

How To Ace The GMAT In 1 Month

Companion Guide to Online Video Course

The GMAT Pill Study Method | www.gmatpill.com



Zeke Lee

Table of Contents

Chapter 1: Getting Into the Right Mindset for GMAT	
How To Prepare For GMAT In 1 Month	4
Syllabus: Detailed 5-day Plan For Each Section	5
GMAT Test Dates And Registration	6
Where Your \$250 Fee Goes	7
When To Take The GMAT And Why Earlier Is Usually Better	8
The 1 GMAT Strategy You Need To Know	9
GMAT Psychology And Timing Strategies	12
Visualize Success	14
How To “Do” GMAT Questions	16
Getting Into A Top Business School	19
GMAT: Management Consulting & Investment Banking	26
GMAT VS SAT	29
GMAT Gets Popular With European Schools	31
Chapter 2: Verbal: Sentence Correction	33
Questions	34
Answer Key	42
Sample Frameworks	43
Chapter 3: Verbal: Critical Reasoning	48
Questions	49
Answer Key	56
Chapter 4: Verbal: Reading Comprehension	58
I. Reading the Passage	59
II How to Approach RC Questions.	60
III. Standard Question Types	66

Table of Contents

Chapter 5: Official Guide 12th Edition	88
Categorization of Quant Questions By type	89
Chapter 6: Quant Problem Solving	90
Questions	91
Answer Key	104
Formulas and Diagrams	105
Chapter 7: Data Sufficiency	125
Questions	126
Answer Key	133
Back Cover	135

How To Prepare For GMAT In 1 Month

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	Aug 1
			GMATPrep		Day 1: Download GMATPrep MBA.com	
2	3	4	5	6	7	8
V Sentence Correction Q	Refer Back to GMAT Pill Videos Apply Thought Process to OG Questions				V Critical Reasoning Q	
9	10	11	12	13	14	15
Refer Back to GMAT Pill Videos Apply Thought Process to OG Questions			V Data Sufficiency Q			
16	17	18	19	20	21	22
V Problem Solving Q					V Reading Comprehension Q	
23	24	25	26	27	28	29
Review Any Mistakes, Refer Back to GMAT Pill	Retake the GMAT Prep Software Exams	Official Guide Practice Exams - Essays			Simulate Exam Day (OG, or CAT)	
30	31	Sep 1	2	3	4	5
Relax, Review GMAT Pill Videos		GMAT Exam Date				

Day 1: Download the GMAT Prep Software from MBA.com and take a test to become familiar with the directions/logistics and identify where you need help most.

Days 2-6: Log in to GMAT Pill. Watch and absorb the efficient thought processes and concepts for your weakest section (e.g. Sentence Correction). Spend at least 3 solid straight hours on Day 2.

Days 7-12: Log in to GMAT Pill and go over your next weakest section.

Days 12-15: Start your 3rd weakest area (e.g., Sufficiency)

Days 16-19: Start your 4th weakest area while also doing practice problems for other sections that already covered.

Days 20-22: Retake the same exam that you took on Day 1 with the mentality that you should get everything correct (after all, you've seen the questions before!)

Days 20-22: Retake the same exam that you took on Day 1 with the mentality that you should get everything correct (after all, you've seen the questions before!)

Days 23-24: Review any questions that you got wrong.

Day 25: Relax. Mentally prepare for the set of practice exams on the [Official Guide](#) you are about to take. Review videos in the [GMAT Pill](#).

Days 26-31: Take practice exams in the Official Guide. At least one full day on a weekend should be dedicated to simulating exam conditions. If your exam begins at 9am, make sure you practice waking up at 7am and going through your pre-exam routine. Control your nerves and get nervous

Syllabus: Detailed 5-day Plan for each section (SC/CR/DS/PS)

We say "5-day Plan" but realistically we know most of you will not study 5 days in a row straight. So this is plan might span out over 7-10 days assuming you take a day or two to rest during this time. These 5 days are the days that you dedicate to studying for SC.

Day 1 (Saturday) 10am: Dedicate 2 hours to focus on the 10 Core Framework videos. Rewind and forward according to how comfortable you are with the material.

Noon-1pm: Get Lunch

1:30pm – 4:30: Dedicate 3 hours to 600 Level Questions. Pause each video and try to answer the question yourself. Then hit the play button and see how your thought process compares to mine.

Day 2 (Sunday): 11am-noon: browse through the 10 Core Frameworks again, spending more time on the videos you are less familiar with.

1:30pm-3:30pm: Start looking at some practice questions in the Official Guide. Mark the ones you get wrong on the first try. Review the explanations for the ones you get wrong

3:30-4:30: Redo ALL of the practice questions you just went through with the mentality that you SHOULD be able to get them all correct. After all, you have already seen these questions before!

8:30-9:30pm: Redo ALL the 600 and 700 level questions in the GMAT Pill, pausing each video. Again, you SHOULD be able to get ALL of these correct. After all, you have already seen these questions before!

Day 3-6 (Monday-Wednesday) 10pm-11pm before you go to bed: Go through at least 10 questions each day. This should take you 30 minutes. Additionally, Go through the set of 10 questions that you went through the previous day—with the mentality that you should get all of them correct. This should take you <20 minutes as you budget <2 minutes per question. Refer back to GMAT Pill videos for thought process.

GMAT Test Dates And Registration

When Do I Take the GMAT? When are the GMAT Test Dates?

It's not like the SATs where everybody takes the exam at one time. You sign up to take the exam INDIVIDUALLY, whenever you are free. Yes, that's right. The only thing to consider is when the test center (whichever test center you want to go, preferably close to where you live) is open.

How Do I Register for the GMAT?

You must create an account with MBA.com, then proceed through the steps to choose a testing center and available time. Once you do that, you make your \$250 payment and you'll have officially registered for the GMAT exam.

But, BEFORE YOU REGISTER, you should browse around the available test centers in your area and see generally when they would be free. Your GMAT Test Date will be determined by when your closest test center is available and reserving that date. You should schedule at least a month in advance to make sure that time slot is open. Also, it's good to know that most test

centers are not open on weekends, though you can occasionally find a Saturday here or there. They can be open.

[Browse the test center list before you actually register.](#)

How much does the GMAT cost? GRE Cost?

\$250 to register for the GMAT exam. \$50 to reschedule before 7 days of exam.

Why should I take the GMAT now?

Well, your GMAT test score is valid for 5 Years. Five years is a long time. So even if you are just out of college, it might make sense to take the exam now while you are still in study mode.

Additionally, it is very stressful studying for the exam while working full time so the best way to avoid this is to take the test when you have a break.

Where Your \$250 GMAT Fee Goes

The entity you pay money to is the Graduate Management Admission Council (GMAT), which is an international non-profit association of business schools that “do business” with business schools and institutions.

Basically this is what happened. In 1953, a group off 9 business schools got together and said they were getting applications from people so diverse it was difficult to assess which ones were quality and which ones weren't. So they put together a standardized test that was initially known as the Admission Test for Graduate Study in Business (ATGSB).

The ATGSB basically went around to business schools and academic institutions throughout the world and said: “Hey...we got this test called the ATGSB that we think will help you assess MBA applicants. How about this..you give us money and we'll test your students for you and send you their scores. We'll even give you lots of fancy statistics including mean, median, standard deviation, and everything else.”

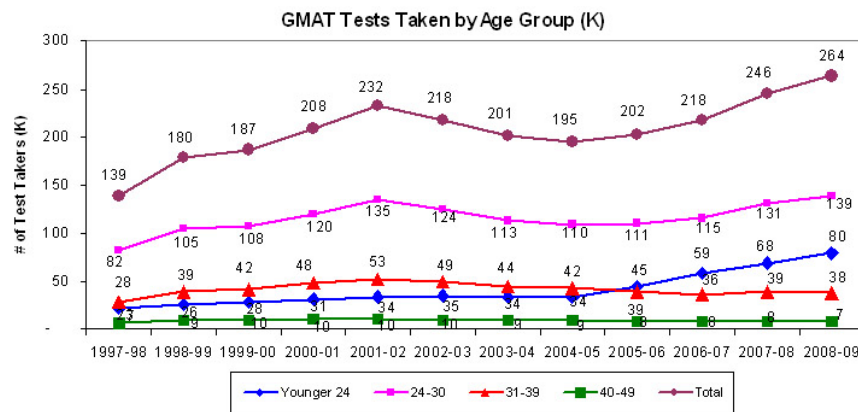
And so a (non-profit) partnership was formed. Pretty interesting, huh.

So your fees go to this organization that makes up test questions
statistics

test takers answer them. The new questions that are created are randomly used as “experimental” questions. You see on your test.

The ATGSB was later renamed the Graduate Management Admission Test (GMAT) in 1976. At first only 2000 people took the test each year way back in 1953. But now about 250,000 people take the test annually.

So there you go. A quick history lesson on the GMAT. The GMAC recently released data on the different test takers categorized by age group. Take a look where you fit in and who your competition is. Notice the growth rate of test takers under the age of 24 is higher than that of the other age groups.



When To Take The GMAT And Why Earlier Is Usually Better

When is the GMAT?

There is no set date (like there is for the SAT) that you must take the GMAT. So you have the liberty of scheduling a date and time for your testing at the nearest testing administration site.

Sounds good. Since I can choose when to take the exam, when is the best time to do so?

Perhaps the best time to take your GMAT is while you are still in school, or shortly afterwards. Remember, as you gain more real world experience, you lose the test-taking intuition that you used to have when you were in school. Taking an intensive test like the GMAT 5 years after your last rigorous exam can be quite challenging. Test-taking intricacies like operating in a time pressured environment, reading through answer choices, marking answers, and dealing with psychological issues are second nature to you when you are in school, but they become quite unfamiliar the longer you wait after college. You want to minimize this risk by taking the exam during the summer after graduation or the summer between your junior and senior year—this is the ideal time. Remember, the GMAT exam is valid for 5 years. If you have any intention of applying for business school sometime in the next 5 years, you should take it at your earliest

I am not in college anymore and I don't have a chance to take the GMAT during this time. What can I do now?

Don't worry. Thousands of people are in your shoes. You might not be used to the pressures of test taking. You need to pay extra attention to doing several practice exams mimicking exam-like conditions.

What do you mean by exam-like conditions?

I mean instead of just running through questions on a practice exam bit by bit, you should schedule an entire morning or afternoon to take the exam with a timer. Especially with the Computer Adaptive Test (CAT) format of the exam, you should take these practice exams AS IF it were the real thing, at least several days before your real exam and preferably earlier.

What else should I take into account?

If you are considering the GMAT, chances are you have a busy life. When applying to business school, you will need to dedicate time not only to your job, but also any extracurricular activities or initiatives you are pursuing. Part of an organization that holds ambitious yearly events? Put some time and effort and participate on the board in a leadership position. Itching for a promotion at your job so you can mention it in your Bschoo application? You'll need to put in the time and effort. You'll also need to budget time for researching/visiting schools and writing those dreaded essays. And of course, you want a social life and time with your family. The GMAT is the LAST thing you want to worry about when juggling all these things. That's why it is best to

Should I study first and then schedule the exam or schedule the exam and then study?

This is a personal preference. I would recommend you to schedule the exam a few months in advance when you intend to take it. Pay the [\\$250](#) (yes, not cheap) it costs to take the exam so that you are invested into the exam—forcing you to study. Otherwise, if you casually study for the exam, you may never progress anywhere.

The 1 GMAT Strategy You Need

Many GMAT students mistakenly believe that focusing their study on math is the best strategy to raising the GMAT score.

Sure, if you have a known weakness in math you'll need to brush up on your math skills and logic. And yes, the GMAT math is significantly more difficult than the SAT math (more emphasis on logic and structuring the problem rather than on pure calculation).

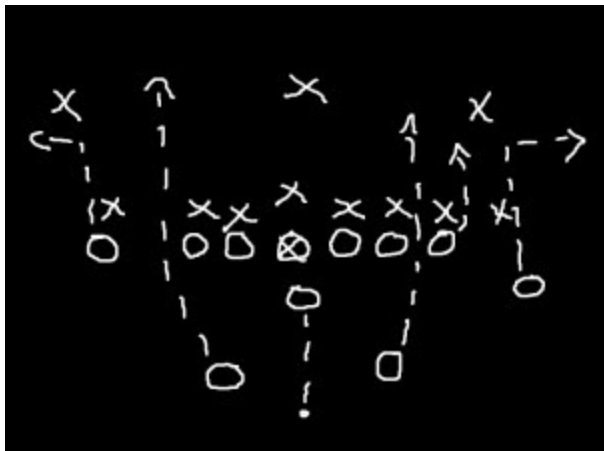
But at the end of the day, doing well on the VERBAL section is more important to your overall score than if you did equally well on the MATH section—this is ESPECIALLY true in the 700+ range. If you are targeting this score range, you MUST polish up your verbal section. Don't believe me? Let's look at some data focusing on the highest levels of scoring: 700+ range

If you score 99th percentile in Verbal (49V), and your Quant score is...

39M = 57th percentile = Total (730, 96th percentile)
 41M = 63th percentile = Total (730, 96th percentile)
 43M = 70th percentile = Total (740, 97th percentile)

Notice it does not matter how many extra points this student gains in math. The overall score is the same.





score of 730 whether her math score is 39 or 43. Doing well in Verbal pays off!

Now is the opposite true? What if a student scores outrageously well in Quant but average in Verbal?

If you score 99th percentile in Math (51V), and your Verbal score is...

30V = 57th percentile = Total (670, 85th percentile)

32V = 65th percentile = Total (690, 88th percentile)

34V = 70th percentile = Total (710, 92nd percentile)

Notice doing extremely well in quant does not guarantee you a good score. In fact, an average score in the 57th percentile for verbal and a perfect quant score only give you a (670, 85th percentile). Doing well in Quant is good, but no

Let me say that again:

Doing well in Quant is good, but not as good as doing well in Verbal!

This is almost ridiculous! A high quant score and average verbal score yields a LOWER score than a high verbal score and an average quant score!

Indeed, the GMAT is biased towards success on the verbal section!!

Why would the GMAT creators do this?

My best guess is one of supply and demand (ah yes, how relevant to an exam for business school). The influx of non-native English speakers from international countries who are strong in quant but weak in verbal and just the plain fact there are more people that are great at quant (where there is always a correct answer) than the number of people who are familiar with the idiomatic intricacies of the English language and inductive reasoning.

But whatever the TRUE reason is, it does NOT matter. What does matter is what this bias in the GMAT means to **you**. If your verbal abilities are not strong, then you **MUST** improve them.

**OK, I believe you. I need to improve my verbal score.
But will studying necessarily improve my score?**

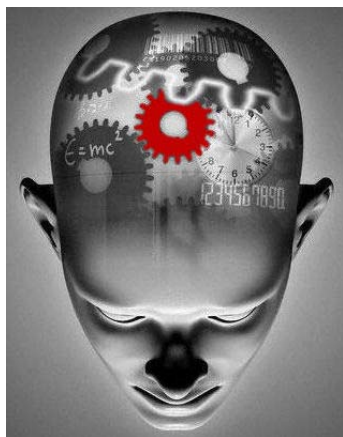
Yes and no. Depends on how you study. There are people who spend 6 months studying and do not see any improvements on their score. And then there are those (including me but also many others, I'm sure) who scored in the 70th percentile and then studied for 2 weeks and scored in the 98th percentile on the real thing. You need to target your studying. There are 3 sections to the verbal:

- 1) Sentence Correction
- 2) Critical Reasoning
- 3) Reading Comprehension

By far, the easiest way to boost your score quickly is to **ACE the Sentence Correction part of the exam**. It's easier than you think. While the GMAT test makers have unlimited imagination in making questions for critical reasoning and reading comprehension, they can only test you on sentence correction in so many ways. If you master all possible TYPES of questions on the sentence correction AND VARIATIONS on those concepts, then you can go into the test with CONFIDENCE that you will ace the entire sentence correction part of the exam. You need to take a different mindset when preparing for critical reasoning and reading comprehension. Yes, there are some tips and tricks you can use to help guide you through these sections, but it is much more difficult for

any prep program or service to teach you. I strongly believe that ANYBODY can master sentence correction section, but NOT anybody can master reading comprehension or critical reasoning.

GMAT Psychology and Timing Strategies



At first glance, the GMAT is a test of academic content. But when you dive deeper you realize the GMAT is really a test of **how you handle pressure, how you handle time, and how you handle your emotions.**

The GMAT tests basic concepts like the distance-rate-time formula, triangles, circles, angles, factoring, exponents, subject-verb agreement, basic English grammar that you see everyday—these are all topics you covered in high school or earlier.

There's nothing to be intimidated about. The GMAT is not a test of how well you understand economics or if you have what it takes to start a business. It does not measure your business savvy, EQ, IQ, or future success. There's a lot of material on the exam but you already know most of it. You just need to review the concepts and learn the sneaky ways the GMAT guys try to trick you on the exam. You definitely need to think but it's not rocket science.

So why, then, do people find the GMAT so tough?

Because the test is **largely psychological**. People who condition themselves for **long marathons**, like marathons, triathlons, matches, or any activity that requires strong mental toughness know what I'm talking about. Heck, prep for the exam itself is rigorous. Do you have the determination and discipline to follow a study plan that will help you get the results you want? Do you have the right attitude towards learning that will help you absorb as much material in as little time as possible?

The exam itself is definitely like an **intense marathon**. You plow through question after question. The adaptive nature of the exam messes with your mind even further as you might wonder how you just did on the previous question when you are all of a sudden given a very easy question.

Did I mention **logistics**? Did you clear out your bladder before the exam? Do you tend to get nervous right before the exam and mentally freeze up? Do you have quick lunch plans in mind that won't force you to rush to the bathroom? Are you accustomed to waking up early in the morning with an alert mind by the time of your exam so you can process a marathon of questions?

Are you able to budget the last few days before the exam so you do not have to go to work and deal with the stress there? Are you fully focused as you go into the exam??—assuming no girlfriend/boyfriend issues, employer issues or family issues that might interfere with your mental state.

Too many people underestimate the psychological aspects of the GMAT exam. You should pay particular attention to these psychological aspects during the last week before the exam.

Perfectionists and overachievers like myself often have trouble with the GMAT. Why?

Because we are so determined to get every question that comes our way correct that we sacrifice time and ultimately are forced to guess the last several questions.

The GMAT is designed to push you to your limits.

The CAT format is much harder from a psychological standpoint than a paper-based test on the same content. **The reason is that by its very nature the computer-adaptive format is designed to push you to your failure point** - and for us perfectionists that's a VERY uncomfortable place to be.

The computer adaptive format means you get a harder question when you get the current question correct. What ends up happening to perfectionists is we get each question correct and in turn the GMAT throws us even harder questions. We perfectionists then spend more and more time on these harder questions double checking our math or re-reading portions of each answer choice over and over with the determination to get each question correct. Meanwhile, we sacrifice time and get heavily penalized for not finishing the exam.

In fact, part of the reason I did so poorly on that practice exam was because **I did not finish the exam**. I was too focused on getting the question correct that I lost sense of the big picture—that I really needed to be strategic with my time.

If you are pressed for time and have 4 questions left but really have time only for 2, my suggestion is instead of answering questions 34 and 35 and then guessing 36 and 37 for Quant is to answer 34, guess 35, answer 36, and guess 37. This allows you to stay at a relatively same level (or higher if you guess one right) than potentially dropping below the level you were at question 33 by getting multiple questions wrong in a row.

Since the **GMAT penalizes you heavily for getting many consecutive answers incorrect** you should make sure you do not end up in a position where you need to guess the last 10 questions because you spent too much time on each question in the beginning. In general, you are better off guessing 10 random questions than guessing 10 consecutive questions—so make sure you time yourself properly.

You should be aiming, on average, to answer each question in less than two minutes. With practice you should be able to sense when you are at around the 3 minute mark that you are spending too much time on this question. Around this time you should make a strategic guess and move on. With easy-type questions you should definitely not reach the 3 minute mark.

Visualize Success



Imagine: It's test day—**the real deal**. Not a practice exam. You've walked by or driven by your test center a few days earlier so you know what it looks like. You imagine yourself walking into the test center. You know your test is in front of a computer at one of those testing centers. **Visualize yourself** going through the directions on the computer.

Spend at least five minutes at a time imagining different details about taking the test. Visualize yourself spotting sentence structures based on keywords or commas. Visualize yourself checking for X & Y consistency for SC questions or recognizing a Data Sufficiency Percent vs. Actual Number question. You know what to look for and where the pitfalls are (multiple % data points without any actual number data points are useless if they ask you a "how many" question). Your visualization scene doesn't need to be the same each time, but you need to tap into a sense of accomplishment and confidence. Do this every morning.

Neurophysiologist researchers at Stanford University (my alma mater) and University of Chicago evaluated the efficacy of visualization. They compared two groups of basketball players. The first group practiced playing basketball, and the second group only imagined practicing. The players who didn't physically practice, but visualized peak performance, improved 23 -30 percent in their actual basket-shooting ability, whereas the students who physically "practiced" saw a little improvement. ([source](#))

Cognition: Think extreme positivity and confidence.

In a way, this is a **chicken and egg problem**. You need to do well on GMAT questions in order to be confident. And you need confidence in order to get the tough GMAT questions correct. But you should develop a little of each and have them grow upon each other.



Bad thoughts:

- 1) I suck at math.
- 2) There's no way I'll finish the exam.
- 3) English is not my first language, I can't do it.

Good thoughts:

- 1) Math is not my strong point, but this math isn't rocket science. Sure, I get some wrong, but looking back at them—**the**

questions are actually pretty easy. I just need to become familiar with the different ways that the GMAT can test me on these relatively simple concepts that I learned in high school. **I can do that! No problem!**

2) GMAT is a timed test. I've had tons of timed tests before. I just need to come in with the right thought process and get enough practice that I have the confidence to know when I am positively sure about a GMAT question. By being super confident in an answer in as little time as possible, I know I'll be able to nail the super easy ones in less than one minute and the harder ones in less than 2-3 minutes. Confidence = less double checking/rereading = less time.

3) Although idioms are a part of the GMAT, a lot of the questions actually don't test the idioms. A lot of times there are other concepts tested alongside the idioms and as long as I focus on that portion of the question, understand the key frameworks, and recognize how those concepts can show up in test questions, I'll be fine.

Extreme positivity:

I'm going to kickass on the GMAT. Sure, I've been to college and failed tons of exams. But the GMAT is so much easier—it's high school material repackaged in fancy, awkward questions. I just need to get used to it. My goal is to follow a study plan. I'll stick to it and keep pushing myself. Heck, I'll even visualize the questions

that I got wrong and see myself think through them correctly as if I were sitting in for the real exam. My strategy will be to first get as many correct practice questions as I can. Then I'll try to get the questions correct in as little time as possible. Any question the GMAT throws at me will be answered correctly and tossed away as I wait for the next one. Bring it!



How to “Do” GMAT Questions – Lessons From A Master Cellist

OK, so you’ve registered for the GMAT and got a hold of the Official Guide to the GMAT.

You’re gonna “do” a bunch of practice questions and then you’ll be prepared for the GMAT. Right? Wrong!

Sure, it’s a good idea to “do” GMAT questions, but I would say **95% of people don’t have the right MINDSET when it comes to “doing” questions.** Obviously, I should have some reason for making a claim like this.

most people don’t “do” questions the right way? That implies that I “do” questions the right way. Well, let me answer that for you.

First, let me say that I am NOT naturally “smart.” Some people who naturally “get it”—I **usually have to work at it.**

Second, even though I’m not naturally smart, I’ve developed a mental strategy that helps me get to where I need to be.

You see, I used to be a **nationally ranked cellist and pianist**(I admit I was overshadowed by my arch-nemesis, Yo-Yo Ma—pictured here at the Nobel Peace Prize ceremony—so I never quite made it on the international scene..haha).

Going through the **painstaking process of learning and memorizing hours of musical literature** and performing them under pressure taught me a few things that are **surprisingly relevant to GMAT studying.**

You: “What??!! Learning cello is related to **GMAT studying??**”

“Me: Uh-huh...”

Think about it. “Doing” GMAT questions is like “practicing” new music. At first it’s completely new to you. But you have to process the new material in your head until you totally understand it. You can explain it. You can recite it.

So how do you get from A to B?

So how do you get from “this is completely new to me” to “I know this” ????

“DO” GMAT Questions Like a Musician

Well, in learning new music **you don’t memorize the whole thing at first glance!** You first take a small chunk, like the one below:

But of course you need to subdivide this chunk. So focus on the first measure first:



Focus on the left side.

Figure it out note by note.

Identify where the beats are.

Identify the sentence structure and any commas you might see at first glance.

And find the correct way to play this and arrive at the correct answer.

When you’re ready, play this first measure all the way through without stopping and mark your correct answer. Then move on.



Focus on the right side.

Now that you’ve got the first question or measure down, now you focus on the second measure. Do the same thing.

Find the pitfalls, avoid them, arrive at the correct answer.

Sure you might get “stuck” here and there, but when you’re ready—start from the beginning of the question and go all the way through and mark your correct answer.



OK, now that you’ve got questions #1 and #2 correct separately, let’s see if you can go through both of them all the way through **without stopping or hesitating.**

You want to make sure you can think through both questions confidently **without any hiccups.**

Sometimes, being exposed to #2, will alter how you might do #1. **So you want to test yourself to see if you can go through both #1 and #2 without hesitation—AS IF it were a performance—AS IF it were the real GMAT.**

You see, this is how I would learn to master a musical piece. Break it into chunks. Subdivide the chunks and focus over and over. Then move to the next one and focus over and over. Then combine the two sub-chunks, practice and practice—until I master that subchunk.

The same is true for “doing” GMAT questions.

First you go through a question. Check the answer. What the heck did you do wrong? How could you have answered that question correctly. Did you do a stupid mistake? Did you not see a comma or an obvious sentence structure that you should have seen? Read the explanation.

OK, move on to the next question. Do the same thing. Look at the explanation. Maybe you got it right, maybe there was a quicker, more efficient way of arriving at the correct answer. Why did you miss that more efficient way? How could you have thought about it better so you would arrive at the correct answer faster?

Keep doing this until by the end of the day you do maybe like 30 questions. **Now by the time you do 30 questions, you probably forgot what the questions or answers were for question #1.**

So start all over. See if you can plow through questions #1 – #30 without stopping and get ALL of them right. After all, you SAW the answers and explanations. So if you really “understood” the answers and explanations, then you should have no problem going through the questions.

This is the approach you should be using when you “do” GMAT questions. Once you redo all 30 questions straight through. Now do another 30 questions. Then combine all 60 questions and see if you can run through all of them straight through without mistakes. If you subdivide, think through groups of questions, and then REDO all those questions in different orders AS IF you were sitting for the real exam and you are aware of time pressure, **I guarantee your studying will be that much more effective than what you are currently doing now.**

Getting Into A Top Business School

Getting into a top business school is as much about being a STELLAR candidate as it is about putting together a GREAT application. The GMATPill Method will help you get above that threshold to be “qualified” to apply. But just as scoring well on the exam requires you to *think* in a different way, applying to “top” business schools will require you to think about the process in a different way as well.

Part 1: Being a Stellar Candidate at a Top Business School

Being a stellar candidate. This is what you spend 4 years (median) of your life to develop. You start working, understanding how business works, how people work, and what it takes to get ahead. This is your real world work experience and business schools pride in their students’ ability to contribute to classroom discussions about real world problems that business executives face.

1. Diversity in Class Profile: MBA Programs will want representation from various types of applicants

By nature, certain industries play a big role in shaping the business landscape. Investment banking, private equity, management consulting. These fields deal with business at a very high level. Schools will want about just as many candidates from various business sectors of the economy – usually no real preference for any sector unless the industry is poised for significant growth. Then



So as an MBA applicant yourself, think about where you fit in given such a target class profile. Take note of the size of the MBA class you are applying to. For example, NYU has about ~400 students in their MBA class. This means that if you are an investment banker, you are competing for one of 180 Finance/Consulting designated positions. More importantly, the number of applicants of this type tend to be extremely large.

On the other hand, if you are applying from a non-profit background, you are competing for one of 20 (or even less) such designated spots. But at the same time, the number of applicants in this field tend to be extremely low.

So if you find yourself comparing yourself to someone else with different credentials who got into your school of choice – think twice. You should be looking at how you stand out in the overall class profile and judge whether you would be adding value or diversity to the business school.

The figures below are *approximate* but are a good way to think of incoming MBA Class profiles at some of the top schools.

45% Finance/Consulting

25% Finance (banking, PE, hedge funds)

20% Consulting

45% Business Sectors

5% Manufacturing / Operations

5% Non-Profit / Education / Govt

5% Healthcare / Biotech

5% Hightech/IT

5% Real Estate

5% Communications / Media

5% Military

5% Consumer Products

5% Energy / Oil & Gas

10% Other (Advertising / Public Relations / Pre-Law / Entrepreneurship)

100% Total

2. Excelling in Your Role

– An advanced position where your role changed and you began handling underlings, interacting more frequently with clients, taking on a greater range of responsibilities. Whatever the case may be, it's important to paint a picture of this *change* in your career. It is this

change that is the foundation for your stories on tough challenges you faced, risks you engaged in, people management issues you confronted, etc.

- The technical and the managerial. Business requires technical competency. Above this standard is an industry built around people – networking, handling clients, managing below and above you, building rapport with colleagues, etc. Being a competent business professional who can work well with others is a key attribute for successful business executives.

- “Work well with others” is certainly a very fuzzy concept – but it involves communication skills that are extremely important on the job. Whether it’s oral communication, ability to build rapport with new strangers/clients, ability to hold conversation in politics, sports, business, family, travel, etc. —all of these soft skills are important and will be reflected in your recommendations and ultimately your career progression.

3. Globalization Perspective

- This largely applies to students at top business schools. The world’s future business leaders understand global dynamics, language / cultural differences, and the beauty of a global perspective. International experience for at least 6 months or more is a big plus. It is this international perspective that makes top business schools unique – and a notch ahead of other business schools.

- If you don’t have six months abroad, any experience that may help you paint yourself as culturally unique is helpful / growing up in a foreign country like Peru, Brazil, study ;

- If you really don’t have any of these experiences, try to seek out these opportunities if you can. But don’t sweat it. Not having an international experience can point to and show DOES NOT MEAN that you are a bad candidate. It just means that among the applicant pool, it’s harder for you to stand out and differentiate yourself. Think about the business of marketing products on supermarket shelves – there are a ton of great products. Sometimes consumers can’t tell the difference between two brands, but one that has a bell and whistle might just stand out as more attractive – even though its technical specifications might be lower. Just keep that in mind. For top schools, you’ll need to stand out in other ways.

Part 2: Putting together a GREAT application for Top Business Schools

1. Scoring high enough on the GMAT Exam (>700 for top business schools)

At top business schools, most admits are 700 and above with a some below. In this day and age with test prep resources available to so many students, don't neglect this valuable resource to help you get ahead. The fact that there might be so many [programs out there that might help you "beat the system"](#), the data continues to show that students with higher GMAT scores fare better in business schools. One important note is that scores tend to fall after the GMAT test itself changes, so watch out! In June 2012, the GMAT will add a new section (in addition to Verbal and Quant) called [Integrated Reasoning](#). And from what I've seen, these questions are much more real world questions that may involve manipulating an excel-type table, looking at charts, and choosing multiple answer choices.

2. GMAT Exam >700 Even for NEAR top business schools?!

If I were to guess, I'd say more than 30% of applicants who scored 700 and above get rejected at top business schools. So where do they go? These remaining 70% of folks fill up all the other business schools that are just a notch below. And so that makes these "near top business schools" even more competitive, especially as more and more students score over 700 each year.

When this happens, the scores realign and it becomes even harder to score the same score. To break this vicious cycle, GMAT needs applicants to score higher and so it is making a change to the exam and [update to reflect more real world type problems](#). All that matters is you are getting a respectable solid score, so that the admissions committee will have interest to READ your essay.

Personally, I think [scoring above a 700 requires a lot of thinking](#). A different way of thinking. And in my opinion the test prep companies out there were ineffective – based on everything I heard from my friends. Question after question with the assumption that practice makes perfect.

Well, smart people will realize that continual practice without guidance will NOT make you perfect because eventually you'll reach a point where your score just won't go any higher. It might take a movie like "Inception" to rewire your thinking, but my new assumption is that improving your score requires a different way of THINKING. And it is this thought process that I teach and that I feel is the most effective method to boosting your score. [Empower yourself to THINK like a top test taker.](#)

4. Application Essays

This is probably the most important part of your application. What is your story? Can you paint a picture for us of who you are? Do you fit the profile of somebody who has the mindset to make a big contribution in business? Everyone faces risks and problems, how have

you dealt with yours in the past? What have you learned that you can take away for the future?

Storytelling skills are important here. This is vital, as admissions people are human after all, they want to get to know you and feel the emotions of what makes you a standout candidate. Let's take, for example, a situation where you took on greater responsibilities with a client.

Story Telling Your Application

A. Assume a framework and make a concerted effort to capture the emotions associated with that framework

Take the position that you normally do analytical work and don't interact with the client – capture your emotions of being eager, ambitious, and nervous at the same time.

B. Introduce characters and challenges

The “situation” – who are the characters and what are their roles? You can mention your boss, you, the client who might be a VP and his respective analyst. You might include descriptions like very aggressive or very lazy, maybe even unresponsive, etc. Do what you need to do to paint a picture of the “scene”.

C. Development – tell the story with rising action

This is where you talk about the project and how it progressed. You did the analysis, shared your work, got some feedback, and then you took on more responsibilities with the client. The client was impressed with the results and the client wanted to hire you for the next project.

just became a discussion that went on for months. The final negotiation for the deal came down to making the client feel comfortable – the deal was signed and you and your firm earn a fee.

Climax / Turning Point / Twist:

So, basically the climax was just told before – the deal got signed. But more importantly for application essays, you'll need to reinterpret this event in your eyes to capture the “aha” moment for you. This is where you talk about what you learned and how it changed you. What do you see differently now? As a result, what do you do differently now?

As an analyst, you were always focused on number crunching. But through a series of meetings at the client level, you started seeing how business was not really just number crunching. Once you got beyond this level, business was business. In fact, it blew you away that the number crunching that took you hours to work on was not even mentioned in discussions with the client. You started seeing that business was much more people oriented than you had imagined before. As a result, you started lifting up your head and thinking about how discussions with the client would go. You would get through your number crunching as fast as possible, then immediately start thinking about higher level business questions on your own. You took more responsibility to think at a higher level before discussing with your boss – consequently you became more prepared to handle discussions with clients and began contributing more at this level.

This is just one way to tell your story which paints you as someone gradually rising the ranks. This is a great attribute. At the same time, be careful of how you tell your story because that is how the admissions committee will brand you and perceive you. Remember, they are going to want a diverse student body with diverse perspectives. If you have a unique story that can be told using the same storytelling elements described above, then you'll have an edge.

5. Recommendations

Hot Shot Recommendation: In the business world, recommendations are social proof. Getting one from a big name guy in the industry who is widely recognized is a huge plus. If your boss is a hot shot or your client is a hot shot (CEO, CFO, Founder, etc) etc, then fantastic! All of these guys can give great recommendations. While it's a great leg up, it's still important for them to convey how you were a business success for the firm. When it comes down to it – how did you bring in money for the firm or save money for the firm? What about people skills – did you facilitate business moving forward thru your ability to work well with others? Did the CEO/CFO like you? Or did conflicts ultimately get in the way of business achievement?

How likely are you to get a hot shot recommendation? This largely depends on where you work – it's rare to get this type of recommendation.

Boss Recommendation: Typically a candidate may have several bosses. As you've worked for them, typically they can gauge how well they work with you, how smart they think you are, and how capable of success in the business they think you are. If your boss loves you, he'll write a genuinely positive

recommendation for you – emphasizing certain character traits that stand out. Hopefully there's one meaningful/impactful project that he can point to and show how you stepped up and contributed. Top business schools stress an assessment on communication skills – both oral and written – this is a fuzzy concept as I described above. But generally, companies with reviews will mention this. In general, make sure you're on your boss's good side. Express your opinions. Find common ground with your boss on topics that are interesting to the both of you. Building rapport is important as it creates a lasting impression of you.

Busy Boss Recommendation: In a lot of cases, your boss will be busy and will have to go out of his way to write your recommendation. To make his task easier, jot down key accomplishments you would like him to note in bullet format. Ideally, a recommendation is most meaningful when the recommender can write about a particular instance that allows certain positive character traits to stand out.

Ultimately, applying to business school is a complex process that is long-term (your 4+ years of work experience), challenging ([GMAT Exam Score](#)), and self-reflective (application essays).

What Does The GMAT/MBA Have To Do With A Career In Investment Banking or Management Consulting?

Many of you take the GMAT because you want to get your MBA.

There are lots of places you can take your career today we will take a look at the two most popular management consulting and investment banking. **Assuming you are currently in another industry and want to break into these industries, read on.**

There are basically two ideal times to get into these industries—it's just the way the system works. Obviously there are exceptions, but the majority of people get into these industries via school recruiting at:

- 1) target undergrad programs
 - 2) target Bschool programs
- Let's take a look at these two options

Option #1: Get in via top undergraduate school recruiting.

This is how I entered the **management consulting** industry with [Booz & Company](#). Most top consulting firms with an “up-or-out” policy will want consultants from undergrad to stay for 2 or 3 years and then make a **career decision: either you go get an MBA and come back as an Associate or you find something else to do**. So even if you are in the management consulting industry or are on track to getting into the field from undergrad, you will eventually find yourself at a fork road deciding to MBA or not to

Talk with your company to find out if an MBA is required for upward mobility. Most management consulting and investment banking firms require it, although a few do not.

Getting an MBA is a deep decision that requires a lot of self-preparation and self-reflection that extends beyond the scope of this article. **But if it is even remotely within your potential career plan within the next 5 years, it might be a good idea to [get your GMAT exam out of the way](#) as the exam score is valid for up to 5 years.**

Up to 5 years.

That's a lot of time. Say you just graduated and are starting your first job.

If you take your GMAT now, then by the end of your 2 or 3 years at your current job, you will have already completed the first major step in the MBA application process.

Trust me, the GMAT is the last thing you want to think about at the end of your 3 years as you contemplate on an MBA and have all kinds of extracurricular, social, work, and life issues to deal with.

Action Items for Option #1: Get in via top undergraduate school recruiting.

Get some relevant internship experience and develop a good story showing your interest in management consulting or investment banking.

Get your offer and start learning as much as you can. Find out your firm's policy on promotions. Some firms require the MBA to move up, others do not.

If your firm requires MBA for promotion, [take your GMAT](#) now to get it out of the way, and then move to MBA sometime in the next 5 years, depending on your career status.

Option #2: Business School Recruiting

A few pros with this option include entering the management consulting firm at a higher salary and generally more responsibility. If you come from another background (IT, engineering, retail, etc), then you'll need to do the MBA route in order to have access to these recruiting channels.

Is it possible to get in directly to management consulting without doing the MBA route? Sure. But it's definitely not as common.

With business school, not only do you have access to management consulting recruiting programs, but you'll also have access to a variety of other career channels including investment banking, corporate business development, etc.

But be careful! [Do NOT assume that getting a top MBA automatically = getting into a top investment bank or management consulting firm.](#) Whatever your career goals are, you should definitely do your research on them NOW. Even if you decided to do the MBA, don't just sit there and wait for the offers to come to you.

If you want to get into real estate, then call up your school's alumni contacts and tell them you are about to attend ABC

advice. Set up an informational interview/phone call to get their perspective.

Remember, the MBA is a great platform to be on—it increases your personal branding and opens the doors for networking. **However, you still need to JUMP off the platform and end up where you want to be!** Do NOT assume the MBA is a **magic bullet** like most people assume.

Action Items for Option #2: Business School Recruiting

Learn about your industry NOW—google it, reach out to your network

[Take your GMAT Now](#) (Or you when you are relatively less busy)

Sometime in the next 5 years, get into a good MBA program that attracts the recruiters you want
Now, depending on your career situation, you may be in option #1 or option #2.

So what do options #1 and #2 have in common?

Both options involve taking the GMAT exam at some point.

With business school, the GMAT is required at most top schools. And even if you get into the industry through your undergrad, you still might find yourself taking the GMAT.

Bottom line: Whether you are currently in consulting or investment banking, you MIGHT find yourself in a situation where you'll need an MBA where you want to be.

If this is the case, then I recommend you get the GMAT out of the way now so you can focus on the other aspects of your career going forward.

Again, make sure you do not let the GMAT or MBA get in the way of your target career. Learn as much about your target industry as you can and use the MBA to help position (not guarantee) yourself for opportunities.

GMAT VS SAT

What is the difference between the GMAT and SAT?
Both are standardized tests. SAT is for college admission and GMAT is for business school admission (MBA). Both exams are multiple choice and have a math/quant section and a verbal/writing section.

But there are significant differences:

Question Content/Format

- The GMAT Math is much more about logic than the SAT Math, whereas the SAT Math is more about calculation and “plug and chug” questions.
- The GMAT Verbal is also more about argumentative logic while the SAT Verbal is more about vocabulary.
- The GMAT is a computerized adaptive test. Questions are dynamically generated based on whether you get the question right or wrong.
- The SAT is a set test and every test taker on a given day will see the same set of questions.

Price:

- [The GMAT costs \\$250 globally.](#)
- The SAT costs \$45.

Test Takers

- Nearly every high school junior/senior ~ages 16/17 in the US takes the SAT
- Self-selected students ranging from age 21-45 with ambitions of business school take the GMAT exam

[GMAT Test Availability](#)

GMAT: Virtually any time opening that your local test center has.



week in front of a computer. I go into more details of the GMAT signup process in my article [“GMAT Test Dates and Registration.”](#)

“SAT: Administered 7 times per year in classroom settings—pencil and paper.

The SAT was quite well known in high school. Remember wayback in high school when everybody freaked out about the SAT? Guidance counselors would remind you every other day and teachers would constantly bring it up. There was much more AWARENESS about the exam.

The GMAT, on the other hand, requires much more **self initiative**. Your employer will not ask you “you need to get your act together and study for the GMAT”—like your guidance counselor would do. Your friends probably won’t remind you either, because not all of them will be taking the exam around the same time you will be taking the exam. Instead of competing against every other high school kid around the age of 16 or 17, **you will be competing against working professionals** roughly in the age range of 21-40 who are a self-selected group of ambitious and goal-oriented individuals. No slackers will take the GMAT whereas there are plenty of slackers who take the SAT “just because” the school makes them.

The GMAT exam is much more competitive than the SAT exam and often has less awareness. This is more
prep

GMAT Gets Popular With European Schools – Reports Sent Here Are Up By 90%

The Age of U.S. Business School dominance is waning. More and more people are actually looking to go to European business schools. More Europeans are taking the exam than ever before and a big chunk of them are actually choosing to stay within the European countries to [attend business school](#). The trend used to be that Europeans would attend business school in the U.S.–but now, Europeans are favoring schools like INSEAD, Oxford, etc.

Is it because of the lovely European women?

Some interesting stats from the period of July 2009 to July 2010 are:

In 2010, 11% of [GMAT score reports](#) were sent to European business schools. Compare that to the percentage in 2006, 7.5%. In actual numbers, 85,262 reports sent to European business schools in 2010.

In 2010, GMAT test takers from Europe sent out 42% more GMAT reports–indicating a huge increase in GMAT test takers in Europe.

As expected, the countries that received the most GMAT score reports were the U.K., France, the Netherlands, and Spain.

One-third of the GMAT score reports sent to European institutions came from the United Kingdom and Germany. In 2010

So it looks like there's an influx of Indian people towards European business schools. Also an influx of Europeans to European business schools.

So who loses out?

The American business schools. Sure, top business schools in the U.S. are still elite by any standard. But it's important to note that the reputation of European business schools is significantly better than it was 5-10 years ago. And that reputation is reflected by hard data numbers as shown above.

We here at GMATPill love tutoring Europeans on the GMAT. Students hail from the big areas like France and London—but also smaller areas like Copenhagen and Portugal.

As always, we're here to help. Whether, you're Chinese, Indian, European, or American—you'll have to jump through the GMAT hurdle to even get a chance at any of these global business schools, unless you're a [brazilian Victoria's Secret supermodel](#) who loves GMATPill.

Additional GMAT Resources and Articles

Did you know your [GMAT Verbal is actually more important](#) than your GMAT Quant score if you are trying to break 700? You might want to make sure you know which parts of the exam to target before you [take the](#)

Sure, [solving permutation and combinatoric quant problems](#) sounds all fancy. And yes, you should do the best you can possibly do on quant. But look at your competition. A lot of non-native English speakers worldwide are taking the GMAT. Most of these people will do well on quant, but the area they are weakest in is the Verbal part—particularly [reading comprehension](#). So re-evaluate where you put most of your focus.

Looking to make lots and lots of money? What does the GMAT have to do with [a career in investment banking and management consulting](#). Well, it has nothing to do with [financial modeling](#), but it may be the first step to a profitable career.

Don't underestimate the [psychological part of the GMAT exam](#). [Success on the GMAT](#) has more to do with your mental toughness than you may think. It's not just about academic rigor.

The GMAT Pill Study Method

Verbal: Sentence Correction Pill

Questions and Video Explanations
+ Sample Core Frameworks



Long Sentences

By the year 2008, Harry Potter, J.K. Rowling's gripping book series portraying a young wizard's struggle against the evil wizard Lord Voldemort had around 400 million copies in print, making it more than that of almost any other English book ever written.

- book portraying a young wizard's struggle against the evil wizard Lord Voldemort had around 200 million copies in print, making it more than
- book portraying a young wizard's struggle against the evil wizard Lord Voldemort had around 200 million copies in print, which is more than
- book portraying a young wizard's struggle against the evil wizard Lord Voldemort, had around 200 million copies in print, more than
- book portraying a young wizard's struggle against the evil wizard Lord Voldemort, had around 200 million copies in print, making it more than
- book portraying a young wizard's struggle against the evil wizard Lord Voldemort had around 200 million copies in print and is more than

[See Video Explanation](#)

2

Apples and Oranges

Unlike the team of consultants working for the company, whose argument rested on a questionable interpretation of a rule that only recently passed the FDA, a competitor's argument centered on what many legal experts consider a common interpretation of the FDA regulations.

- the team of consultants working for the company, whose argument rested on a questionable interpretation of a requirement that only recently passed the FDA
- the argument from the consultant, which rested on a questionable interpretation of a rule that only recently passed the FDA
- the company's argument, which rested on a questionable interpretation of a rule that only recently passed the FDA
- the company's argument, whose case rested on a questionable interpretation of a rule that only recently passed the FDA
- the company's argument, which had rested on a questionable interpretation of a rule that only recently passed the FDA.

[See Video Explanation](#)

3

X&Y Consistency

Just as listening to Franklin D. Roosevelt's famous fireside chats helps students of history understand the 1930s, an era marked by incredible domestic economic distress and unparalleled foreign conflict, so President Obama's appearance on the Jay Leno show helps students grasp the immense strife and challenge America faced in the recession.

- so President Obama's appearance on the Jay Leno show helps students grasp the immense strife and challenge America faced in the recession
- President Obama's appearance on the Jay Leno show helps students grasp the recession, a time of immense challenge and strife
- watching President Obama's appearance on the Jay Leno show helps students grasp the recession, a time of immense challenge and strife
- so watching President Obama's appearance on the Jay Leno show helps students grasp the recession, a time of immense challenge and strife
- so watching President Obama's appearance on the Jay Leno show helps

4

X&Y Consistency

According to a recent poll, graduating is still a top priority of the majority of college students, like that of earlier generations.

- like that of earlier generations
- as that for earlier generations
- just as earlier generations did
- as have earlier generations
- as it was of earlier generations



[Explanation](#)

5

Subject-Verb/Singular-Plural

The pattern of whisker spots on the face of a male lion, like human fingerprints, are a lifelong means of identification, since they are both unique and unchanging.

- like human fingerprints, are a lifelong means of identification, since they are both unique and unchanging
- like human fingerprints, is a lifelong means of identification, since it is both unique and unchanging
- like human fingerprints, is a means of identification for life, being both unique and unchanging
- since they are both unique and unchanging, like human fingerprints, are a means of identification for life
- both unique and unchanging, are, like human fingerprints, a lifelong means of identification

[See Video Explanation](#)

6

X&Y Consistency

Recent findings lend strong support to the theory that a black hole lies at the center of the Milky Way and of many of the 100 billion other galaxies that exist in the universe.

- that a black hole lies at the center of the Milky Way and of many of the 100 billion other galaxies that exist in the universe
- that a black hole lies at the Milky Way's center and of many of the 100 billion other galaxies that exist in the universe
- that there is a black hole lying at the Milky Way's center and of many of the 100 billion other galaxies that exist in the universe
- of a black hole lying at the Milky Way's center and of many of the 100 billion other galaxies that exist in the universe
- of a black hole that lies at the center of the Milky Way and of many of the 100 billion other galaxies that exist in the universe

[See Video Explanation](#)

7

Description, Main Sentence

Trying to find the reason for a discrepancy in the records, he found that the files had been tampered with.

- Trying to find the reason for a discrepancy in the records, he found that the files had been tampered with.
- Trying to find a discrepancy in the records, he found that the files had been tampered with.
- As he was trying to find a discrepancy in the records, he found that the files had been tampered with.
- Having tried to find the reason for a discrepancy in the records, he found that the files had been tampered with.
- Since he is trying to find the reason for a discrepancy in the records, he found that the files had been tampered with.

8

Split Sentences

The first time that Larry walked down the ramp, laden with packages, he tripped and nearly dislocated his shoulder.

- Larry walked down the ramp, laden with packages, he tripped and nearly dislocated his shoulder.
- Larry walked, laden with packages, down the ramp, he tripped and nearly dislocated his shoulder.
- Larry walked down the ramp, with laden packages, he tripped and nearly dislocated his shoulder.
- Larry, laden with packages, walked down the ramp, he tripped and nearly dislocated his shoulder.
- Larry, laden with packages, had walked down the ramp, he tripped and nearly dislocated his shoulder.



PILL.com

[Explanation](#)

9

Idioms

In addition to the immediate money crisis that the hospital faces, its survival depends on if it can broaden its membership and partner with large insurance companies.

- ☐ if it can broaden its membership and partner
- ☐ whether it can broaden its membership and partner
- ☐ whether or not it has the capability to broaden its membership and can partner
- ☐ its ability for broadening its membership and partnering
- ☐ the ability for it to broaden its membership and partner

[See Video Explanation](#)

10

Idioms

The financial credit crisis of 2007 and 2008 demonstrates that the 21st century's capital markets are integrated more closely than never before and part of the global village may be transmitted to the rest of the village?aiming to be more closely integrated as never before while

- ☐ integrated more closely than never before and
- ☐ closely integrated more than ever before so
- ☐ more closely integrated as never before while
- ☐ more closely integrated than ever before and that
- ☐ more than ever before closely integrated as

[See Video Explanation](#)

11

X&Y Consistency

Just as reading Peter Richardson's diary gives a reader a sense of the nineteenth century -- of its emotions and strife -- so Chopin's Ballad takes the pianist inside the world of classical romance.

- ☐ so Chopin's Ballad takes the pianist
- ☐ so listening to Chopin's Ballad takes the pianist
- ☐ so the Ballad of Chopin takes the pianist
- ☐ listening to Chopin's Ballad takes the pianist
- ☐ so does Chopin's Ballad takes the pianist

12

Past/Present/Future

When I saw Mom struggling through the door with the shopping, I remembered I promised to help her.

- ☐ struggling through the door with the shopping, I remembered I
- ☐ struggled through the door with the shopping, I had remembered I
- ☐ struggling through the door with the shopping, I had remembered that I had
- ☐ struggling through the door with the shopping, I remembered that I had
- ☐ struggled through the door with the shopping, I had remembered that I had



13

Idioms

Tim Ferris wrote The 4-Hour Workweek, an eye-opening book, that made it to the New York Times Best Seller List.

- ☐ that made it to
- ☐ that had made it to
- ☐ that eventually
- ☐ which made it to
- ☐ who made it too

[See Video Explanation](#)

14

Description, Main

Scientists have observed pig cells in the culture producing copies of the viral DNA using an electron microscope.

- ☐ Scientists have observed pig cells in the culture producing copies of the viral DNA using an electron microscope.
- ☐ In the culture, scientists have observed pig cells producing copies of the viral DNA using an electron microscope.
- ☐ In the culture, scientists using an electron microscope have observed pig cells in the culture producing copies of the viral DNA.
- ☐ Using an electron microscope, scientists have observed pig cells in the culture producing copies of the viral DNA.
- ☐ Using an electron microscope in the culture, scientists have observed pig cells in the culture producing copies of the viral DNA.

[See Video Explanation](#)

15

Subject-Verb/Singular-Plural

A ground-breaking report written by a major group of scientists has indicated that much of the previously untraceable pollutants in stream water known to kill fish and harm humans comes from polluted rain water and irresponsible chemical dumping by large corporations.

- ☐ much of the previously untraceable pollutants in stream water known to kill fish and harm humans comes from
- ☐ much of the previously untraceable pollutants in stream water known to kill fish and harm humans come from
- ☐ many of the previously untraceable pollutants in stream water known to kill fish and harm humans comes from
- ☐ many of the previously untraceable pollutants in stream water known to kill fish and harm humans comes from
- ☐ many
fish &

16

Description, Main Sentence

For members of the seventeenth-century Ashanti nation in Africa, animal-hide shields with wooden frames were essential items of military equipment, a method to protect warriors against enemy arrows and spears.

- ☐ a method to protect
- ☐ as a method protecting
- ☐ protecting
- ☐ as a protection of



PILL.com

[lanation](#)

17

Idioms

Galileo's theory of there being an Earth that revolves around the sun was treated as heresy by the Church.

- of there being an Earth that revolves around the sun was treated as heresy by the Church
- of an Earth revolving around the sun were treated as heresy by the Church
- that the Earth revolves around the sun was treated as heresy by the Church
- which is that the Earth revolves around the sun were treated as heresy by the Church
- which is treated as heresy by the Church was the Earth revolves around the sun

[See Video Explanation](#)

18

Past-Present-P

The first United States Solicitor General, Benjamin H. Bristow, was born in 1832 and served in the Grant administration from 1874 to 1876. Earlier in his life, Bristow served as a lieutenant colonel in the 25th Kentucky Infantry.

- born in 1832 and served in the Grant administration from 1874 to 1876. Earlier in his life, Bristow had served as a lieutenant colonel in the 25th Kentucky Infantry
- was born in 1832 and had served in the Grant administration from 1874 to 1876. Earlier in his life, Bristow served as a lieutenant colonel in the 25th Kentucky Infantry
- born in 1832 and appointee in the Grant administration from 1874 to 1875. Earlier in his life, Bristow served as a lieutenant colonel in the 25th Kentucky Infantry
- was born in 1832 and served in the Grand administration from 1874 to 1876. Earlier in his life, Bristow had served as a lieutenant colonel in the 25th Kentucky Infantry
- was born in 1832 and served in the Grand administration from 1874 to 1876. Earlier in his life, Bristow served as a lieutenant colonel in the 25th Kentucky Infantry

[See Video Explanation](#)

19

Idioms

Modern critics are amused by early scholars' categorizing Bach's Cello Suites as artistic masterpieces.

- scholars' categorizing Bach's Cello Suites as
- scholars' categorizing Bach's Cello Suites as if
- scholars, categorizing of Bach's Cello Suites as
- scholars who categorize Bach's Cello Suites as
- scholars who categorize Bach's Cello Suites if

20

Onion Layers

The Statue of Liberty's defects in its supporting structure that led to its deterioration have been corrected, according to the firm of consulting engineers.

- The Statue of Liberty's defects in its supporting structure that led to its deterioration
- The Statue of Liberty's defects in its supporting structure, leading to its deterioration
- Leading to its deterioration, the Statue of Liberty's defects in its supporting structure
- The defects that the Statue of Liberty had in its supporting structure that led to its deterioration
- The defects in the supporting structure of the Statue of Liberty which led to its deterioration



21

X&Y Consistency

Despite what was hoped, the introduction of a sixty-five mile per hour speed limit is reducing neither congestion on rural highways, or it is not contributing to save gas for trucking companies and less pollution from the decreased amount of time trucks spend on the road.

- reducing neither congestion on rural highways, or it is not contributing to save gas for trucking companies and less pollution
- reducing neither the congestion on rural highways nor is it contributing to lower gas costs for trucking companies, or to less polluting
- not reducing the congestion on rural highways nor is it contributing to save gas for trucking companies, and it is not lessening the pollution
- not reducing the congestion on rural highways, it is not contributing to savings on gas for trucking companies, it is less pollution
- not reducing congestion on rural highways, nor is it contributing to lower gas costs for truck companies or less pollution

[See Video Explanation](#)

22

Idioms

Congress has enacted legislation forbidding state and local governments from raising taxes on connections that link consumers to the Internet for the next three years.

- forbidding state and local governments from raising taxes on connections that link consumers to the Internet for the next three years.
- that forbids state and local governments for the next three years from raising taxes on connections that link consumers to the Internet.
- that for the next three years forbids state and local governments to raise taxes on connections that link consumers to the Internet.
- forbidding for the next three years to state and local governments the raising of taxes on connections that link consumers to the Internet.
- that forbids for the next three years state and local governments from raising taxes on connections that link consumers to the Internet.

[See Video Explanation](#)

23

Apples Vs Oranges

Some experts believe that the Sacagawea dollar coin will be used more as a substitute for four quarters rather than for the dollar bill because its weight, only 8.1grams, is far less than four quarters, which weigh 5.67 grams each.

- more as a substitute for four quarters rather than for the dollar bill because its weight, only 8.1 grams, is far less than
- more as a substitute for four quarters than the dollar bill because it weighs only 8.1grams, far lighter than
- as a substitute for four quarters more than for the dollar bill because it weighs only 8.1 grams, far less than
- as a substitute for four quarters more than the dollar bill because its weight of only 8.1grams is far lighter than it is for
- as a substitute more for four quarters rather than for the dollar bill because its weight is far less than

24

Past-Present-Future

For some birds the sense of smell appears to play a role in navigation, since pigeons with surgically removed olfactory nerves were found to have increased difficulties in homing.

- were found to have increased difficulties
- have been found to have increased difficulty
- were found to have increasing difficulty
- had been found to have increased difficulties



[Explanation](#)

25

Idioms

The guiding principles of the tax plan released by the Treasury Department could have even a greater significance for the economy than the particulars of the plan.

- even a greater significance for the economy than
- a significance that is even greater for the economy than
- even greater significance for the economy than have
- even greater significance for the economy than do
- a significance even greater for the economy than have

[See Video Explanation](#)

26

Apples and Oranges

According to a survey of graduating medical students conducted by the Association of American medical colleges, minority graduates are nearly four times more likely than are other graduates in planning to practice in socioeconomically depressed areas.

- minority graduates are nearly four times more likely than are other graduates in planning to practice
- minority graduates are nearly four times more likely than other graduates who plan on practicing
- minority graduates are nearly four times as likely as other graduates to plan on practicing
- it is nearly four times more likely that minority graduates rather than other graduates will plan to practice
- it is nearly four times as likely for minority graduates than other graduates to plan to practice

[See Video Explanation](#)

27

Apples and Oranges

Unlike transplants between identical twins, whose genetic endowment is the same, all patients receiving hearts or other organs must take anti-rejection drugs for the rest of their lives.

- Unlike the transplants between identical twins, whose genetic endowment is the same
- Besides the transplant involving identical twins with the same genetic endowment
- Unless the transplant involves identical twins, who have the same genetic endowment
- Aside from a transplant between identical twins with the same genetic endowment
- Other than transplants between identical twins, whose genetic endowment is the same

28

Description, Main Sentence

The greatest road system built in the Americas prior to the arrival of Christopher Columbus was the Incan highway, which, over 2,500 miles long and extending from northern Ecuador through Peru to Southern Chile.

- Columbus was the Incan highway, which, over 2,500 miles long and extending
- Columbus was the Incan highway, over 2500 miles in length, and extended
- Columbus, the Incan highway, which was over 2500 miles in length and extended
- Columbus, the Incan highway, being over 2500 miles in length, was extended
- Columbus, the Incan highway was over 2500 miles long, extending

29

Idioms

Many environmentalists believe that the widespread planting of trees, along with the conservation of existing forests, would be one of the surest, easiest and least expensive ways to begin to halt or even to reverse the buildup of carbon dioxide in the air.

- one of the surest, easiest and least expensive ways to begin to halt or even to reverse
- one of the most sure, easy and least expensive ways to begin a halt or even reverse
- one of the surest, easiest and least expensive ways that would begin halting or even reversing
- a most sure, easy and inexpensive way beginning the halting and reversing of
- the most sure, easiest and inexpensive way that would begin halting or even reversing

[See Video Explanation](#)

30

Apples and Oranges

Although many elderly citizens believe they are entitled to retirement benefits in their old age, some fiscally conservative officials are quick to point out that healthcare benefits cost far more than other retirement benefits.

- providing healthcare benefits cost far more than other retirement benefits
- healthcare benefits costs far more to provide than other retirement benefits do
- providing healthcare benefits costs far more than other retirement benefits do
- healthcare benefits cost far more to provide than other retirement benefits do
- to provide healthcare benefits is far more expensive than other retirement benefits

[See Video Explanation](#)

31

Past-Present-Future

According to some analysts, the continued rise in stocks reflects growing confidence that the economy will rebound from the depression that many had feared earlier in the year and instead gradually improve in the medium term.

- that the economy will rebound from the depression that many had feared earlier in the year and instead gradually improve
- in the economy to avoid the depression, what many feared earlier in the year, rather to gradually improve
- in the economy's ability to avoid the depression, something earlier in the year many had feared, and instead to gradually improve
- in the economy to avoid the depression many were fearing earlier in the year, and rather to gradually improve
- that the economy will rebound from the depression that many had feared earlier in the year and instead gradually improve

32

Description, Main Sentence

Defense attorneys sometimes argue that their client's misconduct stems from a side reaction to a drug medication, but in attributing delinquent behavior to some side effect, the perpetrators are not forced to take responsibility for their actions.

- in attributing delinquent behavior to some side effect
- if delinquent behavior is attributed to a side effect
- in attributing behavior that is delinquent to a side effect
- if some side effect is attributed as the cause of delinquent behavior
- in attributing a side effect as the cause of delinquent behavior

33

In his Academy Award-nominated documentary 'Super Size Me,' which pundits say pushed McDonalds to eliminate Super Size French Fries from their menu, Morgan Spurlock documents his fast-food binge eating, demonstrates his weight gain, and questions corporations' moral and social responsibilities.

- In his Academy Award-nominated documentary 'Super Size Me,' which pundits say pushed McDonalds to eliminate Super Size French Fries from their menu, Morgan Spurlock documents his fast-food binge eating, demonstrates his weight gain, and questions corporations' moral and social responsibilities.
- Morgan Spurlock, in his Academy Award-nominated documentary 'Super Size Me,' which pundits say pushed McDonalds to eliminate Super Size French Fries from their menu, documents his fast-food binge eating, demonstrating his weight gain and questioning corporations' moral and social responsibilities.
- In his Academy Award-nominated documentary 'Super Size Me,' documenting his fast-food binge eating, demonstrating his weight gain and questioning corporations' moral and social responsibilities, Morgan Spurlock suggests to pundits that he pushed McDonalds to eliminate Super Size French Fries from their menu.
- Morgan Spurlock, in his Academy Award-nominated documentary 'Super Size Me,' serving to push McDonalds to eliminate Super Size French Fries from their menu, documents his fast-food binge eating, demonstrates his weight gain, and questions corporations' moral and social responsibilities.
- In his Academy Award-nominated documentary 'Super Size Me,' which pundits say pushed McDonalds to eliminate Super Size French Fries from their menu, Morgan Spurlock documents his fast-food binge eating, demonstrating his weight gain and questioning corporations' moral and social responsibilities.

Laundry Lists

[See Video Explanation](#)

Although she had been known as an effective legislator first in the Texas Senate and later in the United States House of Representatives, not until Barbara Jordan's participation in the hearings on the impeachment of President Richard Nixon in 1974 was she made a nationally recognized figure, as it was televised nationwide.

- later in the United States House of Representatives, not until Barbara Jordan's participation in the hearings on the impeachment of President Richard Nixon in 1974 was she made a nationally recognized figure, as it was
- later in the United States House of Representatives, Barbara Jordan did not become a nationally recognized figure until 1974, when she participated in the hearings on the impeachment of President Richard Nixon, which were
- later in the United States House of Representatives, it was not until 1974 that Barbara Jordan became a nationally recognized figure, with her participation in the hearings on the impeachment of President Richard Nixon, which was
- then also later in the United States House of Representatives, not until 1974 did Barbara Jordan become a nationally recognized figure, as she participated in the hearings on the impeachment of President Richard Nixon, being
- then also later in the United States House of Representatives, Barbara Jordan did not become a nationally recognized figure until 1974, when she participated in the hearings on the impeachment of President Richard Nixon, which was

Long Sentences

[See Video Explanation](#)

Answer Key:

- | | |
|-------|-------|
| 1) C | 11) B |
| 2) B | 12) D |
| 3) D | 13) D |
| 4) E | 14) D |
| 5) B | 15) E |
| 6) A | 16) C |
| 7) A | 17) C |
| 8) D | 18) E |
| 9) B | 19) A |
| 10) D | 20) E |

For solutions to the remaining questions, [login here](#).

Sample Framework #5: Idioms

<p>If I were vs if I was</p>	<p>If I were.... Or If I was...</p>	<p>IF I WERE→ always use this ("If I was" is incorrect) The word "IF" introduces a conditional, whereby you must use "were" This is common on the GMAT.</p> <p>What you'll see on the test: "If international travel was prohibited, the virus would not have spread beyond the country borders."</p> <p>Should be: "If international travel were prohibited, the virus would not have spread beyond the country borders."</p>
<p>So.... vs so that</p>	<p>I did this so I could leave early. Or I did this so that I could leave early</p>	<p>While "so" is commonly used in conversation, the correct form you will need to know for the GMAT is "so that"→ always include "that" in these situations</p> <p>What you'll see on the test: "Scientists study the human genome so they can identify ways to combat genetic diseases."</p> <p>Should be: "Scientists study the human genome so that they can identify ways to combat genetic diseases."</p>
<p>Being...</p>	<p>Undergoing being converted Or Undergoing conversion</p>	<p>Be WARY when you see "being" Not only is "being converted" passive voice (which you should avoid), but it is also wordy.</p> <p>What you'll see on the test: "The powerplant is undergoing being converted to a landfill."</p> <p>Should be: "The powerplant is undergoing conversion to a landfill"</p> <p>OR</p>

[See Video Explanation](#)

Sample Framework #5: Idioms

View as....vs View like	View [X] as [Y] Or View [X] like [Y]	<p>This idiom should sound familiar to you. If not, then make a mental note that you “view X as Y” --don’t use “like”</p> <p>What you’ll see on the test: “He viewed marriage like a property arrangement.” Should be: “He viewed marriage as a property arrangement.”</p>
Forbid to... Vs Forbid from	Forbid one to do something..... OR Forbid one from doing something	<p>Both are correct!!!!</p> <p>“Forbid one to do something” is a little bit stronger (more imperative) than “Forbid one from doing something”—but both are correct.</p> <p>What you’ll see on the test:</p> <p>“The company forbid him to give away trade secrets.” An answer choice might read: “the company forbid him from giving away trade secrets.” Both are correct! This question is not testing this idiom. Look for something else in the sentence that could be changed.</p>
For verbs that you give a “label” to something: Consider Make Declare Elect Label Appoint Name Vote	Vote him as president OR Vote him president	<p>What you’ll see on the test: They considered him as the most hardworking boy in the class....is wrong Should be: They considered him the most hardworking boy in the class.....is right...</p> <p>Remember you want to keep it simple—“Consider him hardworking” is better than “Consider him as hardworking”</p> <p>See Video Explanation</p>

#7: Singular vs. Plural [Subject-Verb Agreement]



SINGULAR

Each
No one
Nobody
Nothing
Every
Everyone
Everything
Whatever
The number of
fishers

IS / WAS

The voting majority
The student minority

PLURAL

Words ending in "s"

"A number of"

2 or more nouns conjoined
with the word "and"

The majority of New Yorkers
The majority near airports
The majority in shelter homes

The minority living in cities
The minority preparing to vote

ARE / WERE

It Depends On What Is Closest
To The Verb

Neither....Nor – (whatever is
closest to the verb is the
subject, regardless of what
the other noun is

It Depends On The Following
Phrase

Some
Any
None
All
Most

People
Voters
Reasons

ARE / WERE

Love
Money
Idea

IS / WAS

When in doubt, guess SINGULAR

[See Video Explanation](#)

#9: Past.....Present.....Future



RULE

Past		
I <u>believed</u> she _____		
Believed		
Past	Present	Future
N/A	Studied	Would Study
Had Studied		
	Would Have Studied	

Present		
I <u>believe</u> she _____		
Believe		
Past	Present	Future
Studied	Studies	Will Study
Have/Has Studied		
	Will Have Studied	

Future		
I <u>will believe</u> she _____		
Believe		
Past	Present	Future
Will Have Studied	Will Study	N/A

Words that, by definition, suggest something in the **past**
[Remember, When She Arrived]

Past	Present	Future
N/A	Studied	Would Study
Had Studied		
	Would Have Studied	

I promise by tomorrow, she _____

Past	Present	Future
Will Have Studied	Will Study	N/A

Words that, by definition, suggest something in the **future**
[Promise, When She Arrives]

I remember two weeks ago, she _____



**For Core Frameworks and More Video Explanations
By GMATPill, Sign Up For the GMAT Pill
Sentence Correction Pill**

The GMAT Pill Study Method

Verbal: Critical Reasoning Pill

Questions and Video Explanations



Advocates of a large-scale space-defense research project conclude that it will represent a net benefit to civilian business. They say that since government-sponsored research will have civilian applications, civilian businesses will reap the rewards of government-developed technology.

Each of the following, if true, raises a consideration arguing against the conclusion above, EXCEPT:

- Ⓐ The development of cost-efficient manufacturing techniques is of the highest priority for civilian business and would be neglected for civilian business and would be neglected if resources go to military projects, which do not emphasize cost efficiency.
- Ⓑ Scientific and engineering talent needed by civilian business will be absorbed by the large-scale project.
- Ⓒ Many civilian businesses will receive subcontracts to provide materials and products needed by the research project.
- Ⓓ If government research money is devoted to the space project, it will not be available for specifically targeted needs of civilian business, where it could be more efficiently used.
- Ⓔ The increase in taxes or government debt needed to finance the project will severely reduce the vitality of the civilian economy.

1 Double Negative Q's

[See Video Explanation](#)

The average normal infant born in the United States weighs between twelve and fourteen pounds at the age of three months. Therefore, if a three-month-old child weighs only ten pounds, its weight gain has been below the United States average. Which of the following indicates a flaw in the reasoning above?

- Ⓐ Weight is only one measure of normal infant development.
- Ⓑ Some three-month-old children weigh as much as seventeen pounds at birth.
- Ⓒ It is possible for a normal child to weigh ten pounds at birth.
- Ⓓ The phrase below average does not necessarily mean insufficient.
- Ⓔ Average weight gain is not the same as average weight.

2 Logical Fallacy

[See Video Explanation](#)

Provinces and states with stringent car safety requirements, including required use of seat belts and annual safety inspections, have on average higher rates of accidents per kilometer driven than do provinces and states with less stringent requirements.

Nevertheless, most highway safety experts agree that more stringent requirements do reduce accident rates.

Which one of the following, if true, most helps to reconcile the safety experts' belief with the apparently contrary evidence described above?

- Ⓐ Annual safety inspections ensure that car tires are replaced before they grow old.
- Ⓑ Drivers often become overconfident after their cars have passed a thorough safety inspection.
- Ⓒ The roads in provinces and states with stringent car safety programs are far more congested and therefore dangerous than in other provinces and states.
- Ⓓ Psychological studies show that drivers who regularly wear seat belts often come to think of themselves as serious drivers, which for a few people discourages reckless driving.
- Ⓔ Proven average

The school board has determined that it is necessary to reduce the number of teachers on the staff. Rather than deciding which teachers will be laid off on the basis of seniority, the school board plans to lay off the least effective teachers first. The school board's plan assumes that

- Ⓐ there is a way of determining the effectiveness of teachers
- Ⓑ what one individual defines as effective teaching will not be defined as effective teaching by another individual
- Ⓒ those with the most experience teaching are the best teachers
- Ⓓ those teachers who are paid the most are generally the most qualified
- Ⓔ some teachers will be more effective working with some students than with other students

Calories consumed in excess of those with which the body needs to be provided to maintain its weight are normally stored as fat and the body gains weight. Alcoholic beverages are laden with calories. However, those people who regularly drink two or three alcoholic beverages a day and thereby exceed the caloric intake necessary to maintain their weight do not in general gain weight.

Which one of the following, if true, most helps to resolve the apparent discrepancy?

- Some people who regularly drink two or three alcoholic beverages a day avoid exceeding the caloric intake necessary to maintain their weight by decreasing caloric intake from other sources.
- Excess calories consumed by people who regularly drink two or three alcoholic beverages a day tend to be dissipated as heat.
- Some people who do not drink alcoholic beverages but who eat high-caloric foods do not gain weight.
- Many people who regularly drink more than three alcoholic beverages a day do not gain weight.
- Some people who take in fewer calories than are normally necessary to maintain their weight do not lose weight.

5

Hypothetical Reasoning

[See Video Explanation](#)

A program instituted in a particular state allows parents to prepay their children's future college tuition at current rates. The program then pays the tuition annually for the child at any of the state's public colleges in which the child enrolls. Parents should participate in the program as a means of decreasing the cost for their children's college education.

Which of the following, if true, is the most appropriate reason for parents not to participate in the program?

- The parents are unsure about which public college in the state the child will attend.
- The amount of money accumulated by putting the prepayment funds in an interest-bearing account today will be greater than the total cost of tuition for any of the public colleges when the child enrolls.
- The annual cost of tuition at the state's public colleges is expected to increase at a faster rate than the annual increase in the cost of living.
- Some of the state's public colleges are contemplating large increases in tuition next year.

During the Second World War, about 375,000 civilians in the United States and about 408,000 members of the United States armed forces died overseas. On the basis of those figures, it can be concluded that it was not much more dangerous to be overseas in the armed forces during the Second World War than to stay at home as a civilian.

Which of the following would reveal most clearly the absurdity of the conclusion drawn above?

- Counting deaths among members of the armed forces who served in the United States in addition to deaths among members of the armed forces serving overseas
- Expressing the difference between the numbers of deaths among civilians and members of the armed forces as a percentage of the total number of deaths
- Separating deaths caused by accidents during service in the armed forces from deaths caused by combat injuries
- Comparing death rates per thousand members of each group rather than comparing total numbers of deaths
- Comparing deaths caused by accidents in the United States to deaths caused by combat in the armed forces.

6

Logical Fallacy

[See Video Explanation](#)

An airplane engine manufacturer developed a new engine model with safety features lacking in the earlier model, which was still being manufactured. During the first year that both were sold, the earlier model far outsold the new model; the manufacturer thus concluded that safety was not the customers' primary consideration. Which of the following, if true, would most seriously weaken the manufacturer's conclusion?

- Both private plane owners and commercial airlines buy engines from this airplane engine manufacturer.
- Many customers consider earlier engine models better safety risks than new engine models, since more is usually known about the safety of the earlier models.
- Many customers of this airplane engine manufacturer also bought airplane engines from manufacturers who did not provide additional safety features in their newer models.
- The newer engine model can be used in all planes in which the earlier engine model can be used.
- There was no significant difference in price between the newer engine model and the earlier engine model.

In the United States, the Postal Service has a monopoly on first-class mail, but much of what is sent first class could be transmitted electronically. Electronic transmittal operators argue that if the Postal Service were to offer electronic transmission, it would have an unfair advantage, since its electronic transmission service could be subsidized from the profits of the monopoly.

Which of the following, if each is true, would allay the electronic transmittal operators' fears of unfair competition?

- If the Postal Service were to offer electronic transmission, it could not make a profit on first-class mail.
- If the Postal Service were to offer electronic transmission, it would have a monopoly on that kind of service.
- Much of the material that is now sent by first-class mail could be delivered much faster by special package couriers, but is not sent that way because of cost.
- There is no economy of scale in electronic transmission—that is, the cost per transaction does not go down as more pieces of information are transmitted.
- Electronic transmission will never be cost-effective for material not sent by first-class mail such as newspapers and bulk mail.

9

Hypothetical Opposition

[See Video Explanation](#)

Firms adopting 'profit-related-pay' (PRP) contracts pay wages at levels that vary with the firm's profits. In the metalworking industry last year, firms with PRP contracts in place showed productivity per worker on average 13 percent higher than that of their competitors who used more traditional contracts.

If, on the basis of the evidence above, it is argued that PRP contracts increase worker productivity, which of the following, if true, would most seriously weaken that argument?

- Results similar to those cited for the metal-working industry have been found in other industries where PRP contracts are used.
- Under PRP contracts costs other than labor costs, such as plant, machinery, and energy, make up an increased proportion of the total cost of each unit of output.
- Because introducing PRP contracts greatly changes individual workers' relationships to the firm, negotiating the introduction of PRP contracts is complex and time consuming.
- Many firms in the metalworking industry have modernized production equipment in the last five years, and most of these introduced PRP contracts at the same time.
- In firms in the metalworking industry where PRP contracts are in place, the average productivity per worker is 13 percent higher than in firms that do not use PRP contracts.

11

Between 1975 and 1985, nursing-home occupancy rates rose from 87 percent of capacity, while admission rates remained constant, at an average of 25 admissions per 1,000 beds per year. Between 1985 and 1988, however, occupancy rates rose to an average of 92 percent of capacity, while admission rates dropped to an average of 10 admissions per 1,000 beds per year.

If the statements above are true, which of the following conclusions can be properly drawn?

- The average length of time nursing-home residents stayed in nursing homes increased between 1985 and 1988.
- The proportion of older people living in nursing homes was greater in 1988 than in 1975.
- Nursing home admission rates tend to decline whenever occupancy rates rise.
- Nursing homes built prior to 1985 generally had fewer beds than did nursing homes built between 1985 and 1988.
- The more beds a nursing home has, the higher its occupancy rate is likely to be.

10

Logical Conclusions

[See Video Explanation](#)

In the United States, the Postal Service has a monopoly on first-class mail, but much of what is sent first class could be transmitted electronically. Electronic transmittal operators argue that if the Postal Service were to offer electronic transmission, it would have an unfair advantage, since its electronic transmission service could be subsidized from the profits of the monopoly.

Which of the following questions can be answered on the basis of the information in the passage above?

- (A) Is the Postal Service as efficient as privately owned electric transmission services?
- (B) If private operators were allowed to operate first-class mail services, would they choose to do so?
- (C) Do the electronic transmittal operators believe that the Postal Service makes a profit on first-class mail?
- (D) Is the Postal Service prohibited from offering electronic transmission services?
- (E) Is the Postal Service expected to have a monopoly on electronic transmission?

Crops can be traded on the futures market before they are harvested. If a poor corn harvest is predicted, prices of corn futures rise; if a bountiful corn harvest is predicted, prices of corn futures fall. This morning meteorologists are predicting much-needed rain for the corn-growing region starting tomorrow. Therefore, since adequate moisture is essential for the current crop's survival, prices of corn futures will fall sharply today.

Which of the following, if true, most weakens the argument above?

- ☐ Corn that does not receive adequate moisture during its critical pollination stage will not produce a bountiful harvest.
- ☐ Futures prices for corn have been fluctuating more dramatically this season than last season.
- ☐ The rain that meteorologists predicted for tomorrow is expected to extend well beyond the corn-growing region.
- ☐ Agriculture experts announced today that a disease that has devastated some of the corn crop will spread widely before the end of the growing season.
- ☐ Most people who trade in corn futures rarely take physical possession of the corn they trade.

13

Hypothetical Opposition

[See Video Explanation](#)

If there is an oil-supply disruption resulting in higher international oil prices, domestic oil prices in open-market countries such as the United States will rise as well, whether such countries import all or none of their oil.

If the statement in the passage concerning oil-supply disruptions is true, which of the following policies in an open-market nation is most likely to reduce the long-term economic impact on that nation of sharp and unexpected increases in international oil prices?

- ☐ Maintaining the quantity of oil imported at constant yearly levels
- ☐ Increasing the number of oil tankers in its fleet
- ☐ Suspending diplomatic relations with major oil-producing nations
- ☐ Decreasing oil consumption through conservation
- ☐

15

A computer equipped with signature-recognition software restricts access to a computer to those people whose signatures are on file. The program identifies a person's signature by analyzing not only the form of the signature but also such factors as pen pressure and signing speed. Even the most adept forgers cannot imitate all of the characteristics the program analyzes.

Which of the following can be logically concluded from the passage?

- ☐ The time it takes to record and analyze a signature makes the system impractical for everyday use.
- ☐ Computers equipped with the software will soon be installed in most homes.
- ☐ Nobody can gain access to a computer equipped with the software solely by virtue of skill at forging signatures.
- ☐ Signature-recognition software has taken many years to develop and perfect.
- ☐ In many cases even authorized users are denied legitimate access to computers equipped with the software.

14

Logical Conclusion

[See Video Explanation](#)

The purpose of the proposed law requiring a doctor's prescription for obtaining hypodermic needles is to lower the incidence of drug-related deaths, both accidental and intentional, involving hypodermic needles. But even knitting needles can be lethal if they fall into the wrong hands; yet everyone would agree that imposing legal restrictions on obtaining knitting needles would be preposterous. Hence the proposed law involving hypodermic needles makes no sense and should not be enacted.

Which of the following, if true, would provide most support for the argument above?

- ☐ Knitting needles have been known to cause injury and death.
- ☐ The benefits of hypodermic needles outweigh those of knitting needles.
- ☐ The proposed law would not deter the sort of activity known to result in drug-related deaths.
- ☐ The proposed law could not be effectively enforced.
- ☐ Knitting needles are not readily available to anybody who wants to obtain them.

The purpose of the proposed law requiring a doctor's prescription for obtaining hypodermic needles is to lower the incidence of drug-related deaths, both accidental and intentional, involving hypodermic needles. But even knitting needles can be lethal if they fall into the wrong hands; yet everyone would agree that imposing legal restrictions on obtaining knitting needles would be preposterous. Hence the proposed law involving hypodermic needles makes no sense and should not be enacted. Which of the following, if true, would provide most support for the argument above?

- ☐ Knitting needles have been known to cause injury and death.
- ☐ The benefits of hypodermic needles outweigh those of knitting needles.
- ☐ The proposed law would not deter the sort of activity known to result in drug-related deaths.
- ☐ The proposed law could not be effectively enforced.
- ☐ Knitting needles are not readily available to anybody who wants to obtain them.

17

Hypothetical Support

[See Video Explanation](#)

In humans, ingested protein is broken down into amino acids, some of which must compete to enter the brain. Subsequent ingestion of sugars leads to the production of insulin, a hormone that breaks down the sugars and also rids the blood of residual amino acids, except for tryptophan. Tryptophan then slips into the brain, where it is ingested and is transformed into the chemical serotonin, increasing the brain's level of serotonin. Thus, sugars can play a major role in mood elevation, helping one to feel more relaxed and anxiety-free.

Which one of the following is an assumption on which the argument depends?

- ☐ Elevation of mood and freedom from anxiety require increasing the level of serotonin in the brain.
- ☐ Failure to consume foods rich in sugars results in anxiety and a lowering of mood.
- ☐ Serotonin can be produced naturally only if tryptophan is present in the bloodstream.
- ☐ Increasing the level of serotonin in the brain promotes relaxation and freedom from anxiety.
- ☐ The consumption of protein-rich foods results in anxiety and a lowering of mood.

18

Assumption

[See Video Explanation](#)

Opponents of laws that require automobile drivers and passengers to wear seat belts argue that in a free society people have the right to take risks as long as the people do not harm others as a result of taking the risks. As a result, they conclude that it should be each person's decision whether or not to wear a seat belt.

Which of the following, if true, most seriously weakens the conclusion drawn above?

- ☐ Many new cars are built with seat belts that automatically fasten when someone sits in the front seat.
- ☐ Automobile insurance rates for all automobile owners are higher because of the need to pay for the increased injuries or deaths of people not wearing seat belts.
- ☐ Passengers in airplanes are required to wear seat belts during takeoffs and landings.
- ☐ The rate of automobile fatalities in states that do not have mandatory seat-belt laws is greater than the rate of fatalities in states that do have such laws.
- ☐ In automobile accidents, a greater number of passengers who do not wear seat belts are killed than are passengers who do wear seat belts.

Six weekends each year, Alpha Showgrounds are used exclusively for public horse shows. During all other weekends, the grounds are used exclusively as a public market. For its revenues, Alpha depends entirely on admission fees, and revenue from a typical weekend horse show is far greater than from a typical weekend market. However, Alpha's annual revenues from the market far exceed its annual revenues from horse shows. Which of the following strategies, if implemented, would likely provide the greatest boost to Alpha's revenues?

- ☐ Increase the fee for admission to the public market, but leave the admission fees for horse shows unchanged.
- ☐ Increase the fees for admission to the horse shows, but leave the admission fee for the public market unchanged.
- ☐ Discontinue use of the grounds for horse shows, and schedule the public market for each and every weekend of the year.
- ☐ Schedule some horse shows for weekdays instead of weekends; and during those weekends, use the grounds as a public market instead.
- ☐ Schedule some weekend markets for weekdays instead of weekends; and during those weekends, use the grounds for horse shows instead.

19

The following proposal to amend the bylaws of an organization was circulated to its members for comment. When more than one nominee is to be named for an office, prospective nominees must consent to nomination and before giving such consent must be told who the other nominees will be.

Which of the following comments concerning the logic of the proposal is accurate if it cannot be known who the actual nominees are until prospective nominees have given their consent to be nominated?

- ☐ The proposal would make it possible for each of several nominees for an office to be aware of who all of the other nominees are.
- ☐ The proposal would widen the choice available to those choosing among the nominees.
- ☐ If there are several prospective nominees, the proposal would deny the last nominee equal treatment with the first.
- ☐ The proposal would enable a prospective nominee to withdraw from competition with a specific person without making that withdrawal known.
- ☐ If there is more than one prospective nominee, the proposal would make it impossible for anyone to become a nominee.

21

Logical Conclusion

[See Video Explanation](#)

Spending on research and development by United States businesses for 1984 showed an increase of about 8 percent over the 1983 level. This increase actually continued a downward trend evident since 1981 - when outlays for research and development increased 16.4 percent over 1980 spending. Clearly, the 25 percent tax credit enacted by Congress in 1981, which was intended to promote spending on research and development, did little or nothing to stimulate such spending.

The conclusion of the argument above cannot be true unless which of the following is true?

- ☐ Business spending on research and development is usually directly proportional to business profits.
- ☐ Business spending for research and development in 1985 could not increase by more than 8.3%.
- ☐ Had the 1981 tax credit been set higher than 25%, business spending for research and development after 1981 would have increased more than it did.
- ☐ In the absence of the 25% tax credit, business spending for research and development after 1981 would not have been substantially lower than it was.

☐ T
b

Advocates of a large-scale space-defense research project claim that it will represent a net benefit to civilian business. They say that since government-sponsored research will have civilian applications, civilian businesses will reap the benefits of government-developed technology.

Each of the following, if true, raises a consideration arguing against the conclusion above, EXCEPT:

- ☐ The development of cost-efficient manufacturing techniques will be a high priority for civilian business and would be neglected for civilian business if resources go to military projects, which do not emphasize cost efficiency.
- ☐ Scientific and engineering talent needed by civilian business will be absorbed by the large-scale project.
- ☐ Many civilian businesses will receive subcontracts to provide materials and products needed by the research project.
- ☐ If government research money is devoted to the space project, it will not be available for specifically targeted needs of civilian business, where it could be more efficiently used.
- ☐ The increase in taxes or government debt needed to finance the project will severely reduce the vitality of the civilian economy.

22

Double Negative Q's

[See Video Explanation](#)

In the past most airline companies minimized aircraft weight to minimize fuel costs. The safest airline seats were heavy, and airlines equipped their planes with few of these seats. This year the seat that has sold best to airlines has been the safest one—a clear indication that airlines are assigning a higher priority to safe seating than to minimizing fuel costs.

Which of the following, if true, most seriously weakens the argument above?

- ☐ Last year's best-selling airline seat was not the safest airline seat on the market.
- ☐ No airline company has announced that it would be making safe seating a higher priority this year.
- ☐ The price of fuel was higher this year than it had been in most of the years when the safest airline seats sold poorly.
- ☐ Because of increases in the cost of materials, all airline seats were more expensive to manufacture this year than in any previous year.
- ☐ Because of technological innovations, the safest airline seat on the market this year weighed less than most other airline seats on the market.

23

Meteorologists say that if only they could design an accurate mathematical model of the atmosphere with all its complexities, they could forecast the weather with real precision. But this is an idle boast, immune to any evaluation, for any inadequate weather forecast would obviously be blamed on imperfections in the model.

Which of the following, if true, could best be used as a basis for arguing against the author's position that the meteorologists' claim cannot be evaluated?

- Certain unusual configurations of data can serve as the basis for precise weather forecasts even though the exact causal mechanisms are not understood.
- Most significant gains in the accuracy of the relevant mathematical models are accompanied by clear gains in the precision of weather forecasts.
- Mathematical models of the meteorological aftermath of such catastrophic events as volcanic eruptions are beginning to be constructed.
- Modern weather forecasts for as much as a full day ahead are broadly correct about 80 percent of the time.
- Meteorologists readily concede that the accurate mathematical model they are talking about is not in their power to construct.

25

Hypothetical Opposition

[See Video Explanation](#)

The theory of military deterrence was based on a simple psychological truth, that fear of retaliation makes a would-be aggressor nation hesitate before attacking and is often sufficient to deter it altogether from attacking. Clearly, then, to maintain military deterrence, a nation would have to have retaliatory power so great that a potential aggressor nation would have reason to think that it could not defend itself against such retaliation.

If the statements above are true, which one of the following can be properly inferred?

- A would-be aggressor nation can be deterred from attacking only if it has certain knowledge that it would be destroyed in retaliation by the country it attacks.
- A nation will not attack another nation if it believes that its own retaliatory power surpasses that of the other nation.
- One nation's failing to attack another establishes that the nation that fails to attack believes that it could not withstand a retaliatory attack from the other nation.
- It is in the interests of a nation that seeks deterrence and has unsurpassed military power to let potential aggressors against it become aware of its power of retaliatory attack.
- Maintaining maximum deterrence from aggression by other nations requires that a nation have the power to retaliate with nuclear weapons.

27

Meteorologists say that if only they could design an accurate mathematical model of the atmosphere with all its complexities, they could forecast the weather with real precision. But this is an idle boast, immune to any evaluation, for any inadequate weather forecast would obviously be blamed on imperfections in the model.

Which of the following, if true, would cast the most serious doubt on the meteorologists' boast, aside from the doubt expressed in the passage above?

- The amount of energy that the Earth receives from the Sun is known to be constant.
- Volcanic eruptions, the combustion of fossil fuels, and several other processes that also cannot be quantified with any accuracy are known to have a significant and continuing impact on the climate.
- As current models of the atmosphere are improved, even small increments in complexity will mean large increases in the number of computers required for the representation of the models.
- Frequent and accurate data about the atmosphere collected at a large number of points both on and above the ground are a prerequisite for the construction of a good model of the atmosphere.
- With existing models of the atmosphere, large scale weather patterns can be predicted with greater accuracy than can relatively local weather patterns.

26

Hypothetical Opposition

[See Video Explanation](#)

A discount retailer of basic household necessities employs thousands of people and pays most of them at the minimum wage rate. Yet, following a federally mandated increase of the minimum wage rate that increased the retailer's operating costs considerably, the retailer's profits increased markedly.

Which of the following, if true, most helps to resolve the apparent paradox?

- Over half of the retailer's operating costs consist of payroll expenditures; yet only a small percentage of those expenditures go to pay management salaries.
- The retailer's customer base is made up primarily of people who earn, or who depend on the earnings of others who earn, the minimum wage.
- The retailer's operating costs, other than wages, increased substantially after the increase in the minimum wage rate went into effect.
- When the increase in the minimum wage rate went into effect, the retailer also raised the wage rate for employees who had been earning just above minimum wage.
- The majority of the retailer's employees work as cashiers, and most cashiers are paid the minimum wage.

United States hospitals have traditionally relied primarily on revenues from paying patients to offset losses from unreimbursed care. Almost all paying patients now rely on governmental or private health insurance to pay hospital bills. Recently, insurers have been strictly limiting what they pay hospitals for the care of insured patients to amounts at or below actual costs.

Which of the following conclusions is best supported by the information above?

- Ⓐ Although the advance of technology has made expensive medical procedures available to the wealthy, such procedures are out of the reach of low-income patients.
- Ⓑ If hospitals do not find ways to raising additional income for unreimbursed care, they must either deny some of that care or suffer losses if they give it.
- Ⓒ Some patients have incomes too high for eligibility for governmental health insurance but are unable to afford private insurance for hospital care.
- Ⓓ If the hospitals reduce their costs in providing care, insurance companies will maintain the current level of reimbursement, thereby providing more funds for unreimbursed care.
- Ⓔ Even though philanthropic donations have traditionally provided some support for the hospitals, such donations are at present declining.

29

Logical Conclusion

[See Video Explanation](#)

Answer Key:

- | | |
|-------|-------|
| 1) C | 11) D |
| 2) E | 12) C |
| 3) C | 13) D |
| 4) A | 14) C |
| 5) B | 15) D |
| 6) D | |
| 7) B | |
| 8) B | |
| 9) A | |
| 10) A | |





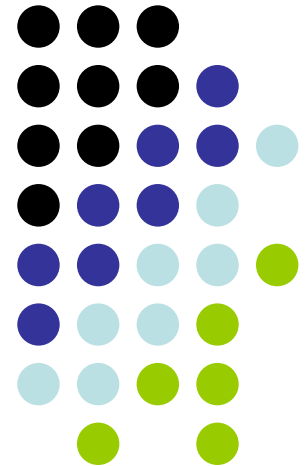
**For More Video Explanations By GMATPill,
Sign Up For the GMAT Pill Critical Reasoning Pill**

GMATPill's RC Pill:

Reading Comprehension Frameworks



- I. Reading the Passage
- II. How to Approach RC Questions
- III. Standard Question Types
- IV. Key Take-Aways



I. Reading the Passage

*Follow my “General Tips on Reading” video
where I introduce concepts of*

- 1. Getting your mind engaged in the passage*
- 2. Cutting the Fluff*
- 3. Scanning for key transitive phrases*
- 4. Connecting the Dots*

See Video Explanation

II. How to Approach RC Question

Sample Question:

The author's argument concerning the effect of the official sale of duplicate artifacts on illegal excavation is based on which of the following assumptions?

- ☐ Prospective purchasers would prefer to buy authenticated artifacts.
- ☐ The price of illegally excavated artifacts would rise.
- ☐ Computers could be used to trace sold artifacts.
- ☐ Illegal excavators would be forced to sell only duplicate artifacts.
- ☐ Money gained from selling authenticated artifacts could be used to investigate and prosecute illegal excavators.

Archaeology as a profession faces two major problems. First, it is the poorest of the poor. Only paltry sums are available for excavating and even less is available for publishing the results and preserving the sites once excavated. Yet archaeologists deal with priceless objects every day. Second, there is the problem of illegal excavation, resulting in museum-quality pieces being sold to the highest bidder.

(5)

I would like to make an outrageous suggestion that would at one stroke provide funds for archaeology and reduce the amount of illegal digging. I would propose that scientific archaeological expeditions and governmental authorities sell excavated artifacts on the open market. Such sales would provide substantial funds for the excavation and preservation of archaeological sites and the publication of results. At the same time, they would break the illegal excavator's grip on the market, thereby decreasing the inducement to engage in illegal activities.

(10)

(15)

II. How to Approach RC Questions

After reading the question, where do your eyes go?

A) REFER to the passage first?

OR

B) READ THRU all the answer choices first?

The author's argument concerning the effect of the official sale of duplicate artifacts on illegal excavation is based on which of the following assumptions?

- ☐ Prospective purchasers would prefer to buy authenticated artifacts.
- ☐ The price of illegally excavated artifacts would rise.
- ☐ Computers could be used to trace sold artifacts.
- ☐ Illegal excavators would be forced to sell only duplicate artifacts.
- ☐ Money gained from selling authenticated artifacts could be used to investigate and prosecute illegal excavators.

B

Archaeology as a profession faces two major problems. First, it is the poorest of the poor. Only paltry sums are available for excavating and even less is available for publishing the results and preserving the sites once excavated. Yet archaeologists deal with priceless objects every day. Second, there is the problem of illegal excavation, resulting in museum-quality pieces being sold to the highest bidder.

(5)

(10)

(15)

I would like to make an outrageous suggestion that would at one stroke provide funds for archaeology and reduce the amount of illegal digging. I would propose that scientific archaeological expeditions and governmental authorities sell excavated artifacts on the open market. Such sales would provide substantial funds for the excavation and preservation of archaeological sites and the publication of results. At the same time, they would break the illegal excavator's grip on the market, thereby decreasing the inducement to engage in illegal activities.

(20)

You might object that professionals excavate to acquire knowledge, not money. Moreover, ancient artifacts are part of our global cultural heritage, which

GMATPILL.com

??

A

II. How to Approach RC Questions

Type A Questions:

- REFER to the passage first when the question is more detailed and there are specific topics mentioned. It is likely these specific topics are mentioned in specific points in the passage where your focus should be
- Give yourself the appropriate background information before looking at the answer choices.
- Follow the RC Pill Attack Strategy – introduced in a later slide – most questions fall in this category!

"The author's argument [concerning the effect of the official sale of duplicate artifacts on illegal excavation] is based on which of the following assumptions?"

Detailed Question

Type B Questions:

See Video Explanation

- READ THRU the answer choices first when the question is generic with no details, no topics mentioned.
- One by one, go thru the passage to confirm its validity.
- Identify keywords in the answer choice and find the relevant areas in the passage to confirm.
- Watch RC Pill videos to figure out how to fine tune your approach to answering

ion

II. How to Approach RC Questions

"The author's argument **concerning the effect of the official sale of duplicate artifacts on illegal excavation** is based on which of the following assumptions?"

Detailed Question

“
For the above question, after reading it do we start reading thru all the answer choices then jump back to the passage? Or do we do some research in the passage and then look at the answer choices?
”

Not the first one! The second one. Since the question was detailed enough to mention specific topics, we should dive back into the passage first to get background info BEFORE reading thru the answer choices. **Use the “RC Pill Attack Strategy!” Find all instances where “illegal digging” and “selling duplicate artifacts” is mentioned. Then start reading the answer choices with the background info in mind.**

tion

II. How to Approach RC Questions

The RC Pill Attack Strategy

(for detailed questions “A” where we first dive into the passage to get background info BEFORE reading answer choices)

Step 1) Identify “INSTANCES” in the passage where the topic is talked about. Find ALL of these instances. (Thru the first read, you should have already gotten the structure of the passage down, use it to help you scan through the passage to identify instances of that topic.)

Step 2) After reading those instances giving you background information, read the answer choices one by one and eliminate

Step 3) Eliminate answer choices

- that require you to search elsewhere OUTSIDE of those “instances” you identified. Chances are, if it requires you to dive into a different paragraph where no “instance” was found, it is likely the wrong answer.

that are only half true (one half of the answer choice is valid but the other

II. How to Approach RC Questions

Type A Question:

“The author's argument concerning the effect of the official sale of duplicate artifacts on illegal excavation is based on which of the following assumptions?”

→ Use RC Pill Attack Strategy, identify topic of interest in the question and find all INSTANCES of it in the passage to give yourself background info before reading answer choices

Type B Question:

“The author's argument is based on which of the following assumptions?”

→ Go thru each answer choice, eyeing for keywords. Scan thru passage to find areas that talk about the keyword – use passage structure to help you.

Still stuck? Follow the RC Videos to see how to fine tune your thinking as you go through RC Questions.

III. Standard Question Types

A) Main Idea

B) According to the Passage, ...

C) It can be INFERRED / SUGGESTED that...

D) Which of the following.../ All of the following EXCEPT" Questions

E) Combination Questions

See Video Explanation

III. Standard Question Types

A) Main Idea:

GMATPill says:

Answer choice **MUST** be derived from connecting the dots from paragraph to paragraph

"What is the main idea of the passage?"

"What is the organization of the passage?"

"The primary purpose of the passage is to..."

See Video Explanation

III. Standard Question Types

B) “According to the passage...”:

GMATPill says:

- Answer choice **MUST** be explicitly stated or is a rephrase of something mentioned in the passage.
- Apply “RC Pill Attack Strategy” when question is “detailed”.

“According to the passage, ...”

“The author would most likely agree that...”

“The author quotes so and so in order to ...”

“Which of the following is mentioned in the passage...”

See Video Explanation

III. Standard Question Types

C) “It can be INFERRED / SUGGESTED that...”:

GMATPill says:

- The answer WILL NOT be explicitly stated / rephrased in the passage. It will require you to draw upon two sentences or concepts to derive at a statement that is INFERRED from these phrases.
- Apply “RC Pill Attack Strategy” when question is “detailed”.

“The passage implies that...”

“We may infer which of the following...”

“The author implies that...”

“The passage suggests that...”

[See Video Explanation](#)

III. Standard Question Types

D) Which of the following.../ All of the following EXCEPT" Questions:

GMATPill says:

- This question will likely require you to read through all the answer choices and might take you longer than usual to answer.
- Watch RC Pill videos to capture the nuance for this type of question in different passages.

"All of the following statements are true EXCEPT..."

"The author's argument is based on which of the following assumptions?"

"The author cites each of the following EXCEPT ..."

"Which of the following can be most reasonably concluded ..."

See Video Explanation

III. Standard Question Types

E) Combination Questions:

GMATPill says:

Some questions will be a combination of the ones identified, such as an “inference” question requiring you to go thru all answer choices.

“The author implies that all of the following statements about duplicate artifacts are true EXCEPT...”

“According to the passage, all of the following statements about duplicate artifacts are true EXCEPT...”

[See Video Explanation](#)

IV. Key Take-Aways

II. How to Approach RC Questions – **allows us to stay focused and avoid confusion. Ultimately save time!**

Determined whether we should dive into the passage or read thru all the answer choices immediately after reading the question

III. Standard Question Types – **allows us to better eliminate wrong answer choices. Ultimately get the right answer!**

By categorizing the questions, we know what to expect and what to eliminate. If we are expecting an answer choice that is explicitly stated in the passage, then we can eliminate the ones that SOUND true but we can't really find where in the passage it's stated.

Though, if that question was an "inference" question, then we know we have to be more careful of what answer choices we are eliminating. Just because an answer choice is not stated in the passage doesn't mean it can't be implied. So we have to double check on these.

For main idea questions, if we can't take an answer choice and be able to connect that idea from paragraph to paragraph then it is probably wrong. If the

er

nation

- Although genetic mutations in bacteria and viruses can lead to epidemics, some epidemics are caused by bacteria and viruses that have undergone no significant genetic change. In analyzing the latter, scientists have
- (5) discovered the importance of social and ecological factors to epidemics. Poliomyelitis, for example, emerged as an epidemic in the United States in the twentieth century; by then, modern sanitation was able to delay exposure to polio until adolescence or adulthood, at
- (10) which time polio infection produced paralysis. Previously, infection had occurred during infancy, when it typically provided lifelong immunity without paralysis. Thus, the hygiene that helped prevent typhoid epidemics indirectly fostered a paralytic polio epidemic. Another
- (15) example is Lyme disease, which is caused by bacteria that are transmitted by deer ticks. It occurred only sporadically during the late nineteenth century but has recently become prevalent in parts of the United States, largely due to an increase in the deer population that
- (20) occurred simultaneously with the growth of the suburbs and increased outdoor recreational activities in the deer's habitat. Similarly, an outbreak of dengue hemorrhagic fever became an epidemic in Asia in the 1950's because of ecological changes that caused Aedes aegypti,
- (25) the mosquito that transmits the dengue virus, to proliferate. The stage is now set in the United States for a dengue epidemic because of the inadvertent introduction and wide dissemination of another mosquito, Aedes albopictus.

Genetic Mutations RC Passage

1

Which of the following best describes the organization of the passage?

- ☐ A paradox is stated, discussed and left unresolved.
- ☐ Two opposing explanations are presented, argued, and reconciled.
- ☐ A theory is proposed and is then followed by descriptions of three experiments that support the theory.
- ☐ A generalization is stated and is then followed by three instances that support the generalization.
- ☐ An argument is described and is then followed by three counterexamples that refute the argument.

2

The passage suggests that a lack of modern sanitation would make which of the following most likely to occur?

- ☐ An outbreak of Lyme disease
- ☐ An outbreak of dengue hemorrhagic fever
- ☐ An epidemic of typhoid
- ☐ An epidemic of paralytic polio among infants
- ☐ An epidemic of paralytic polio among adolescents and adults

3

Which of the following, if true, would most strengthen the author's assertion about the cause of the Lyme disease outbreak in the United States?

- ☐ The deer population was smaller in the late nineteenth century than in the mid-twentieth century.
- ☐ Interest in outdoor recreation began to grow in the late nineteenth century.
- ☐ In recent years the suburbs have stopped growing.
- ☐ Outdoor recreation enthusiasts routinely take measures to protect themselves against Lyme disease.

4

It can be inferred from the passage that Lyme disease has become prevalent in parts of the United States because of which of the following?

- ☐ The inadvertent introduction of Lyme disease bacteria to the United States
- ☐ The inability of modern sanitation methods to eradicate Lyme disease bacteria
- ☐ A genetic mutation in Lyme disease bacteria that makes them more virulent
- ☐ The spread of Lyme disease bacteria from infected humans to noninfected humans
- ☐ An increase in the number of humans who



5 According to the passage, the outbreak of dengue hemorrhagic fever in the 1950's occurred for which of the following reasons?

- ☐ The mosquito *Aedes aegypti* was newly introduced into Asia.
- ☐ The mosquito *Aedes aegypti* became more numerous.
- ☐ The mosquito *Aedes albopictus* became infected with the dengue virus.
- ☐ Individuals who would normally acquire immunity to the dengue virus as infants were not infected until later in life.
- ☐ More people began to visit and inhabit areas in which mosquitos live and breed.

6

Which of the following can most reasonably be concluded about the mosquito *Aedes albopictus* based on the information given in the passage?

- ☐ It is native to the United States.
- ☐ It can proliferate only in Asia.
- ☐ It transmits the dengue virus.
- ☐ It caused an epidemic of dengue hemorrhagic fever in the 1950's.
- ☐ It replaced *Aedes aegypti* in Asia when ecological changes altered *Aedes aegypti*'s habitat.

Caffeine, the stimulant in coffee, has been called "the most widely used psychoactive substance on Earth." (35) Snyder, Daly and Bruns have recently proposed that caffeine affects behavior by countering the activity in the human brain of a naturally occurring chemical called adenosine. Adenosine normally depresses neuron firing in many areas of the brain. It apparently does this by inhibiting the release of neurotransmitters, chemicals (40) that carry nerve impulses from one neuron to the next. Like many other agents that affect neuron firing, a adenosine must first bind to specific receptors on neuronal membranes. There are at least two classes of these receptors, which have been designated A1 and A2. Snyder et al propose that caffeine, which is structurally similar to adenosine, is able to bind to both types of receptors, which prevents adenosine from attaching there and allows the neurons to fire more readily than they otherwise would. (15)

For many years, caffeine's effects have been attributed to its inhibition of the production of phosphodiesterase: an enzyme that breaks down the chemical called cyclic AMP. A number of neurotransmitters exert their effects by first increasing cyclic AMP concentrations in target neurons. Therefore, prolonged periods at the elevated concentrations, as might be brought about by a phosphodiesterase inhibitor, could lead to a greater amount of neuron firing and, consequently, to behavioral stimulation. But Snyder et al point out that the caffeine concentrations needed to inhibit the production of phosphodiesterase in the brain are much higher than (20) (25) (30)

To buttress their case that caffeine affects behavior by preventing adenosine binding, Snyder et al tested the stimulatory effects of a series of caffeine compounds with their ability to dislodge adenosine from its receptors in the brains of mice. "In general," they reported, the ability of the compounds to compete at the receptors correlates with their ability to stimulate locomotion in the mouse; i.e., the higher their capacity to bind at the receptors, the higher their ability to stimulate locomotion." Theophylline, a close structural relative of caffeine and the major stimulant in tea, was one of the most effective compounds in both regards. (45)

There were some apparent exceptions to the general correlation observed between adenosine-receptor binding and stimulation. One of these was a compound called 3-isobutyl-1-methylxanthine (IBMX), which bound very well but actually depressed mouse locomotion. Snyder et al suggest that this is not a major stumbling block to their hypothesis. The problem is that the compound has mixed effects in the brain, a not unusual occurrence with psychoactive drugs. Even caffeine, which is generally known only for its stimulatory effects, displays this property, depressing mouse locomotion at very low concentrations and stimulating it at higher ones. (50)

7

Snyder et al suggests that caffeine's ability to bind to A1 and A2 receptors can be at least partially attributed to which of the following?

- ☐ The chemical relationship between caffeine and phosphodiesterase
- ☐ The structural relationship between caffeine and adenosine
- ☐ The structural similarity between caffeine and neurotransmitters
- ☐ The ability of caffeine to stimulate behavior
- ☐ The natural occurrence of caffeine and adenosine in the brain

8

The author quotes Snyder et al in lines 30-33 probably in order to

- ☐ reveal some of the assumptions underlying the older theory
- ☐ summarize a major finding of their experiments
- ☐ point out that their experiments were limited to the mouse
- ☐ indicate that their experiments resulted only in general correlations
- ☐ refute the objections made by supporters of the older theory

9

The primary purpose of the passage is to

- ☐ discuss a plan for investigation of a phenomenon that is not yet fully understood
- ☐ present two explanations of a phenomenon and reconcile the differences between them
- ☐ summarize two theories and suggest a third theory that overcomes the problems encountered in the first two
- ☐ describe an alternative hypothesis and provide evidence and arguments that support it
- ☐ challenge the validity of a theory by exposing the

10

In response to experimental results concerning IBMX, Snyder et al contended that it is not uncommon for psychoactive drugs to have

- ☐ mixed effects in the brain
- ☐ inhibitory effects on enzymes in the brain
- ☐ close structural relationships with caffeine
- ☐ depressive effects on mouse locomotion
- ☐ the ability to dislodge caffeine from receptors



11

According to Snyder et al, all of the following compounds can bind to specific receptors in the brain EXCEPT

- ☐ IBMX
- ☐ caffeine
- ☐ adenosine
- ☐ theophylline
- ☐ phosphodiesterase

12

According to Snyder et al, caffeine differs from adenosine in that caffeine

- ☐ stimulates behavior in the mouse and in humans, whereas adenosine stimulates behavior in humans only
- ☐ has mixed effects in the brain, whereas adenosine has only a stimulatory effect
- ☐ increases cyclic AMP concentrations in target neurons, whereas adenosine decreases such concentrations
- ☐ permits release of neurotransmitters when it is bound to adenosine receptors, whereas adenosine inhibits such release
- ☐ inhibits both neuron firing and the production of phosphodiesterase when there is a sufficient concentration in the brain, whereas adenosine inhibits only neuron firing

Archaeology as a profession faces two major problems. First, it is the poorest of the poor. Only paltry sums are available for excavating and even less is available for publishing the results and preserving the sites once excavated. Yet archaeologists deal with priceless objects every day. Second, there is the problem of illegal excavation, resulting in museum-quality pieces being sold to the highest bidder.

- (10) I would like to make an outrageous suggestion that would at one stroke provide funds for archaeology and reduce the amount of illegal digging. I would propose that scientific archaeological expeditions and governmental authorities sell excavated artifacts on the open market. Such sales would provide substantial funds for the excavation and preservation of archaeological sites and the publication of results. At the same time, they would break the illegal excavator's grip on the market, thereby decreasing the inducement to engage in illegal activities.
- (20) You might object that professionals excavate to acquire knowledge, not money. Moreover, ancient artifacts are part of our global cultural heritage, which should be available for all to appreciate, not sold to the highest bidder. I agree. Sell nothing that has unique artistic merit or scientific value. But, you might reply, everything that comes out of the ground has scientific value. Here we part company. Theoretically, you may be correct in claiming that every artifact has potential scientific value. Practically, you are wrong.

- (30) I refer to the thousands of pottery vessels and ancient lamps that are essentially duplicates of one another. In one small excavation in Cyprus, archaeologists recently uncovered 2,000 virtually indistinguishable cooking pots in a single courtyard. Even precious royal seal impressions known as *melekh* handles have been found in abundance. More than 4,000 examples so far.

The basements of museums are simply not large enough to store the artifacts that are likely to be discovered in the future. There is not enough money even to

- (40) catalogue the finds; as a result, they cannot be found again and become as inaccessible as if they had never been discovered. Indeed, with the help of a computer, sold artifacts could be more accessible than are the pieces stored in bulging museum basements. Prior to sale, each could be photographed and the list of the purchasers could be maintained on the computer. A purchaser could even be required to agree to return the piece if it should become needed for scientific purposes. It would be unrealistic to suggest that illegal digging would stop if artifacts were sold on the open market. But the demand for the clandestine product would be substantially reduced. Who would want an unmarked pot when another was available whose provenance was known, and that was dated stratigraphically by the professional archaeologist who excavated it?

13 Which of the following is mentioned in the passage as a disadvantage of storing artifacts in museum basements?

- ☐ Museum officials rarely allow scholars access to such artifacts.
- ☐ Space that could be better used for display is taken up for storage.
- ☐ Artifacts discovered in one excavation often become separated from each other.
- ☐ Such artifacts are often damaged by variations in temperature and humidity.
- ☐ Such artifacts' often remain uncatalogued and thus cannot be located once they are put in storage.

14

The author implies that all of the following statements about duplicate artifacts are true EXCEPT:

- ☐ A market for such artifacts already exists.
- ☐ Such artifacts seldom have scientific value.
- ☐ There is likely to be a continuing supply of such artifacts.
- ☐ Museums are well supplied with examples of such artifacts.
- ☐ Such artifacts frequently exceed in quality those already catalogued in museum collections.

15 The author's argument concerning the effect of the official sale of duplicate artifacts on illegal excavation is based on which of the following assumptions?

- ☐ Prospective purchasers would prefer to buy authenticated artifacts.
- ☐ The price of illegally excavated artifacts would rise.
- ☐ Computers could be used to trace sold artifacts.
- ☐ Illegal excavators would be forced to sell only duplicate artifacts.
- ☐ Money gained from selling authenticated artifacts

16 The author anticipates which of the following initial objection: to the adoption of his proposal?

- ☐ Museum officials will become unwilling to store artifacts.
- ☐ An oversupply of salable artifacts will result and the demand for them will fall.
- ☐ Artifacts that would have been displayed in public places will be sold to private collectors.
- ☐ Illegal excavators will have an even larger supply of artifacts for resale.
- ☐ Counterfeiting of artifacts will become more commonplace.



17

The primary purpose of the passage is to propose

- ☐ an alternative to museum display of artifacts
- ☐ a way to curb illegal digging while benefiting the archaeological profession
- ☐ a way to distinguish artifacts with scientific value from those that have no such value
- ☐ the governmental regulation of archaeological sites
- ☐ a new system for cataloguing duplicate artifacts

18

The author mentions the excavation (lines 31-34) to emphasize which of the following points?

- ☐ Ancient lamps and pottery vessels are less common, although more rare, than royal seal impressions.
- ☐ Artifacts that are very similar to each other present cataloguing difficulties to archaeologists.
- ☐ Artifacts that are not uniquely valuable, and therefore could be sold, are available in large quantities.
- ☐ Cyprus is the most important location for unearthing large quantities of salable artifacts.
- ☐ Illegal sales of duplicate artifacts are wide-spread, particularly on the island of Cyprus.

What Methods Do Andean Farmers Use?

(5) Public debate around climate change and its effects on agriculture tends to focus on the large-scale industrial farms of the North. Farmers who work on a small scale and use traditional methods have largely been ignored. However, as the world slowly comes to terms with the threat of climate change, Native farming traditions will warrant greater attention.

(10) In the industrial model of agriculture, one or two crop varieties are grown over vast areas. Instead of trying to use local resources of soil and water optimally and sustainably, the natural environment is all but ignored and uniform growing conditions are fabricated through large-scale irrigation and the intensive use of artificial fertilizers and pesticides. For example, a handful of basically similar potato varieties, all of which require nearly identical soil conditions, temperature, rainfall, and growing seasons, account for almost all global production. When these global crops are no longer suited to the environment in which they are grown, when their resistance to disease and pests begins to fail, or the climate itself changes, the best way to rejuvenate the breeding stock will be to introduce new genetic material from the vast diversity of crop varieties still maintained by indigenous peoples.

(25) In contrast to the industrial model, Andean and other Andean crops such as squash and beans grown by Native farmers exhibit extraordinary genetic diversity, due to the need to adapt crops to the extraordinary climatic diversity of the region. Along the two axes of latitude and altitude, the Andes encompasses fully two-thirds of all possible combinations of climate and geography found on Earth. The Andean potato has been adapted to every environment except the depth of the rainforest or the frozen peaks of the mountains. Today, facing the likelihood of major disruptions to the climatic conditions for agriculture worldwide, indigenous farmers provide a dramatic example of crop adaptation in an increasingly extreme environment. More importantly, Native farmers have also safeguarded the crop diversity essential for the future adaptations.

19 The passage states that which of the following is true of the small number of potato varieties that account for most of the potatoes produced on Earth currently?

- ☐ They are grown in the Andean region.
- ☐ They all require very similar soil and climate conditions.
- ☐ They are no longer suited to their environment.
- ☐ They are based on genetic material from crops developed by indigenous peoples.
- ☐ They make optimal use of available soil and water resources.

20

What is the main idea of the first paragraph?

- ☐ Attention to Native farming practices will lead to greater awareness of the threat of climate change.
- ☐ Popularity of small-scale farming in the North will lead to greater attention to Native farming practices.
- ☐ Global demand for food will lead to increasing efficiency of large-scale farming in the North.
- ☐ It will be worthwhile to include a greater focus on Native farming practices in public discussions concerning the threat of climate change.
- ☐ Despite potential climate change, public debate will have little effect on industrial farming practices.

21 In the second paragraph, the information about potato-growing practices in the industrial model of agriculture serves to:

- ☐ give an example of a potential problem that Native farming practices could help to alleviate.
- ☐ show the likely global consequences of a possible food shortage caused by industrial farming practices.
- ☐ show how pests and disease are less effectively resisted by crops grown in the industrial farming model.
- ☐ give an example of how public debate has had little effect on the agricultural practices of the North.
- ☐

22

As it is used in the passage, the underlined word fabricated most nearly means:

- ☐ woven.
- ☐ falsely stated.
- ☐ fully clothed.
- ☐ manufactured.
- ☐ unwrapped.



A recent study has provided clues to predator-prey dynamics in the late Pleistocene era. Researchers compared the number of tooth fractures in present-day carnivores with tooth fractures in carnivores that lived 36,000 to 10,000 years ago and that were

- (5) preserved in the Rancho La Brea tar pits in Los Angeles. The breakage frequencies in the extinct species were strikingly higher than those in the present-day species. In considering possible explanations for this finding, the researchers dismissed demographic bias because older individuals were not
- (10) overrepresented in the fossil samples. They rejected preservational bias because a total absence of breakage in two extinct species demonstrated that the fractures were not the result of abrasion within the pits. They ruled out local bias because breakage data obtained from other Pleistocene sites
- (15) were similar to the La Brea data. The explanation they consider most plausible is behavioral differences between extinct and present-day carnivores -- in particular, more contact between the teeth of predators and the bones of prey due to more thorough consumption of carcasses by the extinct species. Such
- (20) thorough carcass consumption implies to the researchers either that prey availability was low, at least seasonally, or that there was intense competition over kills and a high rate of carcass theft due to relatively high predator densities.

23

According to the passage, compared with Pleistocene carnivores in other areas, Pleistocene carnivores in the La Brea area

- ☐ included the same species, in approximately the same proportions
- ☐ had a similar frequency of tooth fractures
- ☐ populated the La Brea area more densely
- ☐ consumed their prey more thoroughly
- ☐ found it harder to obtain sufficient prey

24

According to the passage, if the researchers had found that two extinct carnivore species were found with tooth breakage, the researchers would have concluded

- ☐ the difference in breakage frequencies could have been the result of damage to the fossil remains in the La Brea pits
- ☐ the fossils in other Pleistocene sites could have higher breakage frequencies than do the fossils in the La Brea pits
- ☐ Pleistocene carnivore species probably behaved very similarly to one another with respect to consumption of carcasses
- ☐ all Pleistocene carnivore species differed behaviorally from present-day carnivore species
- ☐ predator densities during the Pleistocene era were extremely high

25

The primary purpose of the passage is to

- ☐ present several explanations for a well-known fact
- ☐ suggest alternative methods for resolving a debate
- ☐ argue in favor of a controversial theory
- ☐ question the methodology used in a study
- ☐ discuss the implications of a research finding

26

According to the passage, the researchers believe that the high frequency of tooth breakage in carnivores found at La Brea was caused primarily by

- ☐ the aging process in individual carnivores
- ☐ contact between the fossils in the pits
- ☐ poor preservation of the fossils after they were removed from the pits
- ☐ the impact of carnivores' teeth against the bones of their prey
- ☐ the impact of carnivores' teeth against the bones of

27

The researchers' conclusion concerning the absence of demographic bias would be most seriously undermined if it were found that

- ☐ the older an individual carnivore is, the more likely it is to have a large number of tooth fractures
- ☐ the average age at death of a present-day carnivore is greater than was the average age at death of a Pleistocene carnivore
- ☐ in Pleistocene carnivore species, older individuals consumed carcasses as thoroughly as did younger individuals
- ☐ the methods used to determine animals' ages in fossil samples tend to misidentify many older individuals as younger individuals
- ☐ data concerning the ages of fossil samples cannot provide reliable information about behavioral differences between extinct carnivores and present-day carnivores



**For Core Frameworks and More Video Explanations
By GMATPill, Sign Up For the GMAT Pill
Reading Comprehension Pill**

Official Guide 12th Edition GMAT Quant Questions By Type



Topic	Official Guide 12th Edition Concept Pages	Actual Practice Questions
Fractions, Real Numbers, and Decimals	109-112, 141	Problem Solving: #1, 4, 22, 24, 29, 35, 37, 43, 45, 50, 56, 74, 75, 79, 89, 95, 101, 114, 138, 141, 154, 175, 176, 181, 186, 203, 225 Data Sufficiency: #1, 5, 9, 11, 22, 27, 31, 43, 46, 47, 54, 64, 68, 69, 80, 86, 95, 99, 108, 115, 159, 161, 167, 168
Percent, Mixtures, Sets	113-114, 142-144	Problem Solving: #8, 10, 13, 17, 19, 47, 60, 64, 78, 92, 94, 111, 115, 123, 124, 128, 131, 139, 151, 187, 193, 200, 202, 220 Data Sufficiency: #2, 7, 21, 33, 37, 52, 55, 63, 67, 79, 89, 142, 143
Rates and Word Problems	140	Problem Solving: #6, 26, 59, 77, 81, 83, 85, 90, 120, 127, 140, 149, 153, 155, 163, 165, 166, 167, 170, 178, 182, 183, 195, 204, 206, 211, 221, 223 Data Sufficiency: #4, 10, 14, 23, 25, 39, 40, 50, 59, 61, 62, 70, 77, 85, 87, 92, 101, 102, 103, 104, 113, 118, 120, 123, 124, 126, 127, 138, 145, 152, 155, 158, 174
Ratios	113	Problem Solving: #20, 21, 31, 34, 52, 55, 61, 63, 66, 76, 80, 86, 96, 103, 109, 118, 162, 169 Data Sufficiency: #38, 44, 48, 58, 78, 111, 163
Number Properties	108	Problem Solving: #3, 7, 23, 36, 40, 65, 72, 82, 87, 106, 107, 110, 142, 159, 185, 198, 217, 219, 224 Data Sufficiency: #6, 12, 16, 17, 41, 73, 76, 82, 90, 98, 106, 110, 128, 169, 171, 172
Exponents	114, 125	Problem Solving: #11, 15, 28, 32, 46, 51, 54, 73, 98, 104, 108, 133, 161, 164, 190, 216, 226 Data Sufficiency: #66, 151, 153, 166
Algebra and Functions	120-121, 126-127	Problem Solving: #68, 84, 117, 137, 148, 150, 208, 213, 230 Data Sufficiency: #24, 26, 36, 83, 150, 170
Equations / Inequalities	121-126	Problem Solving: #2, 38, 41, 44, 49, 58, 70, 71, 91, 97, 100, 112, 119, 130, 144, 168, 172, 173, 196, 215, 218, 222, 227 Data Sufficiency: #8, 13, 15, 30, 35, 49, 51, 54, 60, 71, 72, 88, 97, 112, 131, 137, 154, 156, 162, 165
Geometry	127-134	Problem Solving: #16, 18, 33, 48, 53, 62, 102, 113, 134, 145, 147, 152, 160, 177, 189, 197, 209, 212 Data Sufficiency: #18, 20, 29, 34, 42, 56, 74, 91, 96, 109, 114, 117, 122, 132, 135, 140, 144, 148, 157, 160, 173
Stats	114-116	Problem Solving: #5, 14, 27, 57, 69, 93, 99, 132, 180, 184, 199, 201, 207 Data Sufficiency: #28, 32, 53, 81, 84, 93, 105, 116, 129, 134, 136, 141, 146, 147
Comb		

The GMAT Pill Study Method

Quant: Problem Solving Pill

Questions and Video Explanations
+ Formula Sheets



1

Algebra

If $x \neq 0$, then $\frac{\sqrt{x^2}}{x} =$

- ☐ -1
- ☐ 0
- ☐ 1
- ☐ x
- ☐ $\frac{|x|}{x}$

[See Video Explanation](#)

2

Geometry

If two sides of a triangle have lengths 2 and 5, which of the following could be the perimeter of the triangle?

- I. 9
- II. 15
- III. 19

- ☐ None
- ☐ I only
- ☐ II only
- ☐ II and III only
- ☐ I, II, and III

[See Video Explanation](#)

3

Number Properties

If $n + xy = n$ and x is not equal to 0, which of the following must be true?

- ☐ $x > y$
- ☐ $x + y = 0$
- ☐ $y = 0$
- ☐ $x - y = 0$
- ☐

4

Number Properties

If n denotes a number to the left of 0 on the number line such that the square of n is less than $\frac{1}{100}$, then the reciprocal of n must be

- ☐ less than -10
- ☐ between -1 and $-\frac{1}{10}$
- ☐ between $-\frac{1}{10}$ and 0
- ☐ between 0 and $\frac{1}{10}$



[Explanation](#)

5

Number Properties

The product X of two prime numbers is between 17 and 55. If one of the prime numbers is greater than 2 but less than 6 and the other is greater than 13 but less than 25, then $X =$

- ☐ 18
- ☐ 24
- ☐ 34
- ☐ 44
- ☐ 51

[See Video Explanation](#)

6

Sequences

In the infinite sequence $a_1, a_1, a_1, ?, a_n, ?$, each term after the first is equal to twice the previous term. If $a_5 - a_2 = 12$, what is the value of a_1 ?

- ☐ 4
- ☐ $\frac{24}{7}$
- ☐ 2
- ☐ $\frac{12}{7}$
- ☐ $\frac{6}{7}$

[See Video Explanation](#)

7

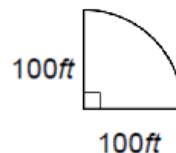
Algebra

If $xy + z = x(y + z)$, which of the following must be true?

- ☐ $x = 0$ and $z = 0$
- ☐ $x = 1$ and $y = 1$
- ☒ $y = 1$ and $z = 0$
- ☐ $x = 1$ or $y = 0$
- ☐ $x = 1$ or $z = 0$

8

Geometry



The figure shown represents a piece of land that is in the shape of a quarter circle. If the land is enclosed by a fence, which of the following is closest to the length, in feet, of the fence?

- ☐ 278
- ☐ 341
- ☐ 357



9

Sequences

If a equals the sum of the even integers from 2 to 200, inclusive, and b equals the sum of the odd integers from 1 to 199, inclusive, what is the value of $a - b$?

- ☐ 10
- ☐ 100
- ☐ 190
- ☐ 200
- ☐ 210

[See Video Explanation](#)

10

Exponents

If $(500)(7,000) = (350)(100^x)$, what is the value of x ?

- ☐ 5
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1

[See Video Explanation](#)

11

Hypothetical Formulas

For all positive integers m , $\#m\# = 3m$ when m is odd and $\#m\# = .5m$ when m is even. Which of the following is equivalent to $(\#9\#)(\#6\#)$?

- ☐ $\#81\#$
- ☐ $\#54\#$
- ☐ $\#36\#$
- ☐ $\#27\#$
- ☐ $\#18\#$

12

Algebra

Sarah paid a sales tax of 8 percent on her purchase. If the sales tax had been only 5 percent, she would have paid \$12 less in sales tax on her purchase. What was the total amount that Sarah paid for her purchase including sale tax?

- ☐ \$368
- ☐ \$380
- ☐ \$400
- ☐ \$420



13

Roots

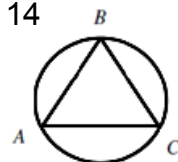
$\sqrt{184,513}$ is between

- ☐ 100 and 200
- ☐ 200 and 300
- ☐ 300 and 400
- ☐ 400 and 500
- ☐ 500 and 600

[See Video Explanation](#)

14

Geometry



In the figure above, equilateral triangle ABC is inscribed in the circle. If the length of arc ABC is 44, what is the approximate diameter of the circle?

- ☐ 12
- ☐ 15
- ☐ 18
- ☐ 21
- ☐ 24

[See Video Explanation](#)

15

Inequalities

Which of the following inequalities has a solution set that, when graphed on the number line, is a single line segment of finite length?

- ☐ $x^4 \geq 1$
- ☐ $x^3 \leq 27$
- ☐ $x^2 \geq 16$
- ☐ $2 \leq |x| \leq 5$
- ☐ $2 \leq 3x + 4 \leq 6$

16

Number Properties

If $0 < r < 1 < s < 2$, which of the following must be less than 1?

- I. r/s
- II. rs
- III. $s - r$

- ☐ I only
- ☐ II only
- ☐ III only
- ☐ I and II



17

Algebra

The total price of a basic TV and a TV stand was \$1,500. If the same TV had been purchased with a next generation 3D TV whose price was \$2,000 more than the price of the basic TV, then the price of the TV stand would have been one eighth of that total. What was the price of the basic TV?

- ☐ \$900
- ☐ \$1,000
- ☐ \$1,100
- ☐ \$1,200
- ☐ \$1,300

[See Video Explanation](#)

18

Factorials

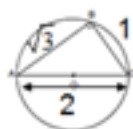
Which of the following is an integer?

- I. $\frac{12!}{6!}$ ☐ I only
- II. $\frac{12!}{7!}$ ☐ II only
- III. $\frac{12!}{7!5!}$ ☐ III only
- ☐ I and II only
- ☐ I, II, and III

[See Video Explanation](#)

19

Geometry



In the figure above, the radius of the circle with center O is 1 and $BC = 1$. What is the area of the triangular region ABC ?

- ☐ $\frac{\sqrt{2}}{2}$
- ☐ $\frac{\sqrt{3}}{2}$
- ☐ 1
- ☐ $\frac{3}{2}$
- ☐ $\frac{3\sqrt{3}}{2}$

20

Geometry

A thin piece of wire 40 meters long is cut into two pieces. One piece is used to form a circle with radius r , and the other is used to form a square. No wire is left over. Which of the following represents the total area, in square meters, of the circular and the square regions in terms of r ?

- ☐ πr^2
- ☐ $\pi r^2 + 10$
- ☐ $\pi r^2 + \frac{1}{4} \pi^2 r^2$
- ☐ $\pi r^2 + (40 - 2\pi r)^2$



21

Algebra

The average (arithmetic mean) of 20, 40, and 60 is 5 more than the average of 10, 70, and what number?

- ☐ 15
- ☐ 25
- ☐ 35
- ☐ 45
- ☐ 55

[See Video Explanation](#)

22

Wordy Word Problems

To celebrate a colleague's retirement, the T coworkers agreed to share equally the cost of a catered lunch. If the lunch costs a total of x dollars and S of the coworkers fail to pay their share, which of the following represents the additional amount, in dollars, that each of the remaining coworkers would have to pay so that the cost of the lunch is completely paid?

- ☐ $\frac{x}{T}$
- ☐ $\frac{x}{T-S}$
- ☐ $\frac{Sx}{T-S}$
- ☐ $\frac{Sx}{T(T-S)}$
- ☐ $\frac{x(T-S)}{T}$

[See Video Explanation](#)

23

Fractional Exponents

If $\left(\frac{1}{5}\right)^m \left(\frac{1}{4}\right)^{18} = \frac{1}{2(10)^{35}}$, then $m =$

- ☐ 17
- ☐ 18
- ☐ 34
- ☐ 35

24

Exponents

If $(5^{21})(4^{11}) = (2)(10^x)$, what is the value of x ?

- ☐ 11
- ☐ 21
- ☐ 22
- ☐ 23



25

Word Word Problems

Alice's take-home pay last year was the same each month, and she saved the same fraction of her take-home pay each month. The total amount of money that she had saved at the end of the year was 3 times the amount of that portion of her monthly take-home pay that she did not save. If all the money that she saved last year was from her take-home pay, what fraction of her take-home pay did she save each month?

- ☐ $\frac{1}{2}$
- ☐ $\frac{1}{3}$
- ☐ $\frac{1}{4}$
- ☐ $\frac{1}{5}$
- ☐ $\frac{1}{6}$

[See Video Explanation](#)

26

Functions

For which of the following functions f is $f_{(a+b)} = f_{(a)} + f_{(b)}$ for all positive numbers a and b ?

- ☐ $f_{(x)} = x^2$
- ☐ $f_{(x)} = x + 1$
- ☐ $f_{(x)} = \sqrt{x}$
- ☐ $f_{(x)} = \frac{2}{x}$
- ☐ $f_{(x)} = -3x$

[See Video Explanation](#)

27

Functions

For all numbers x such that $x \neq 1$, if $g_{(x)}$ is defined by

$$g_{(x)} = \frac{x^2 + 2}{x - 1}, \text{ then } \left(\frac{1}{g_{(2)}} \right) \left(\frac{1}{g_{(x)}} \right) =$$

- ☐ $\frac{6(x-1)}{x^2 + 2}$
- ☐ $\frac{6(x^2 + 2)}{x - 1}$
- ☐ $\frac{x^2 + 2}{2(x - 1)}$
- ☐ $\frac{x - 1}{6}$
- ☐ $\frac{x}{6}$

28

Roots

If $a > b > 0$, then $\sqrt{a^2 - b^2} =$

- ☐ $a + b - \sqrt{2ab}$
- ☐ $a - b + \sqrt{2ab}$
- ☐ $\sqrt{(a - b)^2 - 2ab}$
- ☐ $(\sqrt{a + b})(\sqrt{a - b})$
- ☐ $(\sqrt{a} + \sqrt{b})(\sqrt{a} - \sqrt{b})$



29

Exponents

What is the value of this expression?

$$\frac{1001^2 - 999^2}{101^2 - 99^2}$$

- ☐ 1
- ☐ 5
- ☐ 10
- ☐ 100
- ☐ 101

[See Video Explanation](#)

30

Geometry

Points A, B, and C have xy-coordinates (2,0), (8,12), and (10,12), respectively. Points X, Y, and Z have xy-coordinates (6,0), (8,4), and (10,0), respectively.

What fraction of the area of triangle ABC is the area of triangle XYZ?

- ☐ 1/9
- ☐ 1/8
- ☐ 1/6
- ☐ 1/5
- ☐ 1/3

[See Video Explanation](#)

31

Geometry

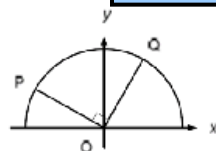
The figure here is a ring with a thickness shown in black. If the radius of the ring is r and the thickness of the ring is t , then which of the following expressions best describes the area of the ring?



- ☐ $\pi(r-t)^2$
- ☐ $\pi(r^2-t)^2$
- ☐ $2\pi(r-t)$
- ☐ $\pi(r-t)$
- ☐ 1

32

Geometry



In the figure above, points P and Q lie on the circle with center O and have xy coordinates $(-\sqrt{3}, 1)$ and (s, t) , respectively. What is the value of s ?

- ☐ $\frac{1}{2}$
- ☐ 1
- ☐ $\sqrt{2}$



33

Geometry

What is the greatest possible area of a triangular region with one vertex at the center of a circle of radius 1 and the other two vertices on the circle?

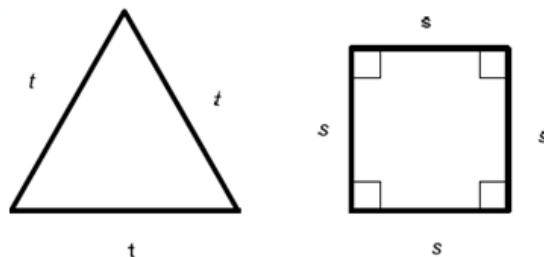
- ☐ $\frac{\sqrt{3}}{4}$
- ☐ $\frac{1}{2}$
- ☐ $\frac{\pi}{4}$
- ☐ 1
- ☐ $\sqrt{2}$

[See Video Explanation](#)

34

Geometry

If the two regions above have the same area, what is the ratio of t to s ?



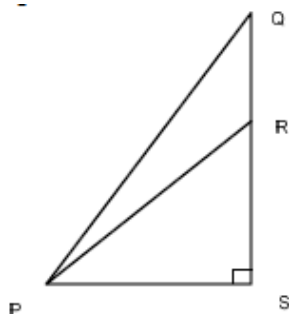
- ☐ 2:3
- ☐ 16:3
- ☐ $4:\sqrt{3}$
- ☐ $2:\sqrt[4]{3}$
- ☐ $4:\sqrt[3]{4}$

[See Video Explanation](#)

35

Geometry

In the figure to the right, the sum of the measures of angles PQR and PRQ is 150 degrees. How many degrees greater is the measure of angle PRS than the measure of angle PQR?



- ☐ 20
- ☐ 30
- ☐ 40
- ☐ 5
- ☐ 6

36

Geometry

The perimeter of a certain isosceles right triangle is $32 + 32\sqrt{2}$. What is the length of the hypotenuse of the triangle?

- ☐ 16
- ☐ 32
- ☐ $8\sqrt{3}$
- ☐ $8\sqrt{2}$



37

Number Properties

What is the sum of the different positive prime factors of 660?

- ☐ 5
- ☐ 10
- ☐ 15
- ☐ 17
- ☐ 21

[See Video Explanation](#)

38

Combo/Permutation

Jack and Jill work at a hospital with 4 other workers. For an interview, 2 of the 6 workers will be randomly chosen to be interviewed. What is the probability that Jack and Jill will both be chosen?

- ☐ 1/3
- ☐ 1/4
- ☐ 1/15
- ☐ 3/8
- ☐ 2/3

[See Video Explanation](#)

39

Number Properties

If k and t are integers and $k^2 - t^2$ is an odd integer, which of the following must be an even integer?

- I. $k + t + 2$
- II. $k^2 + 2kt + t^2$
- III. $k^2 + t^2$

- ☐ None
- ☐ I only
- ☐ II only
- ☐ III only
- ☐ I, II

40

Combo/Permutations

A committee of three people is to be chosen from four teams of two. What is the number of different committees that can be chosen if no two people from the same team can be selected for the committee?

- ☐ 20
- ☐ 22
- ☐ 26
- ☐ 30
- ☐ 32

41

Combo/Permutations

A certain team consists of 4 professors and 6 teaching assistants. How many different teams of 3 can be formed in which at least one member of the group is a professor? (Two groups are considered different if at least one group member is different.)

- ☐ 48
- ☐ 100
- ☐ 120
- ☐ 288
- ☐ 600

[See Video Explanation](#)

42

Combo/Permutations

A cube marked 1, 2, 3, 4, 5, and 6 on its six faces. Three faces are painted blue, and green are used to paint the six faces of the cube. If the adjacent faces are painted with the different colors, in how many ways can the cube be painted?

- ☐ 3
- ☐ 6
- ☐ 8
- ☐ 12
- ☐ 27

[See Video Explanation](#)

43

Algebra

A bowl was filled with 10 ounces of water, and 0.008 ounce of the water evaporated each day during a 50-day period. What percent of the original amount of water evaporated during this period?

- ☐ 0.004%
- ☐ 0.04%
- ☐ 0.40%
- ☐ 4%
- ☐

44

Exponents

If x is the product of the positive integers from 1 to 9, inclusive, and if i , k , m , and p are positive integers such that $x = 2^i 3^k 5^m 7^p$, then $i + k + m + p =$

- ☐ 4
- ☐ 7
- ☐ 8
- ☐ 11



45

Mixture Problems

A puppy on a controlled diet is fed daily 600 grams of a mixture of two foods, food X and food Y. Food X contains 10% protein and food Y contains 15% protein. If the puppy's diet provides exactly 76 grams of protein daily, how many grams of food X are in the mixture.

- A) 200
- B) 280
- C) 300
- D) 320
- E) 400

[See Video Explanation](#)

46

Mixture Problems

24 oz of Juice P and 25 oz of Juice V are mixed to make smoothie X and Y. The ratio of P to V in smoothie X is 4 to 1, in Y is 1 to 5. How many ounces of Juice P is contained in the Smoothie X?

- A) 5
- B) 10
- C) 15
- D) 20
- E) 25

[See Video Explanation](#)

47

Mixture Problems

In what ratio must rice at \$9.30/kg be mixed with rice at \$10.80/kg So that the mixture is worth \$10/kg?

- A) 1:3
- B) 9:4
- C) 8:7
- D) 11:9
- E) 11:7

48

Mixture Problems

10kg of a mixture contains 30% sand and 70% soil. In order to make the mixture contain equal quantities of soil and sand, how much of the mixture is to be removed and replaced with pure sand?

- A) $\frac{25}{7}$
- B) $\frac{20}{7}$
- C) 2
- D) 3
- E) $\frac{17}{13}$



49

Tables

Of the 50 high school students, 40 percent will be assigned to team A and remaining 60 percent to team B. However 70% of the researchers prefer team A and 30 % prefer team B.

What is the lowest number of high school students who will not be assigned to the team they prefer?

- A) 10
- B) 15
- C) 20
- D) 25
- E) 30

[See Video Explanation](#)

50

Rates

Of the 50 high school students, 40 percent will be assigned to math class and remaining 60 percent to reading class. However 70% of the researchers prefer team A and 30 % prefer team B.

What is the highest number of high school students who will not be assigned to the team they prefer?

- A) 30
- B) 35
- C) 40
- D) 45
- E) 50

[See Video Explanation](#)

51

Rates

A taxi leaves the Point A 5 hours after a bus left the same spot. The bus is traveling 30 mph slower than the taxi. Find the speed of the taxi, if it overtakes the bus in three hours.

- A) 30
- B) 36
- C) 42
- D) 48
- E) 50

52

Rates

Two cars start at the same time from opposite ends of a highway that is 45 miles long. One car is riding at 14 mph and the second cyclist is riding at 16 mph. How long after they begin will they meet?

- A) 1
- B) 1.2
- C) 1.25
- D) 1.35
- E) 1.5



53

Exponents

What is the greatest prime factor of $8^{12} - 2^{30}$?

- ☐ 2
- ☐ 3
- ☐ 5
- ☐ 7
- ☐ 11

[See Video Explanation](#)

54

Venn Diagram

Of the 200 students at University XYZ majoring in one or more engineering disciplines, 130 are majoring in electrical and 150 are majoring in mechanical. If at least 30 of the students are not majoring in either electrical or mechanical, the number of students majoring in both electrical and mechanical could be any of the following.

- ☐ 30 to 70
- ☐ 70 to 100
- ☐ 110 to 130
- ☐ 130 to 150
- ☐ 150 to 170

[See Video Explanation](#)



For Concept Videos and More
Video Explanations By **GMATPill**,
Sign Up For the GMAT Pill Problem Solving Pill

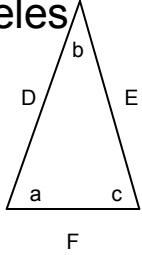
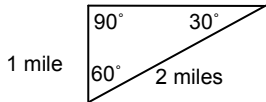
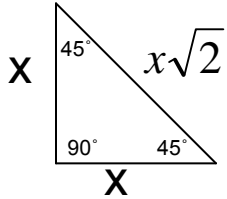
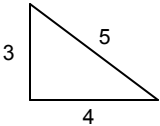
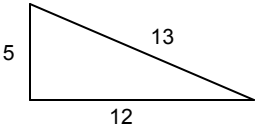
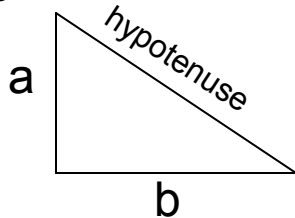
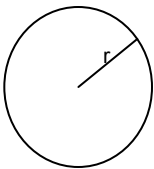


Answer Key:

- 1) E
- 2) A
- 3) C
- 4) A

- 6) E
- 7) E
- 8) C
- 9) D

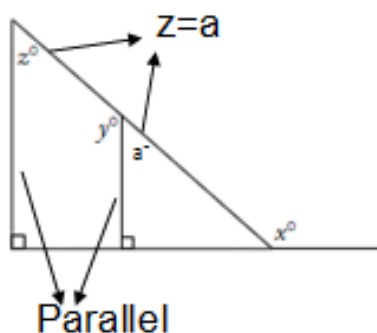
- 11) D
- 12) E

[here.](#)

<p>Isosceles</p> 	<p>If angle a = c, then side length D = E When this condition is met, the triangle is called an isosceles</p>	<p>Triangle A</p> $\frac{1}{2} \text{base} * \text{height}$  $x - 2x - x\sqrt{3}$ <p>Right Triangle</p>
<p>Right Isosceles</p> 	<p>A right isosceles is a specific type of isosceles triangle where the angles are 45-45-90 as shown.</p>	 <p>Know these triangle ratios!</p> 
<p>Right Isosceles</p> 	<p>Hypotenuse = ? $a^2 + b^2 = c^2$ Hypotenuse = $\sqrt{a^2 + b^2}$</p>	
<p>Circle</p> 	<p>Area = πr^2 Circumference = $\pi * \text{diameter}$ (Rhymes: “pi” “di”)</p>	
<p>Cylinder/Sphere</p> 	<p>Volume of cylinder = Area of circle * how far that circle extends Volume of cylinder = $\pi r^2 * \text{height}$</p>	<p>See Video Explanation</p>  <p>PILL.com</p>

Parallel Lines and Angles

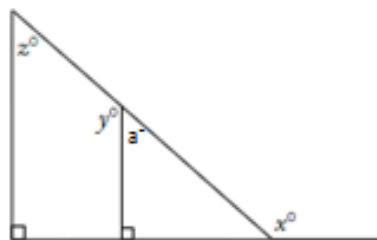
Parallel Lines



You know the two lines are parallel because of the 90 degree marks at the bottom left.

When this is the case, then you can just eyeball and confidently say "angle z" = "angle a"

Angle Diagrams



If $z = 40$, then what's the sum of x and y ?

Well, we know

- 1) $z = a = 40$
 - 2) $x = 90 + a$ (common concept tested)
 - 3) $y + a = 180$ (straight line)
- Just plug in 40 into #2 and #3, and you'll get
 $x = 130$
 $y = 180 - 40 = 140$

So $x + y = 130 + 140 = 270$

Sum of Sequences

Sequences: Sum, Average, # of terms

Sum: What is sum of all multiples of 3 from 1 to 100?

Average: What is the average of all these multiples of 3?

of Terms: How many numbers are multiples of 3 between 1 and 100?

RULE: avg value of each term = average (1st term and last term)

See Video Explanation

Step 1: Find # of terms→Start small, think:

3 is the 1st term

30 is the 10th term

90 is the 30th term

99 is the 33rd term→ so there are 33 terms

Step 2: The easiest way to find the sum is to multiply the # of terms by the average value of each term. So we need to find the average value!

So in this case, $\text{avg}(3 \text{ and } 99) = (3+99)/2 = 102/2 = 51 = \text{average term}$

Step 3: $\text{Sum} = \# \text{ terms} * \text{avg value}$
 $= (\# \text{ from Step 1}) * (\# \text{ from step 2})$
 $= 33 \text{ terms} * 51 = 1683$



Sum of Sequences

Sequences: Sum, Average, # of terms

Sum: What is sum of all even numbers from 1 to 100?

Average: What is the average of all these multiples of 2?

of Terms: How many numbers are multiples of 2 between 1 and 100?

See Video Explanation

Step 1: Find # of terms:

2 is the 1st term

100 is the 50th term → so there are 50 terms

Step 2: The easiest way to find the sum is to multiply the # of terms by the average value of each term. So we need to find the average value!

RULE: avg value of each term = average (1st term and last term)

So in this case, $\text{avg}(2 \text{ and } 100) = (2+100)/2 = 102/2 = 51 = \text{average term}$

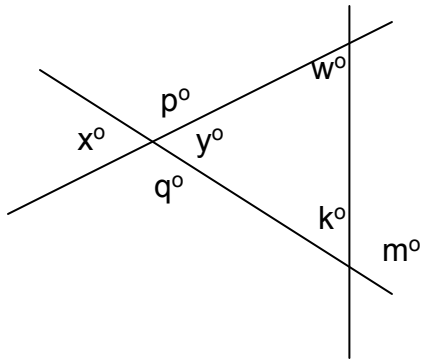
Step 3: $\text{Sum} = \# \text{ terms} * \text{avg value}$
 $= (\# \text{ from Step 1}) * (\# \text{ from step 2})$
 $= 50 \text{ terms} * 51 = 2550$



L.com

Angles

Lines



You should know...

$$x=y$$

$$p=q$$

$$(x+q)=(q+y)=(p+x)=(p+y)=180$$

$$(y+w+k)=(m+k)=180$$

$$m=y+w \text{ (This one is common!)}$$

See Video Explanation



Combinations/Permutations (n Choose r)

Strategy #1: Count them

How many triplets (teams of 3) can you make in a group of 5 people?

1 2 3 4 5

10 possible triplets

Strategy #2: Use Formula

Q1) How many triplets (teams of 3) can you make in a group of 5 people?

n=total # (5)

r=size of selected group (3)

$$\frac{n!}{r!(n-r)!} = \frac{5!}{3!(5-3)!} = \frac{5!}{3!2!} = \frac{1*2*3*4*5}{(1*2*3)(1*2)} = \frac{4*5}{2} = 10$$

Q2) How many pairs (teams of 2) can you form with 6 people?

n=6

r=2

$$\frac{n!}{r!(n-r)!} = \frac{6!}{2!(6-2)!} = \frac{6!}{2!4!} = \frac{1*2*3*4*5*6}{(1*2)(1*2*3*4)} = \frac{5*6}{2} = 15$$

Math Equations/Relationships

Averages (you should already know this)

Arithmetic Mean = add them all up, divide by the # of items

Median = the middle number of a set of numbers

In a set of 5 (odd #) ascending numbers, the median is the 3rd number.

In a set of 6 (even #) ascending numbers, the median is the average of 3rd and 4th terms

{3, 4, 7, 9}:

$$\text{mean} = (3+4+7+9)/4 = 23/4$$

$$\text{median} = (4+7)/2 = 5.5$$

Ratios

$$\frac{a}{b} = \frac{c}{d}$$

- $a:c = b:d$
- Cross products are equivalent
 - $a*d = b*c$

Exponent Operations

Subtraction: $2^4 - 2^2 = 16 - 12 = 12$

Multiplication: $2^4 (2^2) = 2^6$ [Keep the base, add the exponents!]

Addition: $2^4 + 2^2 = 16 + 4 = 20$

Division: $2^4/2^2 = 2^{4-2} = 2^2$ [Keep the base, subtract the exponents!]

Factorials

$$0! = 1$$

$$4! = 4*3*2*1 = 24$$

$$4! = 4*3! = 24$$

$$5! = 120$$

$$\begin{aligned} \left(\frac{1}{2}\right)^{-3} \left(\frac{1}{8}\right)^{-2} \left(\frac{1}{16}\right)^{-1} &= ? \\ &= (2^{-1})^{-3} (2^{-3})^{-2} (2^{-4})^{-1} \\ &= 2^{3+6+4} = 2^{13} \end{aligned}$$

If all the answer choices are in base 1/2 instead of 2, then convert

$$= \left(\frac{1}{2}\right)^{-13}$$

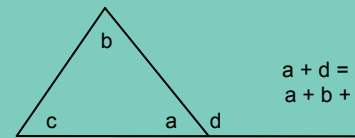
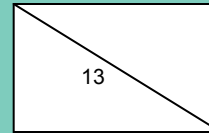
#8: Geometry Formulas

Given diagonal is 13, what is the circumference of the rectangle?

Do you have enough info?

Generally, no. You need to at least know the ratio of the width/length OR be told that the width and length **MUST** be integers.

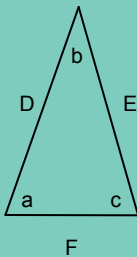
Note: Diagrams on GMAT are NEVER drawn to scale!!



$$d = b + c$$

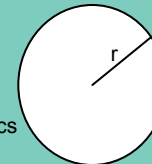
$$a + d = 180 \text{ [straight line]}$$

$$a + b + c = 180 \text{ [triangle]}$$



If 2 sides are same length,
then those angles opposite are equal
[if $a=c \rightarrow D=E$]

Likewise...
If 2 angles are equal,
then the edges opposite of those
angles are of equal length



CIRCLE/Arcs

Circumference = $\pi * di$ [They rhyme!]

Note: Diameter (di) = $2r$

Area of circle = $\pi * r^2$

3D: Volume of Sphere = $\frac{4}{3} \pi * r^3$

Expressions You Should Know Without Thinking

Expression	Exponentials You Should Know Quickly
2^3	8
2^4	16
2^5	32
3^2	9
3^3	27
3^4	81
4^2	16
4^3	64
5^2	25
5^3	125
5^4	625
6^2	36
7^2	49
8^2	64
9^2	81
10^2	100
11^2	121
12^2	144
x^0	1 (always)

$$0! = 1$$

$$D = R * T$$

Distance = Rate * Time

$$(\text{Total \#}) * (\%) = (\text{Actual \#})$$

$$\text{Ex: } 5^3 * 5^x = 5^{3+x}$$

$$5^{-3} = \frac{1}{(5^3)}$$

$$(-2)^2 = 4$$

$$(-2)^3 = -8$$

$$(-2)^4 = 16$$

$$(-2)^5 = -32$$

Odd exponents
keep sign of
base

Fraction	Decimal	Percent
$\frac{1}{100}$	.01	1%
$\frac{1}{50}$	.02	2%
$\frac{1}{25}$	.04	4%
$\frac{1}{20}$	.05	5%
$\frac{1}{10}$	.1	10%
$\frac{1}{8}$	.125	12.5%
$\frac{1}{6}$	.1 $\bar{6}$	$\approx 16.6\%$
$\frac{1}{5}$	.2	20%
$\frac{1}{4}$	.25	25%
$\frac{3}{10}$	.3	30%
$\frac{1}{3}$	.3 $\bar{3}$	$\approx 33.3\%$
$\frac{2}{5}$	.4	40%

Fraction	Decimal	Percent
$\frac{1}{2}$	.5	50%
$\frac{3}{5}$	.6	60%
$\frac{2}{3}$	.6 $\bar{6}$	$\approx 66.6\%$
$\frac{7}{10}$	.7	70%
$\frac{3}{4}$	.75	75%
$\frac{4}{5}$	.8	80%
$\frac{9}{10}$	.9	90%
$\frac{1}{1}$	1	100%
$\frac{5}{4}$	1.25	125%
$\frac{4}{3}$	1.3 $\bar{3}$	$\approx 133\%$
$\frac{3}{2}$	1.5	150%



Pos/Neg Fractional Exponents

$$8^{1/2} = \sqrt{8}$$

$$8^{1/3} = \sqrt[3]{8}$$

$$8^0 = 1$$

$$8^{45} = (2^3)^{45} = 2^{135}$$

$$8^{3/7} = \sqrt[7]{8^3}$$

$$8^{-3} = \frac{1}{8^3} = \frac{1}{(2^3)^3} = \frac{1}{2^9}$$

$$8^{-1/3} = \frac{1}{8^{1/3}} = \frac{1}{\sqrt[3]{8}} = \frac{1}{2}$$

Make sure you are familiar with all formats and switching between them back and forth!

[See Video Explanation](#)

Rates

$$D = R \times T$$

Distance = Rate \times Time

EVERYBODY Knows this formula. Obviously knowing this formula is not going to be enough. The GMAT will test you on variations of this formula

What do you do when there are multiple rates involved??

Rates Must Add Up!

$$R_1 + R_2 = R_{\text{Total}}$$

The Inverse of Times Must Add Up!

$$\frac{1}{T_1} + \frac{1}{T_2} = \frac{1}{T_{\text{Total}}}$$

See Video Explanation



Additional Rules You should know

See Video Explanation

$$\sqrt[n]{x} \geq 0$$

Rule:

$$\sqrt{x^2} = |x|$$

So $\sqrt[4]{81} = 3$ only, not +3 and -3.
Even roots have only a positive value on the GMAT. (well if $x=0$ then it will obviously be 0).

When the GMAT provides the square root sign for an even root, such as a square root, then the only accepted answer is the positive root.

When we see $y = \sqrt{x^2}$

then: $y = |x|$

This means y cannot be negative, but x can be negative

Odd roots will have the same sign as the base of the root

On the exam... $\sqrt[3]{64} = +4$
 $\sqrt[3]{-27} = -3$



Translating fancy word problem

- “There are twice as many Computers as there are printers.”
 - $C=2p$ (NOT $2c = p$!!!!!)
- “There are 10 more grapes than apples, and one fourth as many apples as pears.” Assume g = grape, a = apple, p = pears
 - $G=10+a$
 - $A= (1/4)p$

[See Video Explanation](#)

Translating fancy word problem

If Jack bought a computer for \$1000 more than a generic model, then the price of that computer would have been 8 times the value of the accompanying bonus wireless router, which is $\frac{1}{4}$ th the price of the generic model. What is the price of the computer?

Step 1: Assign letters c = computer, g = generic, b = bonus

Step 2: Reread the paragraph and substitute variables in:

$$c = \$1000 + g$$

$$c = 8b$$

$$b = \left(\frac{1}{4}\right) g$$

[See Video Explanation](#)

Step 3: Identify that there are 3 variables but also 3 unknowns, so it is solvable!



Tricky wordings

- Three Friends sit down to eat 14 slices of Pizza. If two of the Friends eat the same number of slices, and the third eats two more slices than each of the other two, how many slices are eaten by the third friend?
- Step #1: Assign letter variables:
- - f_1 = friend #1
 - f_2 = friend #2
 - f_3 = friend #3
 - $F_1 + f_2 + f_3 = 14$ “Three Friends sit down to eat 14 slices of Pizza.”
 - $F_1 = f_2$ “If two of the Friends eat the same number of slices”
 - $F_3 = 2 + f_1$ “The third eats two more slices than each of the other two”
 - $F_3 = 2 + f_2$ “The third eats two more slices than each of the other two”
 - $F_3 = ?$ “How many slices are eaten third friend?”
- Recognize that you have 3 unknowns, but also more than the necessary 3 equations to solve for everything! So this is solvable!
- Let's do it:
 - $2f_2 + f_3 = 14$
 - $2(f_3 - 2) + f_3 = 14$
 - $3f_3 - 4 = 14$
 - $F_3 = 18/3 = 6$

See Video Explanation

Inequalities (Absolute Value)

Example: $|x-2| < 4$

Whenever you have absolute values on one side, then
There are two possibilities:

1) $x-2 < 4$	→ easy
2) $x-2 > -4$	→ 1) negate the other side AND 2) flip the sign so it faces the other way

Which of the following inequalities is equivalent to $-2 < x < 4$?

- (A) $|x - 2| < 4$
- (B) $|x - 1| < 3$
- (C) $|x + 1| < 3$
- (D) $|x + 2| < 4$
- (E) None of the above

A)	$x < 4 + 2$ $x < 6$	$x > -2$
B)	$x - 1 < 3$ $x < 4$	$x > -3 + 1$ $x > -2$
Same as: $-2 < x < 4$		

See Video Explanation

Divisibility

Divisor	Divisibility Condition	Examples
1	Automatic.	Any integer is divisible by 1.
2	The last digit is even (0, 2, 4, 6, or 8).	1,294: 4 is even.
3	The sum of the digits is divisible by 3. For large numbers, digits may be summed iteratively.	405 $\Rightarrow 4+0+5=9$ and 636 $\Rightarrow 6+3+6=15$ which both are clearly divisible by 3. 16,499,205,854,376 $\Rightarrow 1+6+4+9+9+2+0+5+8+5+4+3+7+6$ sums to 69 $\Rightarrow 6+9=15 \Rightarrow 1+5=6$, which is clearly divisible by 3.
4	The last two digits divisible by 4.	54632: 32 is divisible by 4.
5	The last digit is 0 or 5.	495: the last digit is 5.
6	It is divisible by 2 and by 3.	1,458: $1+4+5+8=18$, so it is divisible by 3 and the last digit is even, hence the number is divisible 6.

[See Video Explanation](#)

What is the difference between Combination and Permutation?

Combination

Order does not matter

Out of 6, pick any 2
(Out of n, pick any r)

Treat (1 with 2) the same as (2 with 1)
This pair counts as 1 combination.

$$\frac{n!}{r! (n-r)!}$$

$$\frac{6!}{2! 4!} = \frac{6*5*4*3*2*1}{(2*1) (4*3*2*1)}$$

Permutation

(Order Matters = More possibilities)

Out of 6, pick any 2
(Out of n, pick any r)

Treat (1 with 2) the same as (2 with 1)
This pair counts as 2 combinations.

Remove r!
In this case 2!

$$\frac{n!}{(n-r)!}$$

$$\frac{6!}{4!} = \frac{6*5*4*3*2*1}{4*3*2*1}$$

See Video Explanation



Nested GMAT Combination Problems

A group of 10 people consists of 3 married couples and 4 single men.
A committee of 4 is to be formed from the 10 people.
How many different committees can be formed if
the committee can consist of at most 1 married couple?

First, look at combinations of GROUPS—then look at individuals later.

Groups:

1. all four are singles
2. two are single and the other two are a married couple
- ~~3. all four are made of 2 married couples~~

Now calculate the INDIVIDUAL combinations by using formula:

$$\frac{n!}{r! (n-r)!}$$

1. $nCr = 4C4$ because out of 4 singles, choose 4 singles
 $(4!) / (4!) = 1$
2. Out of 4 singles, choose 2 singles. Then out of 3 couples, choose 1 couple.
 $(4!) / (2! * 2!) = 4! / 4 = 3 * 2 * 1 = 6$
3. Out of 3 couples, choose 2 couples.





**For Concept Videos and More
Video Explanations By GMATPill,
Sign Up For the GMAT Pill Problem Solving Pill**

The GMAT Pill Study Method

Quant: Data Sufficiency Pill

Questions and Video Explanations
+ Formula Sheets



What was the percent increase of Company A's stock between June 1 and June 30, 2000?

- (1) The stock gained \$5 in value during June 2000.
- (2) The stock rose 12% during the first half of the month.

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

Numbers VS %

[See Video Explanation](#)

What is the value of y ?

- (1) $y - 4 = 1$
- (2) $y^2 = 25$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

Testing Values

[See Video Explanation](#)

Is x a prime number?

- (1) x is an even number.
- (2) x can not be divided evenly by an odd number other than 1.

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

If the average size of 3 accounts is \$1 million, is the smallest account less than \$500,000?

- (1) The largest account is \$1.3 million.
- (2) One of the accounts is \$0.7 million.

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.



[Explanation](#)

Is the product of x and y greater than 30?

- (1) The sum of x and y is greater than 30.
- (2) Each of the variables is greater than 2.

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

5

Testing Values

[See Video Explanation](#)

Which company reported the larger dollar increase in earnings?

- (1) Company A reported that its earnings increased by 10%.
- (2) Company B reported that its earnings increased by 15%.

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

6

Numbers VS %

[See Video Explanation](#)

A pizza recipe calls for cheese and flour in the ratio of 2 grams to 1 gram, respectively. If cheese and flour are the only ingredients in the recipe, how many grams of cheese are used when making a pizza?

- (1) the pizza requires 33 grams of ingredients
- (2) the ratio of the number of grams of flour to the total number of grams used in the recipe is 1:3

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.

x is a positive integer; is $x + 17,283$ odd?

- (1) $x - 192,235,358,935$ is odd
- (2) $x/4$ is not an even integer

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.



How many members of the staff of ABC Derivatives are women from outside the United States?

- (1) one-fourth of the staff at ABC Derivatives are men
- (2) 20% of the staff, or 20 individuals, are men from the U.S.; there are twice as many women from the U.S. as men from the U.S.

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

9

Numbers VS %

[See Video Explanation](#)

Find the fourth consecutive even number

- 1) The sum of the last two numbers is 30
- 2) The sum of the first two numbers is 22

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

10

Number Properties

[See Video Explanation](#)

If x and y are positive integers, is the following cube root an integer? $\sqrt[3]{x + y^2}$

- (1) $x = y^2(y-1)$
- (2) $x=2$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.

Peter can drive to work via the expressway or via the city roads, which is a less delay-prone route to work. What is the difference in the time Peter would spend driving to work via the expressway versus the city roads?

- (1) Peter always drives 60mph, regardless of which route he takes; it takes Peter an hour to drive round-trip to and from work using the city roads
- (2) If Peter travels to and from work on the expressway, he spends a total of $\frac{2}{3}$ of an hour traveling
- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
 - ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
 - ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
 - ☐ Each statement alone is sufficient to answer the question.
 - ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

StudentBounty.com



[Explanation](#)

John is trying to get from point A to point C, which is 20 miles away directly to the northeast; however the direct road from A to C is blocked and John must take a detour. John must travel due north to point B and then drive due east to point C. How many more miles will John travel due to the detour than if he had traveled the direct 20 mile route from A to C?

- (1) The ratio of the distance going north to the distance going east is 4 to 3
- (2) The distance traveled north going the direct route is 16

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

13

Geometry

[See Video Explanation](#)

If w , x , y , and z are the digits of the four-digit number $wxyz$, where $x > 0$, what is the remainder when N is divided by 9?

- (1) $w + x + y + z = 13$
- (2) $N + 5$ is divisible by 9

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

14

Testing Values

[See Video Explanation](#)

x is an integer and x raised to any odd integer is greater than zero; is $w - z$ greater than 5 times the quantity $7^{x-1} - 5^x$?

- (1) $z < 25$ and $w = 7^x$
- (2) $x = 4$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

As a result of dramatic changes in the global currency market, the value of every item in Country X plummeted by 50% from 2000 to 2005. What was the value of a copy of the Moricus Manuscript in Country X's currency in 2000 (Assume that the only variable influencing changes in the value of the book is the value of Country X's currency.)

- (1) The value of Moricus at the end of 2003 was \$30
 - (2) If the value of every item in Country X had plummeted by 50% from 2005 to 2009 the value of the Moricus Manuscript in 2009 would have been \$25
- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
 - ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
 - ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
 - ☐ Each statement alone is sufficient to answer the question.
 - ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

15

If $z = x^n - 19$, is z divisible by 9?

- (1) $x = 10$; n is a positive integer
- (2) $z + 99$ is a multiple of 9

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

17

Exponents

[See Video Explanation](#)

If both x and y are positive integers less than 90, is the sum $x + y$ a multiple of 11?

- (1) $x - y$ is a multiple of 22
- (2) The tens digit and the units digit of x are the same and the units digit of y are the same

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

18

Testing Values

[See Video Explanation](#)

If x is a positive integer, is x divided by 5 an odd integer?

- (1) x contains only odd factors
- (2) x is a multiple of 5

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

19

If the product of X and Y is a positive number, is the sum of X and Y a negative number?

- (1) $X > Y^5$
- (2) $X > Y^6$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.



If y is not zero, is $y^2 + 2y > y^2 + y$?

(1) $y^{\text{odd integer}} > y^{\text{even integer}}$

(2) $y^2 + y - 12 = 0$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

21

Exponents

[See Video Explanation](#)

Is $(2^{y+z})(3^x)(5^y)(7^z) < (90^y)(14^z)$?

(1) y and z are positive integers; $x = 1$

(2) x and z are positive integers; $y = 1$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

22

Exponents

[See Video Explanation](#)

Is $(|x|)^x > x|x|^3$?

(1) $x^2 + 4x + 4 = 0$

(2) $x < 0$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

If $10x + 10y + 16x^2 + 25y^2 = 10 + Z$, what is the value of $x + y$?

(1) $Z = (4x)^2 + (5y)^2$

(2) $x = 1$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

23

Maxine is preparing a pie for the holidays. How much more of substance X does she need than substance Y?

(1) Maxine needs 10 cups of substance X

(2) Maxine needs the substances W, X, Y, and Z in the ratio: 15:5:2:1 and she needs 4 cups of substance Y

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

a, b, c, and d are integers; $abcd \neq 0$; what is $\frac{c}{b}$?

(1) $\frac{c}{b} = \frac{2}{d}$

(2) $b^3a^4c = 27a^4c$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

25

Ratios

[See Video Explanation](#)

How many computers did Michael, a salesman for the computer company Digital Electronics Labs, sell this past year that had more than 4GB of RAM and the Microsoft Windows XP operating system? (Michael sold no computers with exactly 4GB of RAM)

(1) 40% of the 200 total computers that Michael sold had XP and less than 4GB of RAM; these computers represent 80% of the total computers that Michael sold with XP.

(2) 50% of the 200 total computers that Michael sold had XP. Of the computers that Michael sold without XP, half had more than 4GB of RAM while the other half had less than 4GB of RAM.

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

26

Testing Values

[See Video Explanation](#)

If x and y are integers, what is the ratio of 3y to x?

(1) $8x^3 = 27y^3$

(2) $4x^2 = 9y^2$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

27

What is the value of $(n + 1)^2$?

(1) $n^2 - 6n = -9$

(2) $(n-1)^2 = n^2 - 5$

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

If p is a positive integer, is $p + 2 > q$?

(1) $q^2 > p$

(2) $q - p < 0$

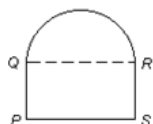
- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ Statements 1 and 2 are not sufficient to answer the question asked and additional data is needed to answer the statements.

29

Exponents

[See Video Explanation](#)

The figure to below shows the shape of a flower bed. Assume QR and RS are integers. If arc QR is a semicircle and PAQRS is a rectangle with $QR > RS$, what is the perimeter of the flower bed?



(1) The perimeter of rectangle PQRS is 28 feet.

(2) Each diagonal of rectangle PQRS is 10 feet long.

- ☐ Statement 1 alone is sufficient but statement 2 alone is not sufficient to answer the question asked.
- ☐ Statement 2 alone is sufficient but statement 1 alone is not sufficient to answer the question asked.
- ☐ Both statements 1 and 2 together are sufficient to answer the question but neither statement is sufficient alone.
- ☐ Each statement alone is sufficient to answer the question.
- ☐ State additi

30

Testing Values

[See Video Explanation](#)

Answer Key:

- | | |
|-------|-------|
| 1) E | 11) A |
| 2) A | 12) C |
| 3) E | 13) D |
| 4) C | 14) D |
| 5) C | 15) A |
| 6) E | |
| 7) A | |
| 8) A | |
| 9) C | |
| 10) B | |

31



For Bonus Brutal Level Data Sufficiency Questions and More Video Explanations By GMATPill, Sign Up For the GMAT Pill Data Sufficiency Pill

How To Ace The GMAT In 1 Month

The GMAT has become one of the most popular exams worldwide and is accepted at virtually every top business school. The competition to get into top business schools is more fierce than ever and so is the desire for a competitive GMAT score to go with a competitive MBA caliber application.

This book provides a preview of the mentality needed to prepare for the GMAT exam in as little time as possible. Also included are various practice problems, some frameworks on how to approach specific types of questions, and video explanations for members of the GMAT Pill Study Method. To learn more about the online video course, visit GMATPill.com.

The GMAT Pill Study Method | www.gmatpill.com

About The Author

Zeke Lee is the founder and president of GMAT Pill (www.gmatpill.com), a GMAT Prep online video course program that teaches the GMAT Pill Study Method through video thought process videos that mimic the private tutoring experience.

Zeke holds management consulting experience with Booz & Company and securities trading experience at hedge funds and investment banks of Wall Street. Zeke graduated from Stanford University and has helped hundreds of students prepare effectively for the GMAT exam.



25794 5