

# GRE<sup>®</sup>

## PRACTICE GENERAL TEST

### IMPORTANT NOTICE

Although this *GRE Practice General Test* is in the paper-based format, it is a valuable practice exercise for the computer-based General Test because question types are the same for both formats.

The information on page 3 does not pertain to the computer-based General Test. For a description of the test and suggested test-taking strategies, see the current *GRE Bulletin* or visit the GRE Web site at [www.gre.org/cbtttest.html](http://www.gre.org/cbtttest.html).



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# Practice General Test

The practice sections that follow are intended to help you become familiar with the paper-based version of the General Test and the test experience. These practice sections will help you take the actual test with greater certainty about your test-taking strategy — such as how much time to spend per question — and with the confidence that familiarity brings.

The practice sections contain many of the kinds of questions that are included in currently used forms of the General Test. However,

the practice test has only six sections, while the actual GRE General Test has seven with trial questions included in one separately timed section of the test. The total time allowed for an actual GRE General Test is 3 1/2 hours. The total time that should be allotted for the practice test is 3 hours. An answer sheet is provided on page 29. Answers to the practice questions are listed on page 31.

The following instructions appear on the back cover of the test book.

I

NOTE: To ensure prompt processing of test results, it is important that you fill in the blanks exactly as directed.

## GENERAL TEST

- A. Print and sign your full name in this box:

PRINT:	(LAST)	(FIRST)	(MIDDLE)
SIGN:			

Copy this code in box 6 on your answer sheet. Then fill in the corresponding ovals exactly as shown.

6. TITLE CODE				
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9
0	1	2	3	4
5	6	7	8	9

Copy the Test Name and Form Code in box 7 on your answer sheet.

TEST NAME General  
FORM CODE \_\_\_\_\_

## GRADUATE RECORD EXAMINATIONS GENERAL TEST

- B. You will have 3 hours and 30 minutes in which to work on this test, which consists of seven sections. During the time allowed for one section, you may work only on that section. The time allowed for each section is 30 minutes.

Each of your scores will be determined by the number of questions for which you select the best answer from the choices given. Questions for which you mark no answer or more than one answer are not counted in scoring. Nothing is subtracted from a score if you answer a question incorrectly. Therefore, to maximize your scores it is better for you to guess at an answer than not to respond at all.

You are advised to work as rapidly as you can without losing accuracy. Do not spend too much time on questions that are too difficult for you. Go on to the other questions and come back to the difficult ones later.

There are several different types of questions; you will find special directions for each type in the test itself. Be sure you understand the directions before attempting to answer any questions.

**YOU MUST INDICATE ALL YOUR ANSWERS ON THE SEPARATE ANSWER SHEET.** No credit will be given for anything written in this examination book, but you may write in the book as much as you wish to work out your answers. After you have decided on your response to a question, fill in the corresponding oval on the answer sheet. **BE SURE THAT EACH MARK IS DARK AND COMPLETELY FILLS THE OVAL.** Mark only one answer to each question. No credit will be given for multiple answers. Erase all stray marks. If you change an answer, be sure that all previous marks are erased completely. Incomplete erasures may be read as intended answers. Do not be concerned if your answer sheet provides spaces for more answers than there are questions in each section.

### Example:

What city is the capital of France?

- (A) Rome  
(B) Paris  
(C) London  
(D) Cairo  
(E) Oslo

### Sample Answer

(A) ● (B) (C) (D) (E)

(A) ✗ (B) (C) (D) (E)

(A) (B) (C) (D) (E)

(A) (B) (C) (D) (E)

**BEST ANSWER  
PROPERLY MARKED**

**IMPROPER MARKS**

Some or all of the passages for this test have been adapted from published material to provide the examinee with significant problems for analysis and evaluation. To make the passages suitable for testing purposes, the style, content, or point of view of the original may have been altered in some cases. The ideas contained in the passages do not necessarily represent the opinions of the Graduate Record Examinations Board or Educational Testing Service.

**DO NOT OPEN YOUR TEST BOOK UNTIL YOU ARE TOLD TO DO SO.**

# SECTION 1

Time—30 minutes

38 Questions

**Directions:** Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five lettered words or sets of words. Choose the word or set of words for each blank that best fits the meaning of the sentence as a whole.

1. Nonviolent demonstrations often create such tensions that a community that has constantly refused to ----- its injustices is forced to correct them: the injustices can no longer be -----.  
(A) acknowledge. .ignored  
(B) decrease. .verified  
(C) tolerate. .accepted  
(D) address. .eliminated  
(E) explain. .discussed
2. Since 1813 reaction to Jane Austen's novels has oscillated between ----- and condescension; but in general later writers have esteemed her works more highly than did most of her literary -----.  
(A) dismissal. .admirers  
(B) adoration. .contemporaries  
(C) disapproval. .readers  
(D) indifference. .followers  
(E) approbation. .precursors
3. There are, as yet, no vegetation types or ecosystems whose study has been ----- to the extent that they no longer ----- ecologists.  
(A) perfected. .hinder (B) exhausted. .interest  
(C) prolonged. .require (D) prevented. .challenge  
(E) delayed. .benefit
4. Under ethical guidelines recently adopted by the National Institutes of Health, human genes are to be manipulated only to correct diseases for which ----- treatments are unsatisfactory.  
(A) similar (B) most (C) dangerous  
(D) uncommon (E) alternative
5. It was her view that the country's problems had been ----- by foreign technocrats, so that to invite them to come back would be counterproductive.  
(A) foreseen (B) attacked (C) ascertained  
(D) exacerbated (E) analyzed
6. Winsor McCay, the cartoonist, could draw with incredible -----; his comic strip about Little Nemo was characterized by marvelous draftsmanship and sequencing.  
(A) sincerity (B) efficiency (C) virtuosity  
(D) rapidity (E) energy
7. The actual ----- of Wilson's position was always ----- by his refusal to compromise after having initially agreed to negotiate a settlement.  
(A) outcome. .foreshadowed  
(B) logic. .enhanced  
(C) rigidity. .betrayed  
(D) uncertainty. .alleviated  
(E) cowardice. .highlighted

**Directions:** In each of the following questions, a related pair of words or phrases is followed by five lettered pairs of words or phrases. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

8. SEDATIVE : DROWSINESS ::  
(A) epidemic : contagiousness  
(B) vaccine : virus  
(C) laxative : drug  
(D) anesthetic : numbness  
(E) therapy : psychosis
9. LAWYER : COURTROOM ::  
(A) participant : team  
(B) commuter : train  
(C) gladiator : arena  
(D) senator : caucus  
(E) patient : ward
10. CURIOSITY : KNOW ::  
(A) temptation : conquer  
(B) starvation : eat  
(C) wanderlust : travel  
(D) humor : laugh  
(E) survival : live
11. FRUGAL : MISERLY ::  
(A) confident : arrogant  
(B) courageous : pugnacious  
(C) famous : aggressive  
(D) rash : foolhardy  
(E) quiet : timid
12. ANTIDOTE : POISON ::  
(A) cure : recovery  
(B) narcotic : sleep  
(C) stimulant : relapse  
(D) tonic : lethargy  
(E) resuscitation : breathing

GO ON TO THE NEXT PAGE.

13. STYGIAN : DARK ::  
 (A) abysmal : low  
 (B) cogent : contentious  
 (C) fortuitous : accidental  
 (D) reckless : threatening  
 (E) cataclysmic : doomed
14. WORSHIP : SACRIFICE ::  
 (A) generation : pyre  
 (B) burial : mortuary  
 (C) weapon : centurion  
 (D) massacre : invasion  
 (E) prediction : augury
15. EVANESCENT : DISAPPEAR ::  
 (A) transparent : penetrate  
 (B) onerous : struggle  
 (C) feckless : succeed  
 (D) illusory : exist  
 (E) pliant : yield
16. UPBRAID : REPROACH ::  
 (A) dote : like  
 (B) lag : stray  
 (C) vex : please  
 (D) earn : desire  
 (E) recast : explain

**Directions:** Each passage in this group is followed by questions based on its content. After reading a passage, choose the best answer to each question. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Line  
 (5) It has been known for many decades that the appearance of sunspots is roughly periodic, with an average cycle of eleven years. Moreover, the incidence of solar flares and the flux of solar cosmic rays, ultraviolet radiation, and x-radiation all vary directly with the sunspot cycle. But after more than a century of investigation, the relation of these and other phenomena, known collectively as the solar-activity cycle, to terrestrial weather and climate remains unclear. For example, the sunspot cycle and the allied magnetic-polarity cycle have been linked to periodicities discerned in records of such variables as rainfall, temperature, and winds. Invariably, however, the relation is weak, and commonly of dubious statistical significance.

(15) Effects of solar variability over longer terms have also been sought. The absence of recorded sunspot activity in the notes kept by European observers in the late seventeenth and early eighteenth centuries has led some scholars to postulate a brief cessation of sunspot activity at that time (a period called the Maunder minimum). The Maunder minimum has been linked to a span of unusual cold in Europe extending from the sixteenth to the early nineteenth centuries. The reality of the Maunder minimum has yet to be established, however, especially since  
 (20) the records that Chinese naked-eye observers of solar activity made at that time appear to contradict it. Scientists

have also sought evidence of long-term solar periodicities by examining indirect climatological data, such as fossil records of the thickness of ancient tree rings. These  
 (30) studies, however, failed to link unequivocally terrestrial climate and the solar-activity cycle, or even to confirm the cycle's past existence.

If consistent and reliable geological or archaeological evidence tracing the solar-activity cycle in the distant  
 (35) past could be found, it might also resolve an important issue in solar physics: how to model solar activity. Currently, there are two models of solar activity. The first supposes that the Sun's internal motions (caused by rotation and convection) interact with its large-scale  
 (40) magnetic field to produce a dynamo, a device in which mechanical energy is converted into the energy of a magnetic field. In short, the Sun's large-scale magnetic field is taken to be self-sustaining, so that the solar-activity cycle it drives would be maintained with little overall  
 (45) change for perhaps billions of years. The alternative explanation supposes that the Sun's large-scale magnetic field is a remnant of the field the Sun acquired when it formed, and is not sustained against decay. In this model, the solar mechanism dependent on the Sun's  
 (50) magnetic field runs down more quickly. Thus, the characteristics of the solar-activity cycle could be expected to change over a long period of time. Modern solar observations span too short a time to reveal whether present cyclical solar activity is a long-lived feature of the Sun, or merely a transient phenomenon.

17. The author focuses primarily on
- (A) presenting two competing scientific theories concerning solar activity and evaluating geological evidence often cited to support them
  - (B) giving a brief overview of some recent scientific developments in solar physics and assessing their impact on future climatological research
  - (C) discussing the difficulties involved in linking terrestrial phenomena with solar activity and indicating how resolving that issue could have an impact on our understanding of solar physics
  - (D) pointing out the futility of a certain line of scientific inquiry into the terrestrial effects of solar activity and recommending its abandonment in favor of purely physics-oriented research
  - (E) outlining the specific reasons why a problem in solar physics has not yet been solved and faulting the overly theoretical approach of modern physicists

GO ON TO THE NEXT PAGE.



18. Which of the following statements about the two models of solar activity, as they are described in lines 37-55, is accurate?
- (A) In both models cyclical solar activity is regarded as a long-lived feature of the Sun, persisting with little change over billions of years.
  - (B) In both models the solar-activity cycle is hypothesized as being dependent on the large-scale solar magnetic field.
  - (C) In one model the Sun's magnetic field is thought to play a role in causing solar activity, whereas in the other model it is not.
  - (D) In one model solar activity is presumed to be unrelated to terrestrial phenomena, whereas in the other model solar activity is thought to have observable effects on the Earth.
  - (E) In one model cycles of solar activity with periodicities longer than a few decades are considered to be impossible, whereas in the other model such cycles are predicted.
19. According to the passage, late seventeenth- and early eighteenth-century Chinese records are important for which of the following reasons?
- (A) They suggest that the data on which the Maunder minimum was predicated were incorrect.
  - (B) They suggest that the Maunder minimum cannot be related to climate.
  - (C) They suggest that the Maunder minimum might be valid only for Europe.
  - (D) They establish the existence of a span of unusually cold weather worldwide at the time of the Maunder minimum.
  - (E) They establish that solar activity at the time of the Maunder minimum did not significantly vary from its present pattern.
20. The author implies which of the following about currently available geological and archaeological evidence concerning the solar-activity cycle?
- (A) It best supports the model of solar activity described in lines 37-45.
  - (B) It best supports the model of solar activity described in lines 45-52.
  - (C) It is insufficient to confirm either model of solar activity described in the third paragraph.
  - (D) It contradicts both models of solar activity as they are presented in the third paragraph.
  - (E) It disproves the theory that terrestrial weather and solar activity are linked in some way.
21. It can be inferred from the passage that the argument in favor of the model described in lines 37-45 would be strengthened if which of the following were found to be true?
- (A) Episodes of intense volcanic eruptions in the distant past occurred in cycles having very long periodicities.
  - (B) At the present time the global level of thunderstorm activity increases and decreases in cycles with periodicities of approximately 11 years.
  - (C) In the distant past cyclical climatic changes had periodicities of longer than 200 years.
  - (D) In the last century the length of the sunspot cycle has been known to vary by as much as 2 years from its average periodicity of 11 years.
  - (E) Hundreds of millions of years ago, solar-activity cycles displayed the same periodicities as do present-day solar-activity cycles.
22. It can be inferred from the passage that Chinese observations of the Sun during the late seventeenth and early eighteenth centuries
- (A) are ambiguous because most sunspots cannot be seen with the naked eye
  - (B) probably were made under the same weather conditions as those made in Europe
  - (C) are more reliable than European observations made during this period
  - (D) record some sunspot activity during this period
  - (E) have been employed by scientists seeking to argue that a change in solar activity occurred during this period
23. It can be inferred from the passage that studies attempting to use tree-ring thickness to locate possible links between solar periodicity and terrestrial climate are based on which of the following assumptions?
- (A) The solar-activity cycle existed in its present form during the time period in which the tree rings grew.
  - (B) The biological mechanisms causing tree growth are unaffected by short-term weather patterns.
  - (C) Average tree-ring thickness varies from species to species.
  - (D) Tree-ring thicknesses reflect changes in terrestrial climate.
  - (E) Both terrestrial climate and the solar-activity cycle randomly affect tree-ring thickness.

Line  
(5) The common belief of some linguists that each language is a perfect vehicle for the thoughts of the nation speaking it is in some ways the exact counterpart of the conviction of the Manchester school of economics that supply and demand will regulate everything for the best. Just as economists were blind to the numerous cases in which the law of supply and demand left actual wants unsatisfied, so also many linguists are deaf to those instances in which the very nature of a language  
(10) calls forth misunderstandings in everyday conversation, and in which, consequently, a word has to be modified or defined in order to present the idea intended by the speaker: "He took his stick—no, not John's, but his own." No language is perfect, and if we admit this truth,  
(15) we must also admit that it is not unreasonable to investigate the relative merits of different languages or of different details in languages.

24. The primary purpose of the passage is to

- (A) analyze an interesting feature of the English language
- (B) refute a belief held by some linguists
- (C) show that economic theory is relevant to linguistic study
- (D) illustrate the confusion that can result from the improper use of language
- (E) suggest a way in which languages can be made more nearly perfect

25. The misunderstanding presented by the author in lines 13-14 is similar to which of the following?

- I. X uses the word "you" to refer to a group, but Y thinks that X is referring to one person only.
- II. X mistakenly uses the word "anomaly" to refer to a typical example, but Y knows that "anomaly" means "exception."
- III. X uses the word "bachelor" to mean "unmarried man," but Y mistakenly thinks that bachelor means "unmarried woman."

- (A) I only
- (B) II only
- (C) III only
- (D) I and II only
- (E) II and III only

26. In presenting the argument, the author does all of the following EXCEPT

- (A) give an example
- (B) draw a conclusion
- (C) make a generalization
- (D) make a comparison
- (E) present a paradox

27. Which of the following contributes to the misunderstanding described by the author in lines 13-14?

- (A) It is unclear whom the speaker of the sentence is addressing.
- (B) It is unclear to whom the word "his" refers the first time it is used.
- (C) It is unclear to whom the word "his" refers the second time it is used.
- (D) The meaning of "took" is ambiguous.
- (E) It is unclear to whom "He" refers.

GO ON TO THE NEXT PAGE.

**Directions:** Each question below consists of a word printed in capital letters, followed by five lettered words or phrases. Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters.

Since some of the questions require you to distinguish fine shades of meaning, be sure to consider all the choices before deciding which one is best.

28. **FALLACY:** (A) personal philosophy  
(B) imaginative idea (C) unconfirmed theory  
(D) tentative opinion (E) valid argument
29. **DIVULGE:** (A) keep secret  
(B) evaluate by oneself (C) refine  
(D) restore (E) copy
30. **BOYCOTT:** (A) extort (B) underwrite  
(C) underbid (D) stipulate (E) patronize
31. **ADULTERATION:** (A) consternation  
(B) purification (C) normalization  
(D) approximation (E) rejuvenation
32. **DEPOSITION:** (A) process of congealing  
(B) process of distilling (C) process of eroding  
(D) process of evolving (E) process of condensing
33. **ENERVATE:** (A) recuperate (B) resurrect  
(C) renovate (D) gather (E) strengthen
34. **LOQUACIOUS:** (A) tranquil (B) skeptical  
(C) morose (D) taciturn (E) witty
35. **REPINE:** (A) intensify (B) excuse  
(C) express joy (D) feel sure (E) rush forward
36. **VENERATION:** (A) derision (B) blame  
(C) avoidance (D) ostracism (E) defiance
37. **INVETERATE:** (A) casual (B) public  
(C) satisfactory (D) trustworthy  
(E) sophisticated
38. **UNDERMINE:** (A) submerge (B) supersede  
(C) overhaul (D) undergird (E) intersperse

## **S T O P**

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.  
DO NOT TURN TO ANY OTHER SECTION IN THE TEST.



## SECTION 2

Time—30 minutes

25 Questions

**Directions:** Each question or group of questions is based on a passage, graph, table, or set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. For each question, select the best answer choice given.

### Questions 1-7

In a game, exactly six inverted cups stand side by side in a straight line, and each has exactly one ball hidden under it. The cups are numbered consecutively 1 through 6. Each of the balls is painted a single solid color. The colors of the balls are green, magenta, orange, purple, red, and yellow. The balls have been hidden under the cups in a manner that conforms to the following conditions:

The purple ball must be hidden under a lower-numbered cup than the orange ball.

The red ball must be hidden under a cup immediately adjacent to the cup under which the magenta ball is hidden.

The green ball must be hidden under cup 5.

1. Which of the following could be the colors of the balls under the cups, in order from 1 through 6 ?
  - (A) Green, yellow, magenta, red, purple, orange
  - (B) Magenta, green, purple, red, orange, yellow
  - (C) Magenta, red, purple, yellow, green, orange
  - (D) Orange, yellow, red, magenta, green, purple
  - (E) Red, purple, magenta, yellow, green, orange
2. If the magenta ball is under cup 4, the red ball must be under cup
  - (A) 1
  - (B) 2
  - (C) 3
  - (D) 5
  - (E) 6
3. A ball of which of the following colors could be under cup 6 ?
  - (A) Green
  - (B) Magenta
  - (C) Purple
  - (D) Red
  - (E) Yellow
4. If the purple ball is under cup 4, the orange ball must be under cup
  - (A) 1
  - (B) 2
  - (C) 3
  - (D) 5
  - (E) 6
5. Which of the following must be true?
  - (A) The green ball is under a lower-numbered cup than the yellow ball.
  - (B) The orange ball is under a lower-numbered cup than the green ball.
  - (C) The purple ball is under a lower-numbered cup than the green ball.
  - (D) The purple ball is under a lower-numbered cup than the red ball.
  - (E) The red ball is under a lower-numbered cup than the yellow ball.
6. If the orange ball is under cup 2, balls of which of the following colors could be under cups immediately adjacent to each other?
  - (A) Green and magenta
  - (B) Green and purple
  - (C) Orange and yellow
  - (D) Purple and red
  - (E) Red and yellow
7. If the magenta ball is under cup 1, balls of which of the following colors must be under cups immediately adjacent to each other?
  - (A) Green and orange
  - (B) Green and yellow
  - (C) Purple and red
  - (D) Purple and yellow
  - (E) Red and yellow
8. The company should not be held responsible for failing to correct the control-panel problem that caused the accident. Although the problem had been mentioned earlier in a safety inspector's report, companies receive hundreds of reports of such problems, and Industry Standard No. 42 requires action on these problems only when an accident is foreseeable.  
  
If the second sentence in the paragraph above is factually correct, the answer to which of the following questions is most relevant in helping to determine whether or not the company violated Industry Standard No. 42 when it failed to correct the control-panel problem?
  - (A) Was the accident serious?
  - (B) Was the control-panel problem of a type that is known to indicate that an accident is likely?
  - (C) Since the accident, has the company done a special safety check on all control panels?
  - (D) Did the safety inspector mention more than one problem in the same report?
  - (E) How long was the control panel in use before the problem was discovered?

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9. Riothamus, a fifth-century king of the Britons, was betrayed by an associate, fought bravely against the Goths but was defeated, and disappeared mysteriously. Riothamus' activities, and only those of Riothamus, match almost exactly those attributed to King Arthur. Therefore, Riothamus must be the historical model for the legendary King Arthur.

The argument above requires at least one additional premise. Which of the following could be such a required premise?

- (A) Modern historians have documented the activities of Riothamus better than those of any other fifth-century king.
- (B) The stories told about King Arthur are not strictly fictitious but are based on a historical person and historical events.
- (C) Riothamus' associates were the authors of the original legends about King Arthur.
- (D) Legends about the fifth century usually embellish and romanticize the actual conditions of the lives of fifth-century nobility.
- (E) Posterity usually remembers legends better than it remembers the actual historical events on which they are based.

10. A worldwide ban on the production of certain ozone-destroying chemicals would provide only an illusion of protection. Quantities of such chemicals, already produced, exist as coolants in millions of refrigerators. When they reach the ozone layer in the atmosphere, their action cannot be halted. So there is no way to prevent these chemicals from damaging the ozone layer further.

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

- (A) It is impossible to measure with accuracy the quantity of ozone-destroying chemicals that exist as coolants in refrigerators.
- (B) In modern societies, refrigeration of food is necessary to prevent unhealthy and potentially life-threatening conditions.
- (C) Replacement chemicals that will not destroy ozone have not yet been developed and would be more expensive than the chemicals now used as coolants in refrigerators.
- (D) Even if people should give up the use of refrigeration, the coolants already in existing refrigerators are a threat to atmospheric ozone.
- (E) The coolants in refrigerators can be fully recovered at the end of the useful life of the refrigerators and reused.

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### Questions 11-15

A government is assigning each of six embassy office workers — Farr, Golden, Hayakawa, Inserra, Jones, and Kovacs — to embassies. There are four embassies. Embassies L and M are located in countries with dry climates, whereas embassies P and T are located in countries with humid climates. The office workers must be assigned according to the following rules:

Each embassy must have at least one of the workers assigned to it.

At least one embassy in a humid climate must have at least two workers assigned to it.

Golden cannot be assigned to the same embassy as Kovacs.

Inserra must be assigned to an embassy in a dry climate.

Jones must be assigned to an embassy in a humid climate.

11. Which of the following is an acceptable assignment of the workers to the embassies?

<u>L</u>	<u>M</u>	<u>P</u>	<u>T</u>
(A) Farr, Golden	Inserra, Kovacs	Hayakawa	Jones
(B) Golden, Kovacs	Inserra	Jones	Farr, Hayakawa
(C) Golden	Farr, Inserra	Kovacs	Jones, Hayakawa
(D) Jones	Golden, Inserra	Hayakawa	Farr, Kovacs
(E) Kovacs	Farr, Hayakawa	Inserra	Golden, Jones

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12. Which of the following must be assigned either to embassy L or to embassy M?

(A) Farr  
(B) Golden  
(C) Hayakawa  
(D) Inserra  
(E) Kovacs

13. Which of the following CANNOT be true?

(A) One worker is assigned to L.  
(B) Two workers are assigned to P.  
(C) Two workers are assigned to L.  
(D) Three workers are assigned to M.  
(E) Three workers are assigned to T.

14. If Golden and Kovacs are assigned to L and M, respectively, which of the following must be true?

(A) Farr is assigned to either P or T.  
(B) Inserra is assigned to either P or T.  
(C) P and T each have two workers assigned to them.  
(D) Hayakawa is assigned to L.  
(E) Hayakawa is assigned to T.

15. If Golden, Hayakawa, and Kovacs are among the workers assigned to embassies in humid climates, which of the following must be true?

(A) Farr is assigned to an embassy to which none of the other five office workers is assigned.  
(B) Golden is assigned to an embassy to which none of the other five office workers is assigned.  
(C) Jones is assigned to the same embassy as Kovacs.  
(D) Hayakawa is assigned to the same embassy as Golden.  
(E) Hayakawa is assigned to the same embassy as Kovacs.

#### Questions 16-19

A volunteer uses a truck to pick up donations of unsold food and clothing from stores and to deliver them to locations where they can be distributed. He drives only along a certain network of roads.

In the network there are two-way roads connecting each of the following pairs of points: 1 with 2, 1 with 3, 1 with 5, 2 with 6, 3 with 7, 5 with 6, and 6 with 7. There are also one-way roads going from 2 to 4, from 3 to 2, and from 4 to 3. There are no other roads in the network, and the roads in the network do not intersect.

To make a trip involving pickups and deliveries, the volunteer always takes a route that for the whole trip passes through the fewest of the points 1 through 7, counting a point twice if the volunteer passes through it twice.

The volunteer's home is at point 3. Donations can be picked up at a supermarket at point 1, a clothing store at point 5, and a bakery at point 4. Deliveries can be made as needed to a tutoring center at point 2, a distribution center at point 6, and a shelter at point 7.

16. If the volunteer starts at the supermarket and next is to go to the shelter, the first intermediate point his route passes through must be

(A) 2  
(B) 3  
(C) 5  
(D) 6  
(E) 7

17. If, starting from home, the volunteer next is to make pickups for the shelter at the supermarket and the bakery (in either order), the first two intermediate points on his route, beginning with the first, must be

(A) 1 and 2  
(B) 1 and 3  
(C) 2 and 1  
(D) 2 and 4  
(E) 4 and 2

18. If, starting from the clothing store, the volunteer next is to pick up bread at either the supermarket or the bakery (whichever stop makes his route go through the fewest of the points) and then is to go to the shelter, the first two points he reaches after the clothing store, beginning with the first, must be

(A) 1 and 2  
(B) 1 and 3  
(C) 4 and 2  
(D) 6 and 2  
(E) 6 and 4

19. If the volunteer is to make a trip starting at the shelter, next going to the bakery for a pickup, and then ending at the distribution center, the first two intermediate points on his route, beginning with the first, can be

(A) 3 and 1  
(B) 3 and 4  
(C) 4 and 2  
(D) 6 and 2  
(E) 6 and 5

GO ON TO THE NEXT PAGE.



Questions 20-22

A developer is planning to build a housing complex on an empty tract of land. Exactly seven different styles of houses—Q, R, S, T, W, X, and Z—will be built in the complex. The complex will contain several blocks, and the developer plans to put houses of at least three different styles on each block. The developer will build the complex according to the following rules:

Any block that has style Z on it must also have style W on it.

Any block adjacent to one that has on it both style S and style X must have on it style T and style Z.

No block adjacent to one that has on it both style R and style Z can have on it either style T or style W.

No block can have on it both style S and style Q.

20. Which of the following can be the complete selection of house styles on a block?

(A) Q, R, S      (B) Q, S, X      (C) R, T, Z  
(D) S, W, Z      (E) T, X, Z

21. Which of the following house styles must be on a block that is adjacent to one that has on it only styles S, T, W, X, and Z?

(A) Q      (B) R      (C) S  
(D) W      (E) X

22. Which of the following can be the complete selection of house styles for a block that is adjacent to exactly one block, if that one block has on it styles S, T, W, and X only?

(A) S, T, and X  
(B) T, X, and Z  
(C) R, S, X, and Z  
(D) S, T, W, and X  
(E) T, W, X, and Z

23. When an osprey (a fish-eating hawk) returns from fishing to its nesting area with a fish like an alewife, a pollack, or a smelt, other ospreys will retrace its flight path in hopes of good fishing. There is seldom such a response if the first bird brings back a winter flounder. Yet ospreys feed on winter flounder just as readily as on any other fish.

Which of the following, if true, contributes most to an explanation of the fishing behavior of ospreys as it is described above?

(A) Ospreys are seldom able to catch alewives, pollack, or smelt.  
(B) Alewives, pollack, and smelt move in schools, but winter flounder do not.  
(C) Winter flounder prefer shallower waters than do alewives, pollack, or smelt.  
(D) Winter flounder and pollack exhibit protective coloration, but alewives and smelt do not.  
(E) Ospreys that live in nesting areas are especially successful fishers.

24. A recent study of an insurance company's underwriters indicated that those who worked in pleasant physical surroundings were 25 percent more productive than their peers in unpleasant physical surroundings. Objective criteria for evaluating job performance included caseload and complexity of cases. This shows that improving workers' environments increases those workers' productivity.

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

(A) On average, less-productive employees spend no fewer hours per day at their workstations than do their more-productive peers.  
(B) Unpleasant surroundings give employees less motivation to work hard than more pleasant surroundings do.  
(C) The more-productive employees are generally rewarded with pleasant office space.  
(D) More-productive employees do not work any more hours than their less-productive peers.  
(E) Peer pressure discourages employees in crowded, unpleasant surroundings from making phone calls to their own family members during work time.

25. In a certain country, individuals tend to change their political affiliation readily from one political party to another. In the past the Union party grew larger because of this tendency, but although most of those who change to a new party affiliation change to the Union party, the Union party has remained about the same size in recent years.

Which of the following, if true, best helps to explain the change in the growth pattern of the Union party mentioned above?

(A) The economy has been prospering recently, and many of those who change party affiliation are upwardly mobile and prosperous.  
(B) In recent years those who were previously nonaffiliated have tended to join the Union party if they joined any party at all.  
(C) The percentage of voting-age citizens who change political party affiliation each year has remained constant, and the number of voting-age citizens has remained the same.  
(D) The percentage of voting-age citizens who are affiliated with any political party has increased over the last ten years.  
(E) Many members of the Union party have abandoned all political party affiliation in recent years.

**STOP**

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.  
DO NOT TURN TO ANY OTHER SECTION IN THE TEST.

SECTION 3  
Time—30 minutes  
30 Questions

**Numbers:** All numbers used are real numbers.

**Figures:** Position of points, angles, regions, etc. can be assumed to be in the order shown; and angle measures can be assumed to be positive.

Lines shown as straight can be assumed to be straight.

Figures can be assumed to lie in a plane unless otherwise indicated.

Figures that accompany questions are intended to provide information useful in answering the questions. However, unless a note states that a figure is drawn to scale, you should solve these problems NOT by estimating sizes by sight or by measurement, but by using your knowledge of mathematics (see Example 2 below).

**Directions:** Each of the Questions 1-15 consists of two quantities, one in Column A and one in Column B. You are to compare the two quantities and choose

- A if the quantity in Column A is greater;  
B if the quantity in Column B is greater;  
C if the two quantities are equal;  
D if the relationship cannot be determined from the information given.

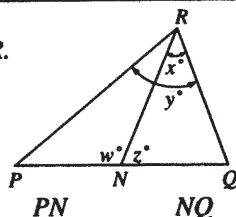
**Note:** Since there are only four choices, NEVER MARK (E).

**Common Information:** In a question, information concerning one or both of the quantities to be compared is centered above the two columns. A symbol that appears in both columns represents the same thing in Column A as it does in Column B.

<u>Column A</u>	<u>Column B</u>	<u>Sample Answers</u>
-----------------	-----------------	-----------------------

<b>Example 1:</b>	$2 \times 6$	$2 + 6$	<input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E
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Examples 2-4 refer to  $\triangle PQR$ .



<b>Example 2:</b>	$PN$	$NQ$	<input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input checked="" type="radio"/> D <input type="radio"/> E (since equal measures cannot be assumed, even though $PN$ and $NQ$ appear equal)
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<b>Example 3:</b>	$x$	$y$	<input type="radio"/> A <input checked="" type="radio"/> B <input type="radio"/> C <input type="radio"/> D <input type="radio"/> E (since $N$ is between $P$ and $Q$ )
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<b>Example 4:</b>	$w + z$	$180$	<input type="radio"/> A <input type="radio"/> B <input checked="" type="radio"/> C <input type="radio"/> D <input type="radio"/> E (since $PQ$ is a straight line)
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<u>Column A</u>	<u>Column B</u>
-----------------	-----------------

1. $3^4$	$4^3$
----------	-------

$$x = 2y + 3$$

$$y = -2$$

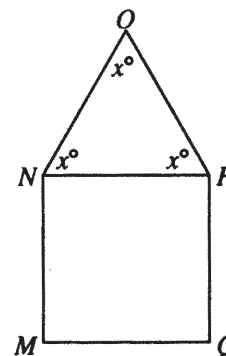
2. $x$	$-1$
--------	------

$d = 5.03894$  and  $\boxed{d}$  is the decimal expression for  $d$  rounded to the nearest thousandth.

3. The number of decimal places where $d$ and $\boxed{d}$ differ	4
--	---

$$x + 2y > 8$$

4. $2x + 4y$	20
--------------	----



Square  $MNPQ$  has area 36.

5. The perimeter of pentagon $MNOPQ$	30
--------------------------------------	----

$p$  and  $q$  are different prime numbers.  $r$  is the least prime number greater than  $p$ , and  $s$  is the least prime number greater than  $q$ .

6. $r - p$	$s - q$
------------	---------

GO ON TO THE NEXT PAGE.



- A if the quantity in Column A is greater;  
 B if the quantity in Column B is greater;  
 C if the two quantities are equal;  
 D if the relationship cannot be determined from the information given.

Column A

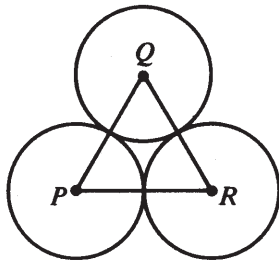
Column B

$$|-3| = -m$$

7.  $m$  3

$n$  is an even integer and a multiple of 3.

8. The remainder when  $n$  is divided by 12 6



Equilateral triangle  $PQR$  is formed by joining centers  $P$ ,  $Q$ , and  $R$  of the circles. Each pair of circles has exactly one point in common.

9. The perimeter of triangle  $PQR$  The circumference of the circle with center  $Q$
10. The volume of a cylindrical tank that has a radius of 2 meters and a height of 10 meters The volume of a cylindrical tank that has a radius of 1 meter and a height of 20 meters

$$ds \neq 0$$

11. The time required to travel  $d$  miles at  $s$  miles per hour The time required to travel  $\frac{d}{2}$  miles at  $2s$  miles per hour

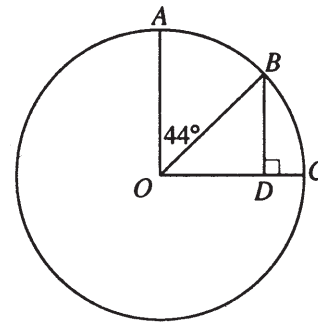
$\triangle RST$  is isosceles and  $\angle RST = 40^\circ$ .

12. The sum of the measures of the two angles of  $\triangle RST$  that have equal measure  $120^\circ$

13.  $\sqrt{x^4 + 6x^2 + 9}$   $x^2 + 3$

Column A

Column B



$O$  is the center of the circle and  $\angle AOC$  is a right angle.

14.  $OD$   $BD$

Before Maria changed jobs, her salary was 24 percent more than Julio's salary. After Maria changed jobs, her new salary was 24 percent less than her old salary.

15. Julio's salary Maria's new salary

**Directions:** Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16.  $(19 - 18 - 17 - 16) - (20 - 19 - 18 - 17) =$

- (A) -36  
 (B) -6  
 (C) -4  
 (D) 1  
 (E) 2

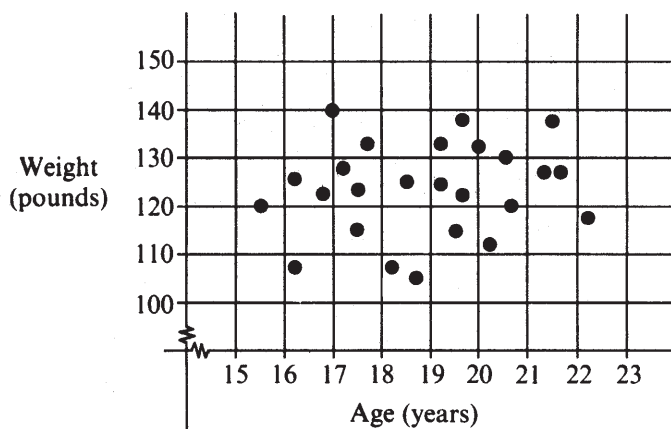
17. If  $3x - 2 = 7$ , then  $4x =$

- (A) 3  
 (B) 5  
 (C)  $\frac{20}{3}$   
 (D) 9  
 (E) 12

18. Of the following, which is closest to  $\sqrt[3]{30}$  ?

- (A) 6  
 (B) 5  
 (C) 4  
 (D) 3  
 (E) 2

GO ON TO THE NEXT PAGE.



19. The dots on the graph above indicate age and weight for a sample of 25 students. What percent of these students are less than 19 years old and weigh more than 110 pounds?

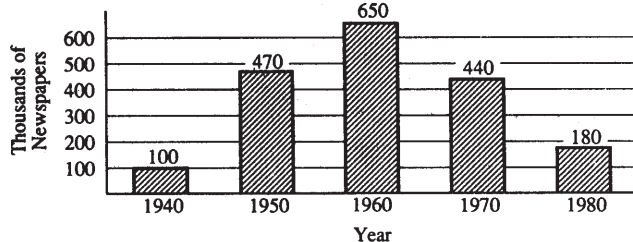
- (A) 36% (B) 40% (C) 44%  
(D) 48% (E) 52%

20. The greatest number of diagonals that can be drawn from one vertex of a regular 6-sided polygon is

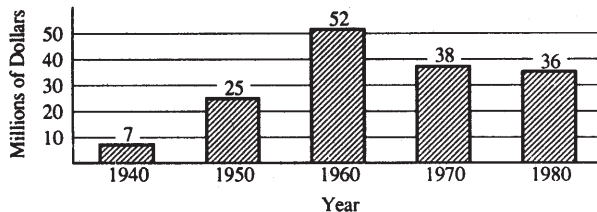
- (A) 2 (B) 3 (C) 4  
(D) 5 (E) 6

Questions 21-25 refer to the following graphs.

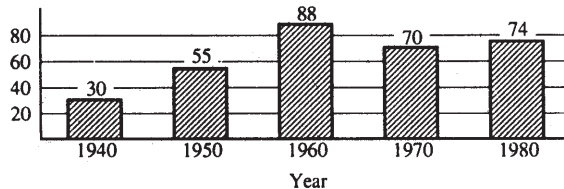
AVERAGE DAILY CIRCULATION FOR NEWSPAPER X



TOTAL YEARLY ADVERTISING REVENUE FOR NEWSPAPER X



AVERAGE NUMBER OF PAGES PER NEWSPAPER FOR NEWSPAPER X



21. In how many of the years shown was the average number of pages per newspaper at least twice as much as the average in 1940?

- (A) Four  
(B) Three  
(C) Two  
(D) One  
(E) None

22. In 1950, if the printing cost per newspaper was \$0.05, what would have been the total cost of printing the average daily circulation?

- (A) \$32,500  
(B) \$26,000  
(C) \$23,500  
(D) \$22,000  
(E) \$2,600

23. In 1980 the number of dollars of advertising revenue was how many times as great as the average daily circulation?

- (A) 500  
(B) 200  
(C) 100  
(D) 50  
(E) 20

24. The percent decrease in average daily circulation from 1960 to 1970 was approximately

- (A) 10%  
(B) 12%  
(C) 20%  
(D) 26%  
(E) 32%

25. Which of the following statements can be inferred from the data?

- I. The greatest increase in total yearly advertising revenue over any 10-year period shown was \$27 million.
- II. In each of the 10-year periods shown in which yearly advertising revenue decreased, average daily circulation also decreased.
- III. From 1970 to 1980 the average number of pages per newspaper increased by 10.

- (A) I only  
(B) II only  
(C) III only  
(D) I and II  
(E) II and III

GO ON TO THE NEXT PAGE.

26. If  $0 < st < 1$ , then which of the following can be true?

(A)  $s < -1$  and  $t > 0$   
 (B)  $s < -1$  and  $t < -1$   
 (C)  $s > -1$  and  $t < -1$   
 (D)  $s > 1$  and  $t < -1$   
 (E)  $s > 1$  and  $t > 1$



27. On segment  $WZ$  above, if  $WY = 21$ ,  $XZ = 26$ , and  $YZ$  is twice  $WX$ , what is the value of  $XY$ ?

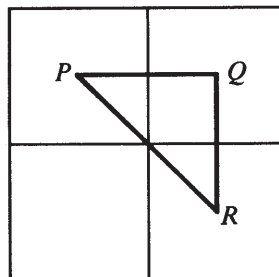
(A) 5  
 (B) 10  
 (C) 11  
 (D) 16  
 (E) It cannot be determined from the information given.

28. To reproduce an old photograph, a photographer charges  $x$  dollars to make a negative,  $\frac{3x}{5}$  dollars for each of the first 10 prints, and  $\frac{x}{5}$  dollars for each print in excess of 10 prints. If \$45 is the total charge to make a negative and 20 prints from an old photograph, what is the value of  $x$ ?

(A) 3  
 (B) 3.5  
 (C) 4  
 (D) 4.5  
 (E) 5

29. Which of the following is equal to  $\frac{1}{4}$  of 0.01 percent?

(A) 0.000025  
 (B) 0.00025  
 (C) 0.0025  
 (D) 0.025  
 (E) 0.25



30. In the figure above, each of the four squares has sides of length  $x$ . If  $\triangle PQR$  is formed by joining the centers of three of the squares, what is the perimeter of  $\triangle PQR$  in terms of  $x$ ?

(A)  $2x\sqrt{2}$   
 (B)  $\frac{x\sqrt{2}}{2} + x$   
 (C)  $2x + \sqrt{2}$   
 (D)  $x\sqrt{2} + 2$   
 (E)  $2x + x\sqrt{2}$

**STOP**

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.  
 DO NOT TURN TO ANY OTHER SECTION IN THE TEST.

## SECTION 4

Time—30 minutes

38 Questions

**Directions:** Each sentence below has one or two blanks, each blank indicating that something has been omitted. Beneath the sentence are five lettered words or sets of words. Choose the word or set of words for each blank that best fits the meaning of the sentence as a whole.

1. The senator's reputation, though ----- by false allegations of misconduct, emerged from the ordeal -----.  
 (A) shaken. .unscathed  
 (B) destroyed. .intact  
 (C) damaged. .impaired  
 (D) impugned. .unclear  
 (E) tarnished. .sullied
  
2. This poetry is not -----; it is more likely to appeal to an international audience than is poetry with strictly regional themes.  
 (A) familiar (B) democratic (C) technical  
 (D) complex (E) provincial
  
3. Experienced employers recognize that business students who can ----- different points of view are ultimately more effective as managers than are the brilliant and original students who ----- dogmatically to their own formulations.  
 (A) discredit. .revert (B) assimilate. .adhere  
 (C) impose. .refer (D) disregard. .incline  
 (E) advocate. .relate
  
4. Poe's ----- reviews of contemporary fiction, which often find great merit in otherwise ----- literary gems, must make us respect his critical judgment in addition to his well-known literary talent.  
 (A) thorough. .completed  
 (B) petulant. .unpopular  
 (C) insightful. .unappreciated  
 (D) enthusiastic. .acclaimed  
 (E) harsh. .undeserving
  
5. The significance of the Magna Carta lies not in its ----- provisions, but in its broader impact: it made the king subject to the law.  
 (A) specific (B) revolutionary (C) implicit  
 (D) controversial (E) finite
  
6. The theory of cosmic evolution states that the universe, having begun in a state of simplicity and -----, has ----- into great variety.  
 (A) equilibrium. .modulated  
 (B) homogeneity. .differentiated  
 (C) contrast. .metamorphosed  
 (D) proportion. .accelerated  
 (E) intelligibility. .developed

7. Not wishing to appear -----, the junior member of the research group refrained from ----- any criticism of the senior members' plan for dividing up responsibility for the entire project.  
 (A) reluctant. .evaluating  
 (B) inquisitive. .offering  
 (C) presumptuous. .venturing  
 (D) censorious. .undercutting  
 (E) moralistic. .observing

**Directions:** In each of the following questions, a related pair of words or phrases is followed by five lettered pairs of words or phrases. Select the lettered pair that best expresses a relationship similar to that expressed in the original pair.

8. FRAGILE : BREAK ::  
 (A) invisible : see  
 (B) erratic : control  
 (C) flammable : burn  
 (D) noxious : escape  
 (E) industrial : manufacture
  
9. MUTTER : INDISTINCT ::  
 (A) demand : obedient  
 (B) plead : obligatory  
 (C) flatter : commendable  
 (D) drone : monotonous  
 (E) confirm : proven
  
10. FAULTFINDER : CRITICIZE ::  
 (A) luminary : recognize  
 (B) athlete : cheer  
 (C) arbitrator : mediate  
 (D) pharmacist : prescribe  
 (E) dawdler : toil
  
11. PEST : IRKSOME ::  
 (A) salesclerk : courteous  
 (B) expert : proficient  
 (C) enigma : unexpected  
 (D) leader : nondescript  
 (E) accuser : indicted
  
12. PROLOGUE : NOVEL ::  
 (A) preamble : statute  
 (B) sketch : drawing  
 (C) movement : symphony  
 (D) index : book  
 (E) blueprint : building

GO ON TO THE NEXT PAGE.

13. EXPAND : VOLUME ::

- (A) ascend : flight
- (B) proliferate : number
- (C) bend : flexibility
- (D) cool : temperature
- (E) deflect : heading

14. CONTIGUOUS : ABUT ::

- (A) possible : occur
- (B) simultaneous : coincide
- (C) comprehensive : except
- (D) synthetic : create
- (E) constant : stabilize

15. SUITCASE : LUGGAGE ::

- (A) gift : package
- (B) necklace : garment
- (C) room : house
- (D) hat : millinery
- (E) faucet : sink

16. PROHIBITIVE : PURCHASE ::

- (A) preventive : heal
- (B) laudatory : praise
- (C) admonitory : fear
- (D) peremptory : dispute
- (E) imperative : comply

**Directions:** Each passage in this group is followed by questions based on its content. After reading a passage, choose the best answer to each question. Answer all questions following a passage on the basis of what is stated or implied in that passage.

Line (5) It is frequently assumed that the mechanization of work has a revolutionary effect on the lives of the people who operate the new machines and on the society into which the machines have been introduced. For example, (10) it has been suggested that the employment of women in industry took them out of the household, their traditional sphere, and fundamentally altered their position in society. In the nineteenth century, when women began to enter factories, Jules Simon, a French politician, warned that by doing so, women would give up their femininity. Friedrich Engels, however, predicted that women would (15) be liberated from the "social, legal, and economic subordination" of the family by technological developments that made possible the recruitment of "the whole female sex . . . into public industry." Observers thus differed concerning the social desirability of mechanization's effects, but they agreed that it would transform women's lives.

(20) Historians, particularly those investigating the history of women, now seriously question this assumption of transforming power. They conclude that such dramatic technological innovations as the spinning jenny, the sewing machine, the typewriter, and the vacuum cleaner have not resulted in equally dramatic social changes in

(25) women's economic position or in the prevailing evaluation of women's work. The employment of young women in textile mills during the Industrial Revolution was largely an extension of an older pattern of employment of young, single women as domestics. It was not (30) the change in office technology, but rather the separation of secretarial work, previously seen as an apprenticeship for beginning managers, from administrative work that in the 1880's created a new class of "dead-end" jobs, thenceforth considered "women's work." The (35) increase in the numbers of married women employed outside the home in the twentieth century had less to do with the mechanization of housework and an increase in leisure time for these women than it did with their own economic necessity and with high marriage rates that (40) shrank the available pool of single women workers, previously, in many cases, the only women employers would hire.

Women's work has changed considerably in the past 200 years, moving from the household to the office or (45) the factory, and later becoming mostly white-collar instead of blue-collar work. Fundamentally, however, the conditions under which women work have changed little since before the Industrial Revolution: the segregation of occupations by gender, lower pay for women (50) as a group, jobs that require relatively low levels of skill and offer women little opportunity for advancement all persist, while women's household labor remains demanding. Recent historical investigation has led to a major revision of the notion that technology is always (55) inherently revolutionary in its effects on society. Mechanization may even have slowed any change in the traditional position of women both in the labor market and in the home.

17. Which of the following statements best summarizes the main idea of the passage?

- (A) The effects of the mechanization of women's work have not borne out the frequently held assumption that new technology is inherently revolutionary.
- (B) Recent studies have shown that mechanization revolutionizes a society's traditional values and the customary roles of its members.
- (C) Mechanization has caused the nature of women's work to change since the Industrial Revolution.
- (D) The mechanization of work creates whole new classes of jobs that did not previously exist.
- (E) The mechanization of women's work, while extremely revolutionary in its effects, has not, on the whole, had the deleterious effects that some critics had feared.

18. The author mentions all of the following inventions as examples of dramatic technological innovations EXCEPT the

- (A) sewing machine (B) vacuum cleaner
- (C) typewriter (D) telephone
- (E) spinning jenny

GO ON TO THE NEXT PAGE.



19. It can be inferred from the passage that, before the Industrial Revolution, the majority of women's work was done in which of the following settings?
- (A) Textile mills (B) Private households  
(C) Offices (D) Factories (E) Small shops
20. It can be inferred from the passage that the author would consider which of the following to be an indication of a fundamental alteration in the conditions of women's work?
- (A) Statistics showing that the majority of women now occupy white-collar positions  
(B) Interviews with married men indicating that they are now doing some household tasks  
(C) Surveys of the labor market documenting the recent creation of a new class of jobs in electronics in which women workers outnumber men four to one  
(D) Census results showing that working women's wages and salaries are, on the average, as high as those of working men  
(E) Enrollment figures from universities demonstrating that increasing numbers of young women are choosing to continue their education beyond the undergraduate level
21. The passage states that, before the twentieth century, which of the following was true of many employers?
- (A) They did not employ women in factories.  
(B) They tended to employ single rather than married women.  
(C) They employed women in only those jobs that were related to women's traditional household work.  
(D) They resisted technological innovations that would radically change women's roles in the family.  
(E) They hired women only when qualified men were not available to fill the open positions.
22. It can be inferred from the passage that the author most probably believes which of the following to be true concerning those historians who study the history of women?
- (A) Their work provides insights important to those examining social phenomena affecting the lives of both sexes.  
(B) Their work can only be used cautiously by scholars in other disciplines.  
(C) Because they concentrate only on the role of women in the workplace, they draw more reliable conclusions than do other historians.  
(D) While highly interesting, their work has not had an impact on most historians' current assumptions concerning the revolutionary effect of technology in the workplace.  
(E) They oppose the further mechanization of work, which, according to their findings, tends to perpetuate existing inequalities in society.
23. Which of the following best describes the function of the concluding sentence of the passage?
- (A) It sums up the general points concerning the mechanization of work made in the passage as a whole.  
(B) It draws a conclusion concerning the effects of the mechanization of work which goes beyond the evidence presented in the passage as a whole.  
(C) It restates the point concerning technology made in the sentence immediately preceding it.  
(D) It qualifies the author's agreement with scholars who argue for a major revision in the assessment of the impact of mechanization on society.  
(E) It suggests a compromise between two seemingly contradictory views concerning the effects of mechanization on society.
- (This passage is excerpted from an article that was published in 1982.)
- Warm-blooded animals have elaborate physiological controls to maintain constant body temperature (in humans, 37° C). Why then during sickness should temperature rise, apparently increasing stress on the infected organism? It has long been known that the level of serum iron in animals falls during infection. Garibaldi first suggested a relationship between fever and iron. He found that microbial synthesis of siderophores—substances that bind iron—in bacteria of the genus *Salmonella* declined at environmental temperatures above 37° C and stopped at 40.3° C. Thus, fever would make it more difficult for an infecting bacterium to acquire iron and thus to multiply. Cold-blooded animals were used to test this hypothesis because their body temperature can be controlled in the laboratory. Kluger reported that of iguanas infected with the potentially lethal bacterium *A. hydrophilia*, more survived at temperatures of 42° C than at 37° C, even though healthy animals prefer the lower temperature. When animals at 42° C were injected with an iron solution, however, mortality rates increased significantly. Research to determine whether similar phenomena occur in warm-blooded animals is sorely needed.
24. The passage is primarily concerned with attempts to determine
- (A) the role of siderophores in the synthesis of serum iron  
(B) new treatments for infections that are caused by *A. hydrophilia*  
(C) the function of fever in warm-blooded animals  
(D) the mechanisms that ensure constant body temperature  
(E) iron utilization in cold-blooded animals
- GO ON TO THE NEXT PAGE.

25. According to the passage, Garibaldi determined which of the following?
- (A) That serum iron is produced through microbial synthesis
  - (B) That microbial synthesis of siderophores in warm-blooded animals is more efficient at higher temperatures
  - (C) That only iron bound to other substances can be used by bacteria
  - (D) That there is a relationship between the synthesis of siderophores in bacteria of the genus *Salmonella* and environmental temperature
  - (E) That bacteria of the genus *Salmonella* require iron as a nutrient

26. Which of the following can be inferred about warm-blooded animals solely on the basis of information in the passage?

- (A) The body temperatures of warm-blooded animals cannot be easily controlled in the laboratory.
- (B) Warm-blooded animals require more iron in periods of stress than they do at other times.
- (C) Warm-blooded animals are more comfortable at an environmental temperature of 37° C than they are at a temperature of 42° C.
- (D) In warm-blooded animals, bacteria are responsible for the production of siderophores, which, in turn, make iron available to the animal.
- (E) In warm-blooded animals, infections that lead to fever are usually traceable to bacteria.

27. If it were to be determined that “similar phenomena occur in warm-blooded animals” (lines 22-23), which of the following, assuming each is possible, is likely to be the most effective treatment for warm-blooded animals with bacterial infections?

- (A) Administering a medication that lowers the animals’ body temperature
- (B) Injecting the animals with an iron solution
- (C) Administering a medication that makes serum iron unavailable to bacteria
- (D) Providing the animals with reduced-iron diets
- (E) Keeping the animals in an environment with temperatures higher than 37° C

**Directions:** Each question below consists of a word printed in capital letters, followed by five lettered words or phrases. Choose the lettered word or phrase that is most nearly opposite in meaning to the word in capital letters.

Since some of the questions require you to distinguish fine shades of meaning, be sure to consider all the choices before deciding which one is best.

28. PERTAIN: (A) be apathetic (B) be illegitimate  
(C) be irrevocable (D) be incongruous  
(E) be irrelevant

29. FREQUENCY: (A) unity (B) rarity  
(C) gradualness (D) persistency  
(E) moderation

30. AMALGAMATE: (A) study (B) circulate  
(C) reduce (D) endure (E) separate

31. ARRHYTHMIC: (A) timely (B) subordinate  
(C) terminal (D) lacking precision  
(E) exhibiting regularity

32. BLITHE: (A) conceited (B) dim (C) sturdy  
(D) laconic (E) grave

33. POLEMICAL: (A) imitative (B) lavish  
(C) conciliatory (D) attractive (E) modest

34. PRECIPITATE: (A) deliberate (B) determined  
(C) dissident (D) desperate (E) divided

35. DEFERENCE: (A) aversion (B) resignation  
(C) suspicion (D) inattention (E) contempt

36. UNTOWARD: (A) direct (B) decisive  
(C) necessary (D) favorable and anticipated  
(E) confident and prepared

37. OPPROBRIOUS: (A) meretricious  
(B) innocuous (C) invulnerable  
(D) irreproachable (E) ambitious

38. VERITABLE: (A) impetuous (B) pernicious  
(C) inefficacious (D) disastrous (E) specious

## S T O P

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.  
DO NOT TURN TO ANY OTHER SECTION IN THE TEST.

## SECTION 5

Time—30 minutes

25 Questions

**Directions:** Each question or group of questions is based on a passage, graph, table, or set of conditions. In answering some of the questions, it may be useful to draw a rough diagram. For each question, select the best answer choice given.

### Questions 1-4

Each of six automated tasks, numbered 1 through 6, takes one full hour to complete. No time elapses between the completion of any of the six tasks and the beginning of another task. The group of six tasks must be completed in the shortest possible time period, subject only to the following restrictions:

Tasks 1 and 2 must both be completed before any of the other tasks can be begun.  
Task 3 must be completed before task 4 can be begun.  
At any one time, no more than one task can be performed, except that tasks 4 and 5 can be performed concurrently.

1. Which of the following tasks could be the second task performed?
  - (A) 2
  - (B) 3
  - (C) 4
  - (D) 5
  - (E) 6
2. The shortest possible time period in which the group of six tasks can be completed is
  - (A) two hours
  - (B) three hours
  - (C) four hours
  - (D) five hours
  - (E) six hours
3. Which of the following CANNOT be true of any acceptable ordering of tasks?
  - (A) Task 1 is performed before task 2.
  - (B) Task 3 is performed before task 6.
  - (C) Task 4 is performed before task 6.
  - (D) Task 5 is performed before task 3.
  - (E) Task 6 is performed before task 3.
4. If task 6 is performed as early in the order of tasks as is permissible, then task 6 is performed
  - (A) first
  - (B) second
  - (C) third
  - (D) fourth
  - (E) fifth

5. Most television viewers estimate how frequently a particular type of accident or crime occurs by how extensively it is discussed on television news shows. Television news shows report more on stories that include dramatic pictures such as fires and motor vehicle accidents than they do on more common stories that have little visual drama such as bookkeeping fraud.

If the statements above are true, it can be properly concluded that which of the following is also true?

- (A) The time that television news reporters spend researching news stories is directly related to the number of viewers who will be affected by events like those in the news stories.
  - (B) It is easier for crimes such as bookkeeping fraud to go unprosecuted than it is for crimes such as arson.
  - (C) The number of fires and motor vehicle accidents greatly increases after each television news show that includes dramatic pictures of a fire or motor vehicle accident.
  - (D) Viewers of television news shows tend to overestimate the number of fires and motor vehicle accidents that occur relative to the number of crimes of bookkeeping fraud.
  - (E) The usual selection of news stories for television news shows is determined by the number of news reporters available for assignment.
6. According to one psychological theory, in order to be happy, one must have an intimate relationship with another person. Yet the world's greatest composers spent most of their time in solitude and had no intimate relationships. So the psychological theory must be wrong.

The conclusion above assumes that

    - (A) the world's greatest composers chose to avoid intimate relationships
    - (B) people who have intimate relationships spend little time in solitude
    - (C) solitude is necessary for the composition of great music
    - (D) less well known composers had intimate relationships
    - (E) the world's greatest composers were happy

GO ON TO THE NEXT PAGE.

7. Every member of the Progress party in a certain city council voted against appropriating funds to build a new bridge. All city council members voted on the bridge-appropriation issue. A simple majority of votes was needed to pass the bill.

Which of the following statements, if true, would provide sufficient information to tell whether or not the bridge appropriation bill passed?

- (A) The Progress party holds a majority of seats on the city council.
- (B) Less than half of the members of the other parties all taken together voted against the bridge appropriation.
- (C) No other council members voted against the bridge appropriation.
- (D) Three-fourths of the votes cast against the appropriation were by members of the Progress party.
- (E) Every member of the city council is either a member of the Popular party or a member of the Progress party.

#### Questions 8-13

An office is one of several in which all the furniture is to be repainted. The office contains exactly four pieces of furniture—a bookcase, two chairs, and a desk—and no furniture is to be moved into or out of that office. The repainting specifications are as follows:

On completion of repainting, any piece of furniture in an office must be uniformly brown, green, tan, or white.

On completion of repainting, at least one of the pieces of furniture in an office must be green, and the desk must be either brown or tan.

If, prior to repainting, a piece of furniture is either orange or yellow, that piece must be white on completion of repainting.

If, prior to repainting, a piece of furniture is tan, that piece must remain tan on completion of repainting.

All of the specifications above can and must be met in each office scheduled for repainting.

8. Which of the following could be the furniture colors in the office on completion of repainting?

	Bookcase	Chair	Chair	Desk
(A)	Yellow	Brown	White	Tan
(B)	White	Green	Green	Brown
(C)	Green	White	Orange	Brown
(D)	Brown	Tan	White	Tan
(E)	Tan	White	Brown	Green

9. If, prior to repainting, one chair in the office is orange and the other chair is tan, which of the following must be true of the furniture in the office on completion of repainting?

- (A) The bookcase is green.
- (B) Exactly one of the chairs is brown.
- (C) Exactly one of the chairs is orange.
- (D) Both of the chairs are white.
- (E) The desk is tan.

10. If, prior to repainting, the desk in the office is green and the other three pieces of furniture are white, then of these four pieces of furniture there must be how many that are painted a color that differs from its color prior to repainting?

- (A) Four
- (B) Three
- (C) Two
- (D) One
- (E) None

11. Prior to repainting, and given the repainting specifications, the desk in the office could have been any of the following colors EXCEPT

- (A) brown
- (B) gray
- (C) tan
- (D) white
- (E) yellow

12. If, prior to repainting, the bookcase is white, one chair is orange, one chair is tan, and the desk is green, which of the following must be true of the furniture in the office on completion of repainting?

- (A) At least one piece of furniture is brown.
- (B) Only one piece of furniture is green.
- (C) Only one piece of furniture is tan.
- (D) Exactly two pieces of furniture are white.
- (E) Exactly two pieces of furniture are changed in color as a result of repainting.

13. Which of the following could be true of the furniture in the office prior to repainting if, also prior to repainting, three of the pieces of furniture in the office are tan?

- (A) The desk is brown.
- (B) The desk is green.
- (C) One piece of furniture is white.
- (D) One piece of furniture is yellow.
- (E) The fourth piece of furniture also is tan.

GO ON TO THE NEXT PAGE.



### Questions 14-18

At the start of a two-week hiking trip, eight women—Fiona, Gabriela, Judith, Karen, Michiko, Sharita, Teresa, and Yuriko—will divide into a River Group and a Hill Group of four members each. After following different trails for one week, the groups will meet and the women will again divide into a River Group and a Hill Group of four members each, which will again follow different trails for a week. The groups must be formed with the following restrictions:

For the first week, Teresa cannot be in the same group as Yuriko.

For the second week, both Teresa and Yuriko must be in the River Group.

For each of the two weeks, if Fiona is in the Hill Group, Karen must also be in the Hill Group.

For each of the two weeks, Judith must be in the same group as Michiko.

14. Which of the following could be the members of the River Group for the first week?

(A) Fiona, Gabriela, Karen, and Yuriko  
(B) Fiona, Karen, Michiko, and Sharita  
(C) Gabriela, Judith, Sharita, and Teresa  
(D) Gabriela, Karen, Teresa, and Yuriko  
(E) Gabriela, Sharita, Teresa, and Yuriko

15. If Michiko is in the River Group for the second week, which of the following must be the members of the Hill Group for that week?

(A) Fiona, Gabriela, Judith, and Sharita  
(B) Fiona, Gabriela, Karen, and Sharita  
(C) Gabriela, Judith, Karen, and Sharita  
(D) Gabriela, Judith, Sharita, and Yuriko  
(E) Judith, Karen, Teresa, and Yuriko

16. If, for each week, Sharita is in a different group from Teresa, Sharita must be in a group with which of the following for exactly one week?

(A) Fiona  
(B) Gabriela  
(C) Karen  
(D) Michiko  
(E) Yuriko

17. If Judith is in the Hill Group for the first week, which of the following must be in the River Group for that week?

(A) Fiona  
(B) Gabriela  
(C) Michiko  
(D) Sharita  
(E) Teresa

18. If exactly two women change groups at the end of the first week, those two women could be which of the following?

(A) Gabriela and Karen  
(B) Gabriela and Sharita  
(C) Karen and Sharita  
(D) Karen and Yuriko  
(E) Teresa and Yuriko

### Questions 19-22

An artist needs to arrange seven drawings on the wall of a room in an art gallery. The drawings must be placed in seven consecutive positions, numbered 1 through 7, along the wall. Four of the drawings—*Fan*, *Gate*, *Harp*, and *Iris*—depict objects, whereas three of the drawings—*Salem*, *Tempe*, and *Utah*—depict landscapes. The order in which the drawings are arranged along the wall must meet the following conditions:

No two drawings of objects can be placed next to each other.

*Iris* cannot immediately precede *Salem*.

*Harp* must immediately precede *Tempe*.

If *Gate* is in the third position, then *Salem* must be in the second position.

19. Which of the following is an acceptable arrangement of the drawings along the wall, from position 1 to position 7?

(A) *Fan*, *Salem*, *Gate*, *Tempe*, *Iris*, *Utah*, *Harp*  
(B) *Harp*, *Tempe*, *Iris*, *Utah*, *Gate*, *Salem*, *Fan*  
(C) *Iris*, *Utah*, *Gate*, *Fan*, *Salem*, *Harp*, *Tempe*  
(D) *Salem*, *Fan*, *Utah*, *Harp*, *Tempe*, *Gate*, *Iris*  
(E) *Utah*, *Salem*, *Gate*, *Harp*, *Tempe*, *Fan*, *Iris*

20. Which of the following lists the three positions on the wall in which *Harp* could be placed?

(A) First, second, and third  
(B) First, third, and fifth  
(C) Third, fourth, and fifth  
(D) Third, fifth, and sixth  
(E) Third, fifth, and seventh

21. If *Gate* is in the third position, *Utah* must be placed in which of the following positions?

(A) First                      (B) Second                      (C) Fourth  
(D) Fifth                      (E) Sixth

22. If *Salem* must be placed on the wall in a higher-numbered position than *Tempe* and in a lower-numbered position than *Utah*, *Fan* must be placed in which of the following positions?

(A) First                      (B) Second                      (C) Third  
(D) Fourth                      (E) Fifth

GO ON TO THE NEXT PAGE.



23. A common defense of sport hunting is that it serves a vital wildlife-management function, without which countless animals would succumb to starvation and disease. This defense leads to the overly hasty conclusion that sport hunting produces a healthier population of animals.

Which of the following, if true, best supports the author's claim that sport hunting does not necessarily produce a healthier population of animals?

- (A) For many economically depressed families, hunting helps keep food on the table.
- (B) Wildlife species encroach on farm crops when other food supplies become scarce.
- (C) Overpopulation of a species causes both strong and weak animals to suffer.
- (D) Sport hunters tend to pursue the biggest and healthiest animals in a population.
- (E) Many people have strong moral objections to killing a creature for any reason other than self-defense.

24. Two suits of battle armor worn by King Henry VIII were discovered, one from the beginning of his reign in 1510 and the other from 1540. Although both suits of armor were made for Henry VIII, the 1540 suit of armor was 40 pounds heavier than the 1510 suit of armor.

Which of the following, if true, contributes LEAST to an explanation of the discrepancy described above?

- (A) Henry, although slim at the beginning of his reign, developed a bulky figure because of massive weight gain.
- (B) During his reign Henry increased his arsenal of weapons because, despite his popularity in 1510, by 1540 the English populace was becoming disenchanted with his rule.
- (C) Although the style of armor was plain and severe in the beginning of Henry's reign, he started the fashion of decorating armor with heavy and elaborate metal pieces because of his love for ornamentation.
- (D) Henry ascended the throne while still an adolescent and grew three inches during his first five years as king.
- (E) Because of the improved design of battle weaponry during the 1530's, armor was given a multilayered design so that the sharper and stronger weapons could not pierce it.

25. Government department head: We already have a code of ethics that companies doing business with the department are urged to abide by. The fact that virtually all of the companies have agreed to abide by it indicates that it is successful. Therefore, neither stronger ethics regulations nor enforcement mechanisms are necessary to ensure ethical behavior by companies doing business with the department.

Which of the following, if true, casts most doubt on the department head's conclusion?

- (A) The code of ethics applies only to companies that do business with the department.
- (B) The code of ethics was instituted only after it was discovered that several companies had committed serious violations of ethics in their business with the department.
- (C) A government investigation found that most of the companies that agreed to abide by the department's code of ethics are not complying with it.
- (D) A survey of major companies found that several companies stopped doing business with the department because they did not want to agree to abide by the code of ethics.
- (E) A study of codes of ethics for companies found that the codes are most effective when the top executives of companies that agree to abide by them are fully committed to following them.

## STOP

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.  
DO NOT TURN TO ANY OTHER SECTION IN THE TEST.

**SECTION 6**  
Time—30 minutes  
30 Questions

**Numbers:** All numbers used are real numbers.

**Figures:** Position of points, angles, regions, etc. can be assumed to be in the order shown; and angle measures can be assumed to be positive.

Lines shown as straight can be assumed to be straight.

Figures can be assumed to lie in a plane unless otherwise indicated.

Figures that accompany questions are intended to provide information useful in answering the questions. However, unless a note states that a figure is drawn to scale, you should solve these problems NOT by estimating sizes by sight or by measurement, but by using your knowledge of mathematics (see Example 2 below).

**Directions:** Each of the Questions 1-15 consists of two quantities, one in Column A and one in Column B. You are to compare the two quantities and choose

A if the quantity in Column A is greater;  
B if the quantity in Column B is greater;  
C if the two quantities are equal;  
D if the relationship cannot be determined from the information given.

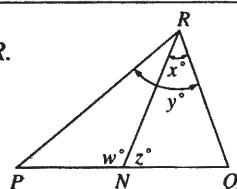
**Note:** Since there are only four choices, NEVER MARK (E).

**Common Information:** In a question, information concerning one or both of the quantities to be compared is centered above the two columns. A symbol that appears in both columns represents the same thing in Column A as it does in Column B.

<u>Column A</u>	<u>Column B</u>	<u>Sample Answers</u>
-----------------	-----------------	-----------------------

<b>Example 1:</b>	$2 \times 6$	$2 + 6$
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Examples 2-4 refer to  $\triangle PQR$ .



<b>Example 2:</b>	$PN$	$NQ$
-------------------	------	------

(A) (B) (C) (D) (E)

(since equal measures cannot be assumed, even though  $PN$  and  $NQ$  appear equal)

<b>Example 3:</b>	$x$	$y$
-------------------	-----	-----

(A) (B) (C) (D) (E)

(since  $N$  is between  $P$  and  $Q$ )

<b>Example 4:</b>	$w + z$	$180$
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(A) (B) (C) (D) (E)

(since  $PQ$  is a straight line)

Column A

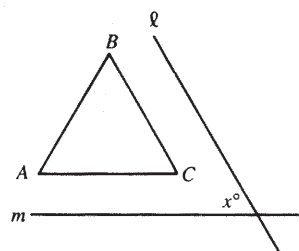
Column B

1. The number of months in 7 years

The number of days in 12 weeks

2.  $1 - \frac{1}{27}$

$\frac{8}{9} + \frac{1}{81}$



$\triangle ABC$  is equilateral. Line  $l$  is parallel to side  $BC$  and line  $m$  is parallel to side  $AC$ .

3.  $x$

60

$r > s > 0$

4.  $\frac{rs}{r}$

$\frac{rs}{s}$

The circumference of circle  $C$  is  $18\pi$ .

5. The diameter of circle  $C$

9

6.  $9^7$

10,000,000

The volume of a cube is 64.

7. The area of the base of the cube

32

$t$  is a positive integer.

$\frac{4}{7} = \frac{t}{s}$

8.  $s$

7

9.  $(0.82)^2(0.82)^3$

$(0.82)^6$

For all real numbers  $a$ , let  $a^* = 1 - a$ .

10.  $((-1)^*)^*$

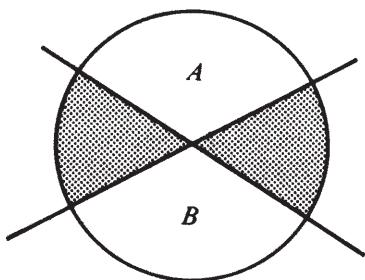
$2^*$

GO ON TO THE NEXT PAGE.

- A if the quantity in Column A is greater;  
 B if the quantity in Column B is greater;  
 C if the two quantities are equal;  
 D if the relationship cannot be determined from the information given.

Column A

Column B



The areas of the two shaded regions of the circle are equal.

- |   |   |
|---|---|
| 11. The area of unshaded region A of the circle | The area of unshaded region B of the circle |
|---|---|

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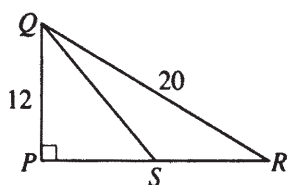

$$x \neq 0$$

- |                     |   |
|---------------------|---|
| 12. $\frac{x}{ x }$ | 1 |
|---------------------|---|

Team X scored  $p$  points more than team Y, and the two teams together scored a total of 10 points.

- |  |          |
|--|----------|
| 13. Twice the number of points team Y scored | $10 - p$ |
|--|----------|

- |                         |             |
|-------------------------|-------------|
| 14. $(x - 1)(x)(x + 1)$ | $(x)(x)(x)$ |
|-------------------------|-------------|



The area of  $\triangle PQS$  is 45.

- |                              |                          |
|------------------------------|--------------------------|
| 15. The length of segment PS | The length of segment SR |
|------------------------------|--------------------------|

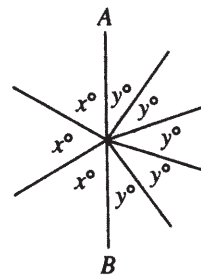
**Directions:** Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. In a certain shop, notebooks that normally sell for 59 cents each are on sale at 2 for 99 cents. How much can be saved by purchasing 10 of these notebooks at the sale price?

- (A) \$0.85 (B) \$0.95 (C) \$1.10  
 (D) \$1.15 (E) \$2.00

17. Which of the following is a solution to  $x + x^2 = 1$ ?

- (A)  $-1$   
 (B)  $0$   
 (C)  $\frac{1}{2}$   
 (D)  $1$   
 (E) None of the above

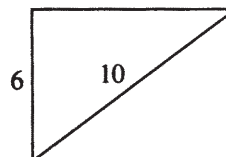


18. In the figure above,  $AB$  is a line segment. What is the value of  $\frac{x - y}{x + y}$ ?

- (A)  $\frac{5}{24}$  (B)  $\frac{1}{4}$  (C)  $\frac{7}{16}$  (D)  $\frac{11}{24}$  (E)  $\frac{7}{13}$

19. If the average (arithmetic mean) of 5 consecutive integers is 12, what is the sum of the least and greatest of the 5 integers?

- (A) 24 (B) 14 (C) 12 (D) 11 (E) 10



20. What is the perimeter of the rectangle shown above?

- (A) 14 (B) 24 (C) 28 (D) 38 (E) 48

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following chart.

**PROFILE OF CONGRESS IN YEAR X**  
(total membership: 535)

House of Representatives		Senate
<b>Party</b>		
292.....	Democratic .....	62
143.....	Republican.....	38
435.....	Total .....	100
<b>Sex</b>		
418.....	Male .....	100
17.....	Female .....	0
<b>Age</b>		
27.....	Youngest.....	34
77.....	Oldest.....	80
48.....	Average (arithmetic mean) .....	54
<b>Religion</b>		
255.....	Protestant .....	69
107.....	Catholic.....	12
18.....	Jewish.....	5
4.....	Mormon.....	3
51.....	Other .....	11

House of Representatives		Senate
<b>Profession</b>		
215.....	Lawyer .....	63
81.....	Business Executive or Banker .....	15
45.....	Educator.....	6
14.....	Farmer or Rancher .....	6
22.....	Career Government Official.....	0
24.....	Journalist or Communications Executive ..	4
2.....	Physician.....	0
1.....	Veterinarian .....	1
0.....	Geologist .....	2
6.....	Worker or Skilled Tradesperson .....	0
25.....	Other .....	3
<b>Ethnic Group</b>		
17.....	Black American.....	1
2.....	Asian American.....	3
4.....	Hispanic American .....	0

21. In the Senate, if 25 male members were replaced by 25 female members, the ratio of male members to female members would be

- (A) 4 to 1
- (B) 3 to 1
- (C) 3 to 2
- (D) 2 to 1
- (E) 1 to 1

22. Approximately what percent of the members of Congress are lawyers?

- (A) 63%
- (B) 58%
- (C) 56%
- (D) 52%
- (E) 49%

23. If 5 senators are Catholic Democrats, how many senators are neither Catholic nor Democratic?

- (A) 79
- (B) 74
- (C) 69
- (D) 31
- (E) 21

24. If all lawyers and all women in the House of Representatives vote for the passage of a bill, how many more votes will be needed for a majority?

- (A) 435
- (B) 220
- (C) 3
- (D) 0
- (E) It cannot be determined from the information given.

25. Which of the following can be inferred from the information given in the chart?

- I. More than 80 percent of the men in Congress are members of the House of Representatives.
  - II. The percent of members who are categorized as farmers or ranchers is greater for the House of Representatives than for the Senate.
  - III. The median age in the Senate is 57.
- (A) I only
  - (B) II only
  - (C) III only
  - (D) I and II
  - (E) I and III

GO ON TO THE NEXT PAGE.

26. If  $xy \neq 0$ ,  $\frac{x-1}{xy} =$

(A)  $\frac{1}{x} - \frac{1}{xy}$

(B)  $\frac{x}{y} - \frac{1}{xy}$

(C)  $\frac{1}{y} - x$

(D)  $\frac{1}{y} - \frac{1}{xy}$

(E)  $\frac{1}{xy} - \frac{1}{y}$

27. The number 0.01 is how many times as great as the number  $(0.0001)^2$ ?

(A)  $10^2$

(B)  $10^4$

(C)  $10^6$

(D)  $10^8$

(E)  $10^{10}$

28. A certain cake recipe states that the cake should be baked in a pan 8 inches in diameter. If Jules wants to use the recipe to make a cake of the same depth but 12 inches in diameter, by what factor should he multiply the recipe ingredients?

(A)  $2\frac{1}{2}$

(B)  $2\frac{1}{4}$

(C)  $1\frac{1}{2}$

(D)  $1\frac{4}{9}$

(E)  $1\frac{1}{3}$

29. If  $x > 0$  and  $y > 0$ , which of the following is

equivalent to  $\frac{x}{y}\sqrt{\frac{y}{x^2}}$ ?

(A) 1

(B)  $\frac{\sqrt{x}}{\sqrt{y}}$

(C)  $\sqrt{x}$

(D)  $\frac{1}{\sqrt{x}}$

(E)  $\frac{1}{\sqrt{y}}$

30. The cost, in dollars, of manufacturing  $x$  refrigerators is  $9,000 + 400x$ . The amount received when selling these  $x$  refrigerators is  $500x$  dollars. What is the least number of refrigerators that must be manufactured and sold so that the amount received is at least equal to the manufacturing cost?

(A) 10

(B) 18

(C) 45

(D) 90

(E) 100

**STOP**

IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.  
DO NOT TURN TO ANY OTHER SECTION IN THE TEST.



Use only a pencil with soft, black lead (No. 2 or HB) to complete this answer sheet. Be sure to fill in completely the space that corresponds to your answer choice. Completely erase any errors or stray marks.

Enter your last name, first name initial (given name), and middle initial if you have one.

First Name	Middle Initial

[illegible]

## SIDE 1

BE SURE EACH MARK IS DARK AND COMPLETELY FILLS THE INTENDED SPACE AS ILLUSTRATED HERE:  
YOU MAY FIND MORE RESPONSE SPACES THAN YOU NEED. IF SO, PLEASE LEAVE THEM BLANK.

SECTION 1						SECTION 2						SECTION 3					
1	A	B	C	D	E	1	A	B	C	D	E	1	A	B	C	D	E
2	A	B	C	D	E	2	A	B	C	D	E	2	A	B	C	D	E
3	A	B	C	D	E	3	A	B	C	D	E	3	A	B	C	D	E
4	A	B	C	D	E	4	A	B	C	D	E	4	A	B	C	D	E
5	A	B	C	D	E	5	A	B	C	D	E	5	A	B	C	D	E
6	A	B	C	D	E	6	A	B	C	D	E	6	A	B	C	D	E
7	A	B	C	D	E	7	A	B	C	D	E	7	A	B	C	D	E
8	A	B	C	D	E	8	A	B	C	D	E	8	A	B	C	D	E
9	A	B	C	D	E	9	A	B	C	D	E	9	A	B	C	D	E
10	A	B	C	D	E	10	A	B	C	D	E	10	A	B	C	D	E
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12	A	B	C	D	E	12	A	B	C	D	E	12	A	B	C	D	E
13	A	B	C	D	E	13	A	B	C	D	E	13	A	B	C	D	E
14	A	B	C	D	E	14	A	B	C	D	E	14	A	B	C	D	E
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17	A	B	C	D	E	17	A	B	C	D	E	17	A	B	C	D	E
18	A	B	C	D	E	18	A	B	C	D	E	18	A	B	C	D	E
19	A	B	C	D	E	19	A	B	C	D	E	19	A	B	C	D	E
20	A	B	C	D	E	20	A	B	C	D	E	20	A	B	C	D	E
21	A	B	C	D	E	21	A	B	C	D	E	21	A	B	C	D	E
22	A	B	C	D	E	22	A	B	C	D	E	22	A	B	C	D	E
23	A	B	C	D	E	23	A	B	C	D	E	23	A	B	C	D	E
24	A	B	C	D	E	24	A	B	C	D	E	24	A	B	C	D	E
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28	A	B	C	D	E	28	A	B	C	D	E	28	A	B	C	D	E
29	A	B	C	D	E	29	A	B	C	D	E	29	A	B	C	D	E
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31	A	B	C	D	E	31	A	B	C	D	E	31	A	B	C	D	E
32	A	B	C	D	E	32	A	B	C	D	E	32	A	B	C	D	E
33	A	B	C	D	E	33	A	B	C	D	E	33	A	B	C	D	E
34	A	B	C	D	E	34	A	B	C	D	E	34	A	B	C	D	E
35	A	B	C	D	E	35	A	B	C	D	E	35	A	B	C	D	E
36	A	B	C	D	E	36	A	B	C	D	E	36	A	B	C	D	E
37	A	B	C	D	E	37	A	B	C	D	E	37	A	B	C	D	E
38	A	B	C	D	E	38	A	B	C	D	E	38	A	B	C	D	E

2. **YOUR NAME:** \_\_\_\_\_  
(Print) Last Name (Family or Surname) First Name (Given) M.I.

**MAILING ADDRESS:** \_\_\_\_\_  
(Print) P.O. Box or Street Address

City \_\_\_\_\_ State or Province \_\_\_\_\_

Country \_\_\_\_\_ Zip or Postal Code \_\_\_\_\_

**CENTER:** \_\_\_\_\_  
City \_\_\_\_\_ State or Province \_\_\_\_\_

Country \_\_\_\_\_

Center Number \_\_\_\_\_ Room Number \_\_\_\_\_

**SIGNATURE:** \_\_\_\_\_

3. DATE OF BIRTH		
Month	Day	Year
<input type="radio"/> Jan.	<input type="text"/>	<input type="text"/>
<input type="radio"/> Feb.	<input type="text"/>	<input type="text"/>
<input type="radio"/> Mar.	<input type="text"/>	<input type="text"/>
<input type="radio"/> April	<input type="text"/>	<input type="text"/>
<input type="radio"/> May	<input type="text"/>	<input type="text"/>
<input type="radio"/> June	<input type="text"/>	<input type="text"/>
<input type="radio"/> July	<input type="text"/>	<input type="text"/>
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<input type="radio"/> Oct.	<input type="text"/>	<input type="text"/>
<input type="radio"/> Nov.	<input type="text"/>	<input type="text"/>
<input type="radio"/> Dec.	<input type="text"/>	<input type="text"/>

[illegible][illegible][illegible]

7. TEST NAME	(on back cover of your test book)
FORM CODE	(on back cover of your test book)
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## GENERAL TEST

## CERTIFICATION STATEMENT

Please write the following statement below, DO NOT PRINT.

"I certify that I am the person whose name appears on this answer sheet. I also agree not to disclose the contents of the test I am taking today to anyone." Sign and date where indicated.

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

Month Day Year

BE SURE EACH MARK IS DARK AND COMPLETELY FILLS THE INTENDED SPACE AS ILLUSTRATED HERE: ●  
YOU MAY FIND MORE RESPONSE SPACES THAN YOU NEED. IF SO, PLEASE LEAVE THEM BLANK.

SECTION 4						SECTION 5						SECTION 6						SECTION 7					
1	A	B	C	D	E	1	A	B	C	D	E	1	A	B	C	D	E	1	A	B	C	D	E
2	A	B	C	D	E	2	A	B	C	D	E	2	A	B	C	D	E	2	A	B	C	D	E
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4	A	B	C	D	E	4	A	B	C	D	E	4	A	B	C	D	E	4	A	B	C	D	E
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36	A	B	C	D	E	36	A	B	C	D	E	36	A	B	C	D	E	36	A	B	C	D	E
37	A	B	C	D	E	37	A	B	C	D	E	37	A	B	C	D	E	37	A	B	C	D	E
38	A	B	C	D	E	38	A	B	C	D	E	38	A	B	C	D	E	38	A	B	C	D	E

IF YOU DO NOT WANT THIS ANSWER SHEET TO BE SCORED

If you want to cancel your scores from this administration, complete A and B below. You will not receive scores for this test; however, you will receive confirmation of this cancellation. No record of this test or the cancellation will be sent to the recipients you indicated, and there will be no scores for this test on your GRE file. Once a score is canceled, it cannot be reinstated.

To cancel your scores from this test administration, you must:

A. fill in both ovals here . . . ○ - ○ B. sign your full name here: \_\_\_\_\_

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# Answer Key for the Practice General Test

VERBAL ABILITY					
Section I			Section IV		
Number	Answer	P+	Number	Answer	P+
1	A	90	1	A	84
2	B	82	2	E	86
3	B	81	3	B	87
4	E	77	4	C	80
5	D	70	5	A	74
6	C	62	6	B	71
7	C	28	7	C	68
8	D	96	8	C	98
9	C	85	9	D	76
10	C	46	10	C	70
11	A	46	11	B	63
12	D	46	12	A	60
13	A	39	13	B	48
14	E	36	14	B	48
15	E	35	15	D	26
16	A	26	16	D	35
17	C	63	17	A	58
18	B	63	18	D	97
19	A	64	19	B	89
20	C	75	20	D	51
21	E	64	21	B	66
22	D	46	22	A	33
23	D	51	23	B	48
24	B	62	24	C	74
25	A	59	25	D	70
26	E	52	26	A	51
27	B	66	27	C	48
28	E	89	28	E	89
29	A	86	29	B	87
30	E	76	30	E	69
31	B	78	31	E	58
32	C	41	32	E	30
33	E	37	33	C	44
34	D	36	34	A	25
35	C	35	35	E	31
36	A	29	36	D	36
37	A	18	37	D	25
38	D	21	38	E	19

QUANTITATIVE ABILITY					
Section III			Section VI		
Number	Answer	P+	Number	Answer	P+
1	A	85	1	C	94
2	C	84	2	A	80
3	B	79	3	C	85
4	D	76	4	B	76
5	C	57	5	A	64
6	D	70	6	B	67
7	B	69	7	B	72
8	D	52	8	D	69
9	B	52	9	A	34
10	A	50	10	C	38
11	A	42	11	D	19
12	D	26	12	D	59
13	C	57	13	C	42
14	B	52	14	D	28
15	A	35	15	B	40
16	E	75	16	B	88
17	E	86	17	E	80
18	D	81	18	B	77
19	A	83	19	A	74
20	B	63	20	C	71
21	B	92	21	B	84
22	C	90	22	D	58
23	B	71	23	D	54
24	E	58	24	E	63
25	D	71	25	A	34
26	C	47	26	D	51
27	D	32	27	C	52
28	E	44	28	B	32
29	A	19	29	E	49
30	E	47	30	D	57

ANALYTICAL ABILITY					
Section II			Section V		
Number	Answer	P+	Number	Answer	P+
1	C	88	1	A	91
2	C	87	2	D	81
3	E	92	3	D	72
4	E	86	4	C	83
5	C	81	5	D	79
6	A	65	6	E	75
7	A	45	7	A	76
8	B	89	8	B	76
9	B	66	9	A	70
10	E	52	10	C	59
11	C	81	11	E	56
12	D	89	12	B	48
13	D	68	13	C	34
14	A	47	14	A	67
15	A	44	15	B	78
16	B	62	16	E	58
17	A	45	17	A	26
18	B	50	18	D	25
19	D	37	19	B	60
20	D	60	20	B	54
21	D	23	21	C	55
22	E	30	22	C	40
23	B	54	23	D	69
24	C	51	24	B	59
25	E	30	25	C	60

## How to Score Your Practice Test

The tables above provide a list of the correct answers. Match your answer to each question to the answer given in the list, crossing out questions you answered incorrectly or omitted. Add the number of correct answers in Sections I and IV to obtain your raw verbal score, add the number of correct answers in Sections III and VI to obtain your raw quantitative score, and add the number of correct answers in Sections II and V to obtain your raw analytical score. In the conversion table on page 32, find the scaled scores that correspond to each of your raw scores on the test.

## Evaluating Your Performance

One way to evaluate your performance is to compare your scaled scores with those of others who have taken the General Test. The score conversion table on page 32 based on those examinees who took the General Test between October 1, 1989, and September 30, 1992, provides for each scaled score, the percent of examinees who earned lower scores. For example, the column next to the verbal scaled score 460 indicates 43 percent. This means that 43 percent of the examinees tested between October 1989 and September 1992 earned verbal scores below 460. For each score you earned on this practice test, note the percent of GRE examinees who earned lower

scores. This is a reasonable indication of your rank among GRE General Test examinees if you have taken the practice test under standard timing conditions.

You can also evaluate your performance by looking at how you performed on each item. In the tables above, there is a number to the right of each correct answer, P+. The P+ is the percent of examinees who answered the question correctly and is based on the examinees who actually took that edition of the test. This information enables you to see how other examinees performed on each question. It can also help identify content areas in which you need more practice and review.

It may be helpful to compare your score to scores of examinees whose intended graduate school major field is similar to your own. The table on page 32 shows you the average scores for people in various categories of intended graduate major fields. You can see that for those whose interests lie in the physical sciences and engineering, which are highly mathematical, the quantitative scores are relatively high, whereas those interested in the humanities generally have relatively high verbal scores. You can evaluate your scores by finding the major field category most closely related to your career goals and see how your performance compares with others who are striving for similar goals.

**Score Conversions for GRE General Test GR94-2 Only and the Percents Below\***

Raw Score	VERBAL		QUANTITATIVE		ANALYTICAL		Raw Score	VERBAL		QUANTITATIVE		ANALYTICAL	
	Scaled Score	% Below	Scaled Score	% Below	Scaled Score	% Below		Scaled Score	% Below	Scaled Score	% Below	Scaled Score	% Below
74-76	800	99					39	430	34	610	60	660	81
73	790	99					38	420	31	600	58	640	77
72	780	99					37	410	28	580	53	630	73
71	760	99					36	400	25	570	51	610	69
70	750	98					35	390	22	560	48	590	63
							34	380	20	550	46	580	60
69	740	98					33	380	20	540	43	560	55
68	730	97					32	370	17	530	41	550	52
67	720	96					31	360	15	520	39	530	46
66	710	96					30	350	13	500	34	520	43
65	700	95											
64	680	93					29	340	11	490	32	500	37
63	670	92					28	340	11	480	30	490	35
62	660	90					27	330	9	470	27	480	32
61	650	89					26	320	8	450	23	460	28
60	640	87	800	97			25	310	6	440	21	450	25
							24	310	6	420	17	430	21
59	630	86	800	97			23	300	5	410	15	420	19
58	620	84	800	97			22	290	4	390	12	400	15
57	600	81	800	97			21	280	3	380	11	390	13
56	590	79	790	95			20	280	3	370	9	380	12
55	580	76	780	93									
54	570	74	770	92			19	270	2	350	7	360	9
53	560	71	760	90			18	260	2	340	6	350	8
52	550	69	740	86			17	260	2	320	4	330	6
51	540	66	730	84			16	250	1	300	3	320	5
50	540	66	720	82	800	98	15	240	1	290	2	310	4
							14	230	1	270	1	300	3
49	530	64	710	80	800	98	13	220	1	260	1	290	3
48	520	61	700	79	800	98	12	210	1	240	1	270	2
47	510	58	690	76	780	97	11	210	1	220	1	260	1
46	490	53	680	75	760	96	10	200	1	200	1	240	1
45	480	50	670	73	750	95							
44	470	47	660	70	730	93	9	200	1	200	1	230	1
43	460	43	650	68	710	90	8	200	1	200	1	220	1
42	460	43	640	66	700	89	7	200	1	200	1	200	1
41	450	40	630	64	680	85	6	200	1	200	1	200	1
40	440	37	620	62	670	83	5	200	1	200	1	200	1
							0-4	200	1	200	1	200	1

\*Percent scoring below the scaled score is based on the performance of 1,135,982 examinees who took the General Test between October 1, 1989, and September 30, 1992. This percent below information is used for score reports during the 1993-94 testing year.