- 1. The 180 students in a group are to be seated in rows so that there is an equal number of students in each row. Each of the following could be the number of rows EXCEPT
 - (A) 4
 - (B) 20
 - (C) 30
 - (D) 40
 - (E) 90
- 2. A parking garage rents parking spaces for \$10 per week or \$30 per month. How much does a person save in a year by renting by the month rather than by the week?
 - (A) \$140
 - (B) \$160
 - (C) \$220
 - (D) \$240
 - (E) \$260
- 3. If $y = 5x^2 2x$ and x = 3, then y = 3
 - (A) 24
 - (B) 27
 - (C) 39
 - (D) 51
 - (E) 219
- 4. Of the following, which is the best approximation to $\sqrt{0.092}$
 - (A) 0.05
 - (B) 0.06
 - (C) 0.16
 - (D) 0.5
 - (E) 0.6
- 5. At a certain diner, a hamburger and coleslaw cost \$3.59, and a hamburger and french fries cost \$4.40. If french fries cost twice as much as coleslaw, how much do french fries cost?
 - (A) \$0.30
 (B) \$0.45
 (C) \$0.60
 (D) \$0,75

(E) \$0.90

x x x x x z

6. If $\angle XYZ$ in the figure above is a right angle, what is the value of x?

- (A) 155
- (B) 145
- (C) 135

(D) 125
(E) 110
$$\frac{\left(\frac{a}{b}\right)}{c}$$

- 7. In the expression above, *a*, *b*, and *c* are different numbers and each is one of the numbers 2, 3, or 5. What is the <u>least possible value of the expression?</u>
 - (A) $\frac{1}{30}$ (B) $\frac{2}{15}$ (C) $\frac{1}{6}$ (D) $\frac{3}{10}$ (E) $\frac{5}{6}$

8. A certain culture of bacteria quadruples every hour. If a container with these bacteria was half full at 10:00 a.m., at what time was it one-eighth full?

- (A) 9:00 a.m.
- (B) 7:00 a.m.
- (C) 6:00 a.m.
- (D) 4:00 a.m.
- (E) 2:00 a.m.
- 9. Al, Lew, and Karen pooled their functs to buy a gift for a friend. Al contributed \$2 less than $\frac{1}{3}$ of the cost of

the gift and Lew contributed \$2 more $han \frac{1}{4}$ of the cost. If Karen contributed the remaining \$15, what was

the cost of the gift?

- (A) \$24
- (B) \$33 (C) \$36
- (D) \$43

(E) \$4

W

is the total number of integers between 100 and 200 that are divisible by 3?

- (B) 32 (C) 31 (D) 30
- (E) 29
- 11. Which of the following inequalities is equivalent to 10 2x > 18?

(A) x > -14

(B) x > -4 (C) x > 4 (D) x < 4 (E) x < -4

12. In 1979 approximately $\frac{1}{3}$ of the 37.3 million airline passengers traveling to or from the United States used Kennedy Airport. If the number of such passengers that used Miami Airport was $\frac{1}{2}$ the number that used

of

Kennedy Airport and 4 times the number that used Logan Airport, approximately how many millio these passengers used Logan Airport that year?

(A) 18.6

(B) 9.3

(C) 6.2

- (D) 3.1
- (E) 1.6

13. A certain basketball team that has played $\frac{2}{3}$ of its games has a record of 17 wins and 3 losses. What is the

greatest number of the remaining games that the team can lose and still with at least $\frac{3}{4}$ of all of its games?

- (A) 7
- (B) 6
- (C) 5
- (D) 4 (E) 3
- (\mathbf{E}) 5

14. Dan and Karen, who live 10 miles apart neet at a cafe that is directly north of Dan's house and directly east of Karen's house. If the cafe is 2 miles closer to Dan's house than to Karen's house, how many miles is the cafe from Karen's house?

- (A) 6
- (B) 7
- (C) 8 (D) 9
- (E) 10

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: and

15. If *n* is

 $\frac{2 \cdot 3 \cdot 5 \cdot 7 \cdot 11 \cdot 13}{77k}$ then which of the following could be the value of k?

(E) 60

There were 36.000 hardback copies of a certain novel sold before the paperback version was issued. From the time the first paperback copy was sold until the last copy of the novel was sold. 9 times as many paperback copies as hardback copies were sold. If a total of 441.000 copies of the novel were sold in all, how many paperback copies were sold?

(A) 45.000

(B) 360.000 (C) 364.500

- (C) 304.300
- (D) 392.000(E) 396.900
- 17. In the formula $w = \frac{p}{t\sqrt{v}}$, integers p and t are positive constants. If w = 2 when v = 1 and if $w = \frac{1}{2}$ when v = 1
 - 64, then *t* =
 - (A) 1
 - (B) 2
 - (C) 3
 - (D) 4
 - (E) 16
- 18. Last year Mrs. Long received \$160 in dividends on her shares of Company X sock, all of which she had held for the entire year. If she had had 12 more shares of the stock last year, she would have received \$15 more in total annual dividends. How many shares of the stock did she have last year?
 - (A) 128
 - (B) 140
 - (C) 172
 - (D) 175
 - (E) 200

Month	Average Price
	per Dozen
April	\$1.26
May	\$1.20
June	\$1.08

- 19. The table above shows the average tarithmetic mean) price per dozen of the large grade A eggs sold in a certain store during three successive months. If $\frac{2}{3}$ as many dozen were sold in April as in May, and twice as many were sold in Juneas in April, what was the average price per dozen of the eggs sold over the three-month period?
 - (A) \$1.08
 - (B) \$1.10 (C) \$1.14
 - (D) **\$1**.16
 - (F) \$1.18

3 and $\frac{5x}{3}$ is a prime integer greater than 2, which of the following must be true?

I. x = yII. y = 1

III. x and y are prime integers.

- (A) None
- (B) I only
- (C) II only

(D) IIIonly

(E) I and III

Answers:

- 1. D 2. B 3. C 4. A

- F. E
 E
 E
 E
 B
 E
 F. B

- 8. A 9. C
- 10. A
- 11. E

C

- 12. E
- 13. D
- 14. C
- 15. B
- 16. C
- 17. C 18. A
- 19. D
- 20. A