

Section 4

Mathematics Achievement

30 Questions**Time: 30 minutes**

Each question is followed by four suggested answers. Read each question and then decide which one of the four suggested answers is best.

Find the row of spaces on your answer document that has the same number as the question. In this row, mark the space having the same letter as the answer you have chosen. You may write in your test booklet.

SAMPLE QUESTION:Sample Answer

Which of the numbers below is NOT a factor of 364?

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

(A) 13

(B) 20

(C) 26

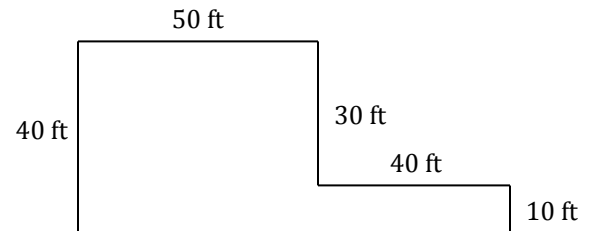
(D) 91

The correct answer is 20, so circle B is darkened.

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- Which fraction is between $\frac{1}{5}$ and $\frac{1}{2}$?
 - $\frac{1}{10}$
 - $\frac{3}{10}$
 - $\frac{4}{5}$
 - $\frac{9}{10}$
- Use the set of numbers shown to answer the question.
 $\{6, 9, 12, 15, 18, \dots\}$
Which describes this set of numbers?
 - odd numbers
 - even numbers
 - prime numbers
 - multiples of 3
- What is the sum of 3.14 and 1.6?
 - 3.6
 - 3.74
 - 4.7
 - 4.74
- What is the name of a polygon with four sides and four right angles?
 - rectangle
 - pentagon
 - kite
 - rhombus

- Which number is divisible by 9 with a remainder of 1?
 - 181
 - 180
 - 179
 - 178
- Shown below is a plan for a parking lot that a grocery store is building. All angles shown in the plan are 90° .



- According to the grocery store's plan, what will be the perimeter of the parking lot? ($P = s+s+s+s+s+s$)
- 300 ft
 - 260 ft
 - 200 ft
 - 160 ft

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7. What is the mode of this set of data?

TIME SPENT READING (IN MINUTES)							
Week:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
1	12	30	18	40	25	30	30
2	30	15	45	20	30	40	30
3	20	30	30	35	45	30	25

- (A) 15
- (B) 25
- (C) 30
- (D) 45

8. Use the number sequence to answer the question.

1, 4, 7, __, 13, 16

What is the missing number in the sequence?

- (A) 9
- (B) 10
- (C) 11
- (D) 12

9. Brendan tried to fill an empty vase with $6\frac{1}{6}$ cups of water, but he accidentally spilled $1\frac{2}{3}$ cups of water onto the floor. If he poured the rest of the water into the vase, how many cups of water ended up in the vase?

- (A) $2\frac{2}{3}$
- (B) $3\frac{1}{2}$
- (C) $4\frac{1}{3}$
- (D) $4\frac{1}{2}$

10. The chart below shows Anne’s purchases at the store.

Item	Price of 1	Quantity
jar of peanut butter	\$2.99	3
loaf of bread	\$1.49	2
1 pack of paper plates	\$4.99	1
jar of jelly	\$3.49	1

What is the total estimated cost?

- (A) between \$0 and \$8
- (B) between \$8 and \$16
- (C) between \$16 and \$24
- (D) between \$24 and \$32

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11. What is the value of the expression $3,100 - 255$?
- (A) 3,845
(B) 2,945
(C) 2,845
(D) 2,745
12. What is the standard form for eight hundred sixty-two thousand fourteen?
- (A) 862,404
(B) 862,014
(C) 814,620
(D) 800,624
13. Jessica asked 100 third-graders at her school where they want to go on the next school field trip. The table shows the results.

Field trip location	Number of votes
art museum	17
public library	13
animal shelter	45
police station	25

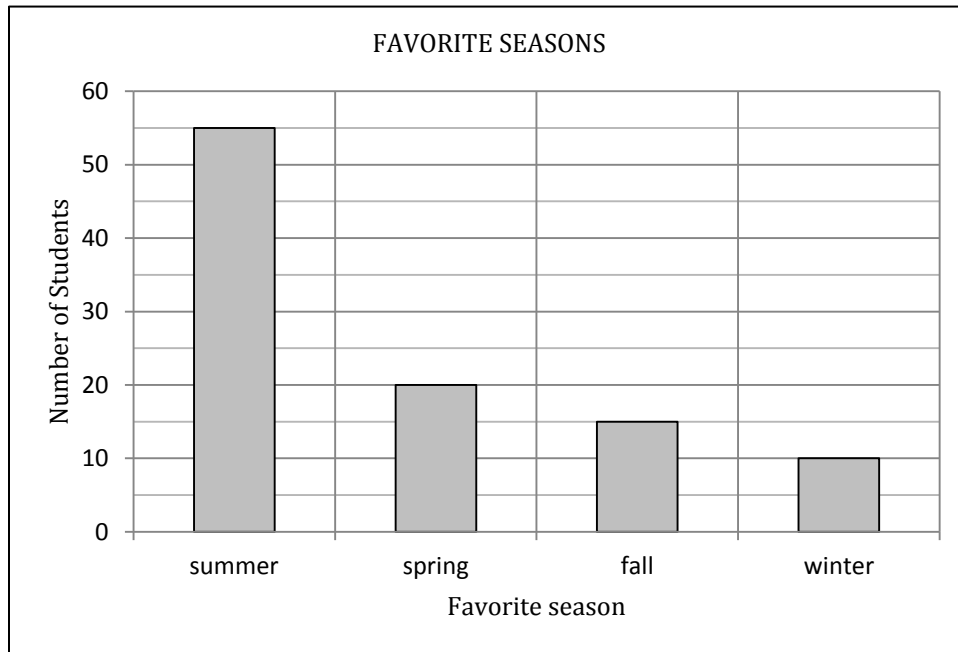
What fraction of the students wanted to go to either the animal shelter or the police station?

- (A) $\frac{1}{2}$
(B) $\frac{7}{10}$
(C) $\frac{3}{4}$
(D) $\frac{4}{5}$

14. If the perimeter of a rectangle is 60 ft, which equation below can be used to determine the length of the rectangle? ($P = 2l + 2w$, where P = perimeter, l = length, and w = width.)
- (A) $l = 30 - w$
(B) $l = 60 - w$
(C) $l = w + 30$
(D) $l = \frac{w}{60}$
15. Which fraction is equivalent to 0.25?
- (A) $\frac{25}{10}$
(B) $\frac{1}{2.5}$
(C) $\frac{1}{4}$
(D) $\frac{4}{25}$
16. If $(\blacksquare \times 2) + 60 = 300$, what number does \blacksquare stand for?
- (A) 180
(B) 120
(C) 110
(D) 80
17. Mrs. Grayson has 6 boxes of crayons. Each box contains 12 crayons. If C represents the total number of crayons, which equation would tell her how many crayons she has?
- (A) $12 \times 6 = C$
(B) $C + 6 = 12$
(C) $12 = \frac{C}{6}$
(D) $C = \frac{12}{6}$

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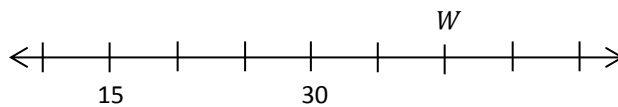
18. Sabra asked 100 students what their favorite seasons were. The chart below shows her results.



How many more students prefer summer than fall and winter combined?

- (A) 10
- (B) 15
- (C) 25
- (D) 30

19. Use the number line to answer the question.

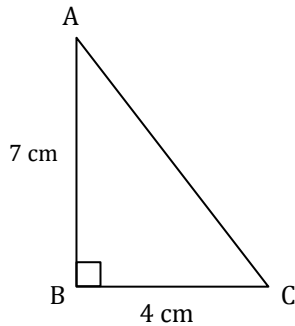


What number is represented by point *W* on the number line?

- (A) 32
- (B) 35
- (C) 40
- (D) 55

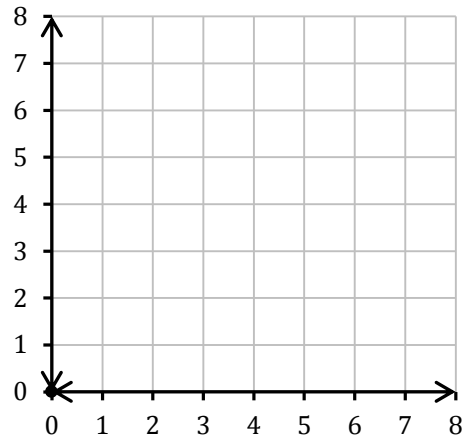
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20. If the area of a triangle is $\frac{1}{2} \times \text{base} \times \text{height}$, what is the area of the triangle ABC?



- (A) 7 cm^2
 (B) 11 cm^2
 (C) 14 cm^2
 (D) 28 cm^2
21. What is the value of the expression $(6 + 3 \times 4) \div 2$?
- (A) 32
 (B) 18
 (C) 12
 (D) 9
22. Which of the following numbers is divisible by 4 without a remainder, but NOT by 3?
- (A) 12
 (B) 24
 (C) 40
 (D) 48

23. Use the coordinate graph below.



Chelsea plotted the following points on the coordinate graph:

Point A (1,1); Point B (6,1); Point C (6,6)

Where on the coordinate graph should she plot Point *D* so that her points form a square with vertices *A*, *B*, *C*, and *D*, and sides *AB*, *BC*, *CD*, and *DA*?

- (A) (1, 4)
 (B) (1, 6)
 (C) (6, 1)
 (D) (6, 8)
24. Which of the following expressions is equal to $5 \times \frac{3}{7}$?
- (A) $\frac{5+3}{7}$
 (B) $\frac{5 \times 3}{5 \times 7}$
 (C) $\frac{3}{5 \times 7}$
 (D) $\frac{5 \times 3}{7}$

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25. The graph shows the number of pies sold at a school bake sale.

Hours since start of sale	Pies sold
1	⊙⊙
2	⊙
3	⊙⊙⊙⊙
4	⊙⊙⊙⊙⊙⊙
5	⊙⊙⊙

⊙ = 5 pies sold

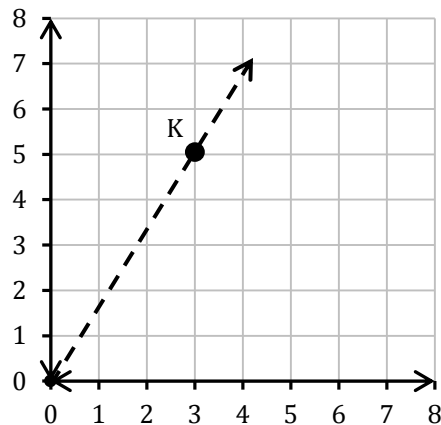
How many pies were sold at the bake sale?

- (A) 16
 - (B) 80
 - (C) 160
 - (D) 220
26. What is the value of the expression $191 + 223$?
- (A) 424
 - (B) 414
 - (C) 404
 - (D) 314
27. Mrs. Rattan is 5.5 feet tall. There are 12 inches in 1 foot. How many inches tall is Mrs. Rattan?
- (A) 55
 - (B) 60
 - (C) 66
 - (D) 67

28. In Mr. Cluff's class of 30 students, 3 students are allergic to bees. If a bee flies into the classroom and stings a student at random, what is the probability that the student is allergic to the bee?

- (A) $\frac{1}{100}$
- (B) $\frac{1}{10}$
- (C) $\frac{1}{3}$
- (D) 3

29. Use the coordinate grid to answer the question.



What are the coordinates of point *K* in the figure above?

- (A) (5,5)
 - (B) (5,3)
 - (C) (3, 5)
 - (D) (3, 1)
30. Which of the following numbers is a multiple of 15?
- (A) 3
 - (B) 6
 - (C) 30
 - (D) 33

STOP. Do not go on until told to do so.

