

Multiple Choice Practice

Mathematics

Grade

7

Part I

Directions: Read each question carefully. Record your answers by bubbling the correct response on the answer sheet. Work will not be graded in this part. A scientific calculator is permitted in this section.

1. Cassie rolls a fair number cube with 6 faces labeled 1 through 6. She rolls the number cube 300 times. Which result is **most** likely?

- A. Cassie will roll a 1 or a 2 about 50 times.
- B. Cassie will roll a 1 or a 2 exactly 50 times.
- C. Cassie will roll an even number about 150 times.
- D. Cassie will roll an even number exactly 150 times.

2. What is the value of the expression below?

$$\frac{3}{8} + \left(-\frac{4}{5}\right) + \left(-\frac{3}{8}\right) + \frac{5}{4}$$

- A. 0
- B. $\frac{1}{20}$
- C. $\frac{9}{20}$
- D. $2\frac{4}{5}$

3. Carmine paid an electrician x dollars per hour for a 5-hour job plus \$70 for parts. The total charge was \$320. Which equation can be used to determine how much the electrician charged per hour?

- A. $5x = 320 + 70$
- B. $5x = 320 - 70$
- C. $(70 + 5)x = 320$
- D. $(70 - 5)x = 320$

4. The relationship between the length of one side of a square, x , and the perimeter of the square, y , can be represented in any xy -plane by a straight line. Which of the points with coordinates (x,y) lie on the line?

A. (2,6)

B. (2,8)

C. (6, 2)

D. (8, 2)

5. A crew of highway workers paved $\frac{2}{15}$ mile in 20 minutes. If they work at the same rate, what portion of a mile will they pave in one hour?

A. $\frac{1}{150}$

B. $\frac{2}{45}$

C. $\frac{2}{5}$

D. $\frac{5}{2}$

6. Which expression represents the sum of $(2x - 5y)$ and $(x + y)$

A. $3x - 4y$

B. $3x - 6y$

C. $x - 4y$

D. $x - 6y$

7. Which steps can be used to solve for the value of y ?

$$\frac{2}{3}(y + 57) = 178$$

- A. divide both sides by $\frac{2}{3}$, then subtract 57 from both sides
- B. subtract 57 from both sides, then divide both sides by $\frac{2}{3}$
- C. multiply both sides by $\frac{2}{3}$, then subtract 57 from both sides
- D. subtract $\frac{2}{3}$ from both sides, then subtract 57 from both sides

8. Leo bought a used car for x dollars. One year later, the value of the car was $0.88x$. Which expression is another way to describe the change in the value of the car?

- A. 0.12% decrease
- B. 0.88% decrease
- C. 12% decrease
- D. 88% decrease

9. Last week Len spent \$18 to bowl 4 games. This week he spent \$27 to bowl 6 games. Len owns his bowling ball and shoes, so he only has to pay for each game that he bowls. If each of the bowling games costs the same amount of money, what is the constant of proportionality between the money spent and the number of games played?

- A. 1.5
- B. 2.0
- C. 4.5
- D. 9.0

10. Which expression is equivalent to $(7x - 5) - (3x - 2)$?

- A. $10x - 7$
- B. $10x - 3$
- C. $4x - 7$
- D. $4x - 3$

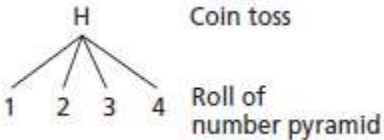
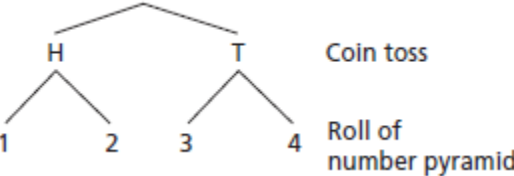
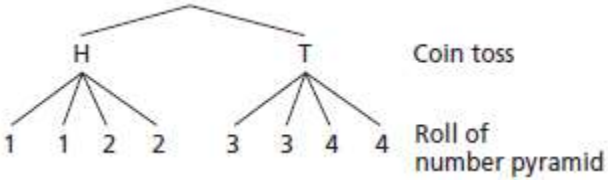
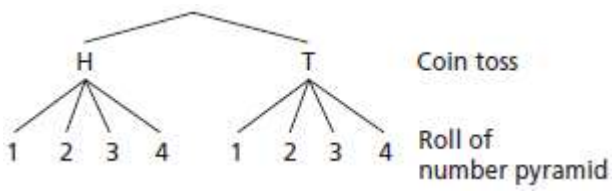
11. The population of a city is expected to increase by 7.5% next year. If p represents the current population, which expression represents the expected population next year?

- A. $1.75p$
- B. $1.075p$
- C. $p + 0.075$
- D. $1 + 0.075$

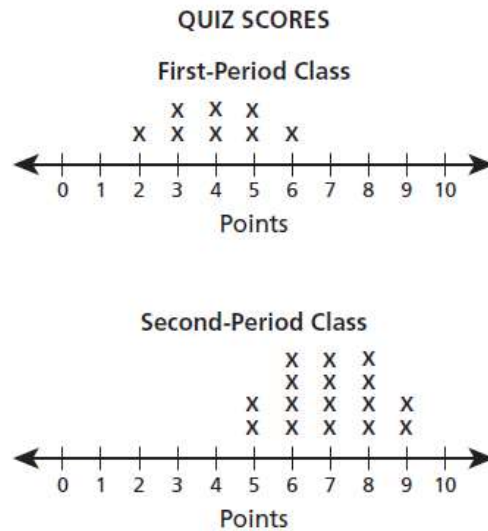
12. Ms. Graves gave her class 12 minutes to read. Carrie read $5\frac{1}{2}$ pages in that time. At what rate, in pages per hour, did Carrie read?

- A. $1\frac{1}{10}$
- B. 22
- C. $27\frac{1}{2}$
- D. 66

13. Which tree diagram shows all of the possible outcomes for tossing a coin and rolling a fair number pyramid that has four sides labeled 1 through 4?

- A. 
- B. 
- C. 
- D. 

14. Ms. Andrews made the line plots below to compare the quiz scores for her first-period math class and her second-period math class. She gave the same quiz to each class.



What conclusion can Ms. Andrews make about the performance of her first- and second-period class?

- A. The first-period class had a higher median score than the second-period class.
- B. The second-period class scores had a higher mean than the first-period class scores.
- C. The first-period class scores had a greater range than the second-period class scores.
- D. The second-period class scores had a greater mean absolute deviation than the first-period class scores.

15. Scientists determined that Antarctica's average winter temperature was -34.44°C . The difference between this temperature and Antarctica's highest recorded temperature was 49.44 degrees. What was Antarctica's highest recorded temperature?

- A. -83.88°C
- B. -15°C
- C. 15°C
- D. 83.88°C

16. The expression below was simplified using two properties of operations.

$$5(11z + 29 + 6z)$$

$$\text{Step 1 } 5(11z + 6z + 29)$$

$$\text{Step 2 } 5(17z + 29)$$

$$\text{Step 3 } 85z + 145$$

Which properties were applied in Steps 1 and 3, respectively?

- A. commutative property, then distributive property
- B. commutative property, then identity property
- C. associative property, then distributive property
- D. associative property, then commutative property

17. Sammy drew a rectangle that was w inches wide. The expression $2(2w) + 2(w)$ represents the perimeter of the rectangular that Sammy drew. Which statement relates the perimeter to the width of the rectangle?

- A. The perimeter is 6 inches more than the width.
- B. The perimeter is 6 times the width.
- C. The perimeter is 2 inches more than the width.
- D. The perimeter is 2 times the width.

18. Sally has a discount card that reduces the price of her grocery bill in a certain grocery store by 5%. If c represents the cost of Sally's groceries, which expression represents Sally's grocery bill?

- A. $0.05c$
- B. $0.95c$
- C. $c - 0.05$
- D. $c + 0.95$

19. The cost of oranges in a grocery store is directly proportional to the number of oranges purchased. Jerri paid \$2.52 for 6 oranges. If p represents the cost, in dollars, and n represents the number of oranges purchased, which equation best represents this relationship?

A. $p = 0.42n$

B. $p = 2.52n$

C. $p = 6n$

D. $p = 15.12n$

20. Which expression is equivalent to $4.8 + 2.2w - 1.4w + 2.4$?

A. $0.4(6 + 2w)$

B. $0.8(9 + w)$

C. $1.6(3 + 2w)$

D. $3.6(2 + w)$

21. Bananas cost \$0.45 per pound. What equation is used to find C , the total cost of p pounds of bananas?

A. $C = 0.45p$

B. $C = p + 0.45$

C. $0.45C = p$

D. $0.45 + C = p$

22. To select a new school mascot, 20 randomly selected students in each grade were asked to choose between the two finalists: tiger and eagle. The results are shown below.

Grade	Tiger	Eagle
5	14	6
6	13	7
7	8	12
8	5	15

Which statement is **best** supported by the results?

- A. The preferred mascot is a tiger.
- B. The preferred mascot is an eagle.
- C. Fifth and sixth grade students at the school preferred an eagle mascot.
- D. Seventh and eighth grade students at the school preferred an eagle mascot.

23. Yesterday, the temperature at noon was 11.4°F . By midnight, the temperature had decreased by 15.7 degrees. What was the temperature at midnight?

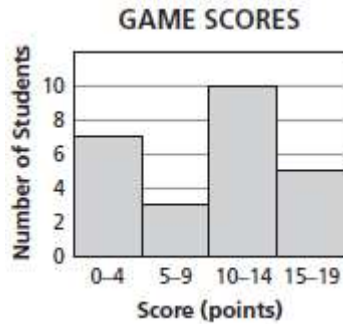
- A. -4.3°F
- B. -11.4°F
- C. -15.7°F
- D. -27.1°F

24. Jared surveyed the students in his class to determine how they scored in a game. He displayed the results in the table shown below.

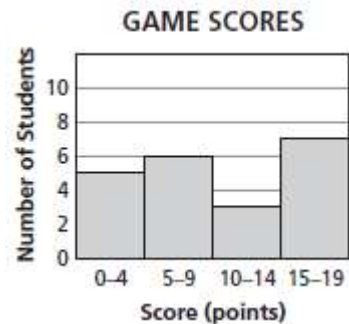
GAME SCORES

Score (points)	Number of Students
0 to 4	5
5 to 9	10
10 to 14	3
15 to 19	7

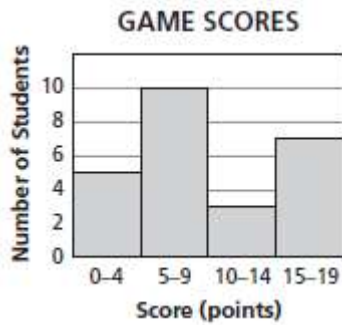
Which histogram represents the data in the table?



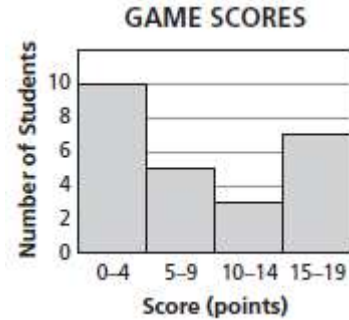
A.



B.



C.



D.

25. Altitude above sea level is given in positive values and below sea level is given in negative values. Which situation describes a hiker in Death Valley stopping at an altitude of 0 feet?

- A. The hiker starts at -10 feet then increased altitude by 10 feet.
- B. The hiker starts at -10 feet then decreases altitude by 10 feet.
- C. The hiker starts at 10 feet then increases altitude by 10 feet.
- D. The hiker starts at 0 feet then decreases altitude by 10 feet.

26. A cereal company puts a colored ring in each box of cereal. There are 6 different ring colors. The colors of the rings in each of the 50 cereal boxes are shown in the table below.

RING COLORS IN CEREAL BOXES

Color	Number of Rings
Red	7
Blue	15
Green	8
Purple	10
Yellow	5
Orange	5

Based on the data, what is the probability that the next cereal box will contain a blue or a yellow ring?

- A. $\frac{1}{6}$
- B. $\frac{2}{5}$
- C. $\frac{3}{5}$
- D. $\frac{2}{3}$

27. The three steps shown below were used to find an expression equivalent to

$$\frac{2}{5}(15x - 30y) + 10x.$$

Step 1: _____

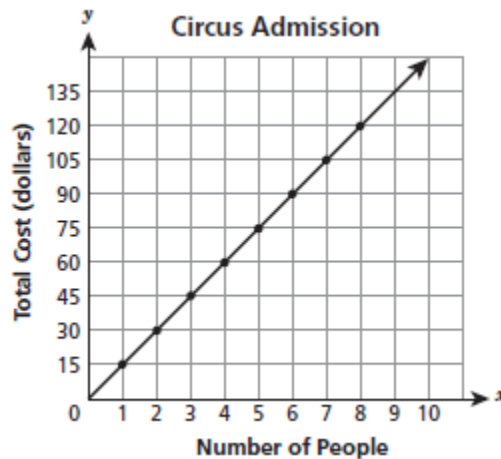
Step 2: $16x - 12y$

Step 3: $4(4x - 3y)$

Which expression could be used as Step 1?

- A. $\frac{2}{5}(25x - 30y)$
- B. $6x - 12y + 10x$
- C. $6x - 30y + 10x$
- D. $15(x - 2y) + 10x$

28. The graph below shows the relationship between the number of people in a group and the total cost of admission tickets for a circus.



What point on the graph represents the unit rate?

- A. (0,0)
- B. (1,15)
- C. (15,1)
- D. (8,120)

29. Evaluate.

$$\left(-\frac{7}{10} + 0.15\right) \div (-0.125)$$

- A. -6.8
- B. -4.4
- C. 4.4
- D. 6.8

30. A recipe requires $\frac{1}{3}$ cup of milk for each $\frac{1}{4}$ cup of water. How many cups of water are needed for each cup of milk?

- A. $\frac{1}{12}$
- B. $\frac{3}{4}$
- C. $\frac{11}{12}$
- D. $1\frac{1}{3}$

31. What is the product of $-\frac{1}{4} \times -\frac{3}{7}$?

- A. $-\frac{7}{12}$
- B. $-\frac{3}{28}$
- C. $\frac{3}{28}$
- D. $\frac{7}{12}$

32. Gary buys a $3\frac{1}{2}$ pound bag of cat food every 3 weeks. Gary feeds his cats the same amount of food each day. Which expression can Gary use to determine the number of pounds of cat food his cat eats each year? (1 year = 52 weeks)

A. $\frac{7}{2} \times \frac{52}{3}$

B. $\frac{7}{2} \times \frac{3}{52}$

C. $3\left(\frac{1}{2} \times \frac{3}{52}\right)$

D. $3\left(\frac{1}{2} \times \frac{52}{3}\right)$

33. What is the decimal equivalent of $\frac{7}{8}$?

A. 0.780

B. 0.870

C. 0.875

D. 0.885

34. What is the value of $\left(-\frac{1}{4} - \frac{1}{2}\right) \div \left(-\frac{4}{7}\right)$?

A. $-1\frac{5}{13}$

B. $-\frac{3}{7}$

C. $\frac{3}{7}$

D. $1\frac{5}{16}$

35. The school bus Evie rides is schedule to arrive at her stop at 8:20am each day. The table below shows the actual arrival times of the bus for several days that were randomly selected over the past few months.

BUS ARRIVAL TIMES (a.m.)

8:21	8:21	8:19	8:20	8:23
8:22	8:20	8:18	8:20	8:18
8:21	8:20	8:19	8:17	8:25
8:20	8:20	8:18	8:19	8:24

Based on these data, what is the probability that the bus will arrive at Evie's stop before 8:20 a.m. tomorrow?

- A. $\frac{3}{10}$
- B. $\frac{1}{3}$
- C. $\frac{7}{20}$
- D. $\frac{13}{20}$

36. What is the radius, in centimeters, of a circle that has a circumference of 16π centimeters?

- A. 8
- B. 16
- C. 32
- D. 64

37. Which expression represents a factorization of $32m + 56mp$?

- A. $8(4m + 7p)$
- B. $8(4 + 7)mp$
- C. $8p(4 + 7m)$
- D. $8m(4 + 7p)$

38. Amber determined that the expression $\frac{-\frac{1}{2}}{\frac{41}{-15}}$ is equivalent to $\frac{15}{82}$. Which statement describes the process Amber could have used?

- A. She divided $-\frac{1}{2}$ by -15 and then divided the result by 41 .
- B. She multiplied by $-\frac{1}{2}$ by -15 and then divided the result by 41 .
- C. She divided $-\frac{1}{2}$ by -15 and then multiplied the result by 41 .
- D. She multiplied $-\frac{1}{2}$ by -15 and then multiplied the result by 41 .

39. Malika and Adrian prepared containers of potato salad at a deli. Each container was supposed to have a mass of one pound. The manager selected a random sample of containers prepared by each employee to check the mass of each container. The results are shown in the table below.

MASS OF EACH CONTAINER

Malika's Containers (pounds)	Adrian's Containers (pounds)
1.10	1.30
1.08	1.21
1.05	0.79
0.95	0.90
0.98	0.88

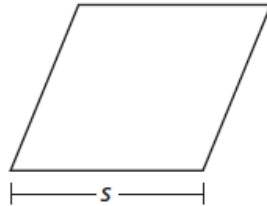
Which inference is best supported by these data?

- A. Malika will produce more containers with a mass of exactly one pound than Adrian will.
- B. Adrian will produce more containers with a mass of exactly one pound than Malika will.
- C. Most of Malika's containers will have a mass closer to one pound than most of Adrian's containers.
- D. Most of Adrian's containers will have a mass closer to one pound than Most of Malika's containers.

40. Which expression is equivalent to $8c + 6 - 3c - 2$?

- A. $5c + 4$
- B. $5c + 8$
- C. $11c + 4$
- D. $11c + 8$

41. A rhombus with side length s is shown below. The perimeter, P , of a rhombus is proportional to the length of each side, s . Which equation represents this relationship?



- A. $P = 4s$
- B. $S = 4P$
- C. $P = 4 + s$
- D. $S = 4 + P$

42. Sara is playing a board game. The probability that Sara will score a point on her next turn is $\frac{1}{3}$. Which statement describes the probability that Sara will score a point on her next turn?

- A. likely
- B. certain
- C. unlikely
- D. impossible

43. Craig went bowling with \$25 to spend. He rented shoes for \$5.25 and paid \$4.00 for each game. What was the greatest number of games Craig could have played?

A. 4

B. 5

C. 6

D. 7

44. The label on a $1\frac{1}{2}$ pound bag of wildflower seeds states that it will cover an area of 375 square feet. Based on this information, what is the number of square feet that 1 pound of wildflower seeds will cover?

A. $\frac{1}{250}$

B. 250

C. $562\frac{1}{2}$

D. 750

45. The Lions won 16 games last year. This year the Lions won 20 games. What is the percent increase in the number of games the Lions won from last year to this year?

A. 20%

B. 25%

C. 80%

D. 125%

46. The table shows prices for shoe rental, games, and snacks at the bowling alley.

BOWLING ALLEY PRICES

Item	Price
Shoe rental	\$2.75
One game of bowling	\$2.50
Small soda	\$0.95
Large soda	\$1.50
Nachos	\$1.75

Gina rented shoes, bowled 3 games, and bought 1 order of nachos. She used a coupon for $\frac{1}{2}$ off the price of her bowling games. What was Gina's total cost before tax was added?

- A. \$5.75
- B. \$6.00
- C. \$8.25
- D. \$12.00

47. Laticia randomly selected 25% of the seventh-grade students in her school and asked them their favorite season. Of the students surveyed, 51 chose summer as their favorite season. Based on the data, what is the most reasonable prediction of the number of seventh-grade students in her school who would choose summer as their favorite season?

- A. 15
- B. 75
- C. 150
- D. 200

48. An owner of a small store knows that in the last week 54 customers paid with cash, 42 paid with a debit card, and 153 paid with a credit card. Based on the number of customers from last week, which fraction is closest to the probability that the next customer will pay with cash?

A. $\frac{1}{5}$

B. $\frac{1}{4}$

C. $\frac{1}{3}$

D. $\frac{1}{2}$

49. For her cell phone plan, Heather pays \$30 per month plus \$0.05 per text. She wants to keep her bill under \$60 per month. Which inequality represents the number of texts, t , Heather can send each month while staying within her budget?

A. $t < 600$

B. $t > 600$

C. $t < 1,800$

D. $t > 1,800$

50. Solve for x : $0.5x + 78.2 = 287$

A. $x = 65.3$

B. $x = 104.4$

C. $x = 417.6$

D. $x = 495.8$

51. Katie bought 4 sweaters that each cost the same amount and 1 skirt that cost \$20. The items she brought cost a total of \$160 before tax was added. What was the cost of each sweater?

- A. \$20
- B. \$35
- C. \$40
- D. \$45

52. Jocelyn was shopping at a farmers' market. She observed the prices of cucumbers at several stands. Which sign shows a proportional relationship in the pricing of the cucumbers?

A.

Joe's Stand	
5 cucumbers	for \$2.50
10 cucumbers	for \$4.00
15 cucumbers	for \$5.50
20 cucumbers	for \$7.00

B.

Betty's Stand	
5 cucumbers	for \$2.00
10 cucumbers	for \$4.00
15 cucumbers	for \$6.00
20 cucumbers	for \$8.00

C.

Steve's Stand	
5 cucumbers	for \$2.50
10 cucumbers	for \$4.50
15 cucumbers	for \$6.50
20 cucumbers	for \$8.50

D.

Lula's Stand	
5 cucumbers	for \$1.50
10 cucumbers	for \$3.00
15 cucumbers	for \$6.00
20 cucumbers	for \$12.00

53. Doug earns \$10.50 per hour working at a restaurant. On Friday, he spent $1\frac{3}{4}$ hours cleaning, $2\frac{1}{3}$ hours doing paperwork, and $1\frac{5}{12}$ hours serving customers. What were Doug's earnings?

- A. \$46.97
- B. \$47.25
- C. \$53.00
- D. \$57.75

54. A store sold 650 bicycles last year. This year, the store sold 572 bicycles. What is the percent decrease in the number of bicycles sold from last year to this year?

- A. 12%
- B. 14%
- C. 78%
- D. 88%

55. The scale of a model train is 1 inch to 13.5 feet. One of the cars of the model train is 5 inches long. What is the length, in feet, of the actual train car?

- A. 67.5
- B. 32.4
- C. 14.5
- D. 2.7

56. Charis invested \$140. She earned a simple interest of 3% per year on the initial investment. If no money was added or removed from the investment, what was the amount of interest Charis received at the end of the two years?

- A. \$4.20
- B. \$6.00
- C. \$8.40
- D. \$12.60

57. A storeowner made a list of the number of greeting cards sold last month. The store sold 167 thank-you cards, 285 birthday cards, and 56 blank cards. Based on these data, which number is closest to the probability that the next customer will buy a blank card?

- A. 0.11
- B. 0.33
- C. 0.56
- D. 0.89

58. A store purchased a DVD for \$12.00 and sold it to a customer for 50% more than the purchase price. The customer was charged a 7% tax when the DVD was sold. What was the customer's total cost for the DVD?

- A. \$12.84
- B. \$18.42
- C. \$18.84
- D. \$19.26

59. David bought a computer that was 20% off the regular price of \$1,080. If an 8% sales tax was added to the cost of the computer, what was the total price David paid for it?

- A. \$302.40
- B. \$864.00
- C. \$933.12
- D. \$1,382.40

60. Suzanne bought a sweater at the sale price of \$25. The original cost of the sweater was \$40. What percent represents the discount that Suzanne received when buying the sweater?

- A. 15%
- B. 37.5%
- C. 60%
- D. 62.5%

61. Julia's service charge at a beauty salon was \$72.60, before tax. The sales tax rate was 8%. If she added 20% of the amount before tax as a tip, how much did she pay for the service at the salon?

- A. \$87.12
- B. \$92.93
- C. \$100.60
- D. \$145.20

62. During a sale, a store offered a 40% discount on a particular camera that was originally priced at \$450. After the sale, the discounted price of the camera was increased by 40%. What was the price of the camera after this increase?

- A. \$252
- B. \$360
- C. \$378
- D. \$450

63. Each sales associate at an electronics store has a choice of the two salary options shown below:

- \$115 per week plus 9.5% commission on the associate's total sales
- \$450 per week with no commission

The average of the total sales amount for each associate last year was \$125,000. Based on this average, what is the *difference* between the two salary options each year? (52 weeks = 1 year)

- A. \$4,262.11
- B. \$5,545.00
- C. \$10,956.90
- D. \$11,525.00

64. The mean radius of Earth is 6,371.0 kilometers and the mean radius of Earth's Moon is 1,737.5 kilometers. What is the approximate difference in the mean circumferences, in kilometers, of Earth and Earth's Moon? Round your answer to the nearest tenth of a kilometer.

- A. 40,030.2
- B. 29,113.1
- C. 14,556.6
- D. 10,917.0

65. A dealer paid \$10,000 for a boat at an auction. At the dealership, a salesperson sold the boat for 30% more than the auction price. The salesperson received a commission of 25% of the difference between the auction price and the dealership price. What was the salesperson's commission?

- A. \$750
- B. \$1,750
- C. \$3,250
- D. \$5,500

66. Ben earns \$9 per hour and \$6 for each delivery he makes. He wants to earn more than \$155 in an 8-hour workday. What is the least number of deliveries he must make to reach his goal?

- A. 11
- B. 12
- C. 13
- D. 14

67. Salid bought 35 feet of window trim at a hardware store. The trim cost \$1.75 per foot, including sales tax. If Salid paid with a \$100.00 bill, how much change should he have received?

- A. \$20.00
- B. \$38.75
- C. \$61.25
- D. \$80.00

68.

Point P is shown on the number line below.

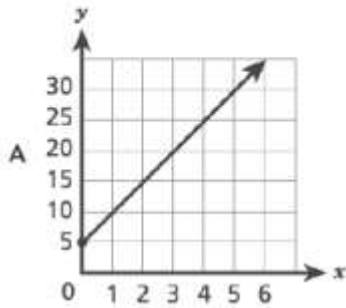


The distance between point Q and point P is $6\frac{1}{2}$ units. Which number could represent point Q?

- A. $-9\frac{1}{2}$
- B. $1\frac{1}{2}$
- C. $2\frac{1}{2}$
- D. $10\frac{1}{2}$

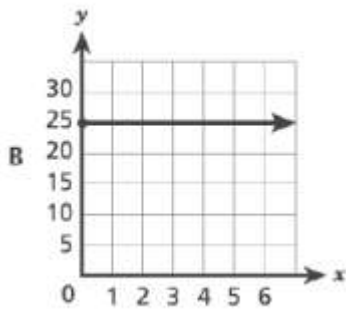
69.

Which representation shows a proportional relationship between x and y ?



C

x	y
2	8
4	16
8	24
12	32



D

x	y
2	3
4	6
8	12
12	18

70.

Every five years in March, the population of a certain town is recorded. In 1995, the town had a population of 4,500 people. From 1995 to 2000, the population increased by 15%. From 2000 to 2005, the population decreased by 4%. What was the town's population in 2005?

A 4,527

B 4,968

C 4,995

D 5,382

71.

The measure of one side of a square is $(s + 3)$ inches long. Which pair of expressions both represent the perimeter of this square?

$$2s + 3$$

A and

$$(s + 3)(s + 3)$$

$$2(s + 3)$$

B and

$$(s + 3)(s + 3)$$

$$4s + 3$$

C and

$$(s + 3) + (s + 3) + (s + 3) + (s + 3)$$

$$4(s + 3)$$

D and

$$(s + 3) + (s + 3) + (s + 3) + (s + 3)$$

72.

Which expression has the same value as $59.2 - 84.7$?

A $84.7 - 59.2$

B $-84.7 + (-59.2)$

C $59.2 - (-84.7)$

D $59.2 + (-84.7)$

73.

Winston needs at least 80 signatures from students in his school before he can run for class president. He has 23 signatures already. He and two of his friends plan to get the remaining signatures during lunch. If each person gets the same number of signatures, which inequality can Winston use to determine the minimum number of signatures each person should get so he can run for class president?

- A $3x + 80 \geq 23$
- B $3x + 80 \leq 23$
- C $3x + 23 \geq 80$
- D $3x + 23 \leq 80$

74.

In the morning, a farm worker packed 3 pints of strawberries every 4 minutes. In the afternoon, she packed 2 pints of strawberries every 3 minutes. What was the difference between her morning and afternoon packing rates, in pints per hour?

- A 5
- B 10
- C 40
- D 45

75.

Which expression makes the equation true for all values of x ?

$$16x - 16 = 4(\underline{\quad ? \quad})$$

- A $4x - 4$
- B $4x - 16$
- C $2x - 2$
- D $12x - 12$

76.

Which number is equivalent to $\frac{43}{12}$?

A 3.583

B $3.58\overline{3}$

C $3.\overline{583}$

D $\overline{3.583}$

77.

Mr. Santino needs a total of 406 forks for his restaurant. He currently has 278 forks. If each set has 12 forks, what is the minimum number of sets of forks he should buy?

A 11

B 12

C 128

D 140

78.

If the expression below has a positive value, which inequality represents all possible values of x in the expression?

$$-3x$$

A $x < 0$

B $x > 0$

C $x \leq 0$

D $x \geq 0$

79.

Jensen stopped at rest area A along the side of the highway. His map, shown below, has a scale of 1 inch to 35 miles.



Jensen planned to stop at rest area B next. What is the actual distance, in miles, between the two rest areas?

- A 14.0
- B 37.5
- C 70.5
- D 87.5

80.

Which statement describes the decimal equivalent of $\frac{7}{8}$?

- A It is a decimal with a repeating digit of 5.
- B It is a decimal with repeating digits of 75.
- C It is a decimal that terminates after 2 decimal places.
- D It is a decimal that terminates after 3 decimal places.

81.

Which expression is equivalent to the expression shown below?

$$-\frac{1}{2}\left(-\frac{3}{2}x + 6x + 1\right) - 3x$$

- A $\frac{3}{2}x - \frac{1}{2}$
- B $6\frac{3}{4}x - \frac{1}{2}$
- C $-\frac{3}{4}x + \frac{1}{2}$
- D $-5\frac{1}{4}x - \frac{1}{2}$

82.

Leanne collects data throughout the basketball season and uses these data to determine the probabilities of different teams playing in the league championship game. The probabilities for her four favorite teams playing in the championship game are shown below.

- Tigers: $P = \frac{2}{3}$
- Redbirds: $P = \frac{4}{5}$
- Bulldogs: $P = \frac{3}{8}$
- Titans: $P = \frac{1}{2}$

Which of these teams is **least likely** to play in the championship game?

- A Tigers
- B Redbirds
- C Bulldogs
- D Titans

83.

The initial balance of a savings account was \$275. After which transactions will the balance of the savings account be the same as the initial balance?

- A a withdrawal of \$232 followed by a deposit of \$132
- B a deposit of \$278 followed by a withdrawal of \$278
- C a withdrawal of \$115 followed by a deposit of \$312
- D a deposit of \$205 followed by a withdrawal of \$317

84.

A researcher surveyed five randomly selected employees from each of four different companies about their daily commutes to work. The table shows the commute times for the surveyed employees.

COMMUTE TIMES FOR SELECTED EMPLOYEES

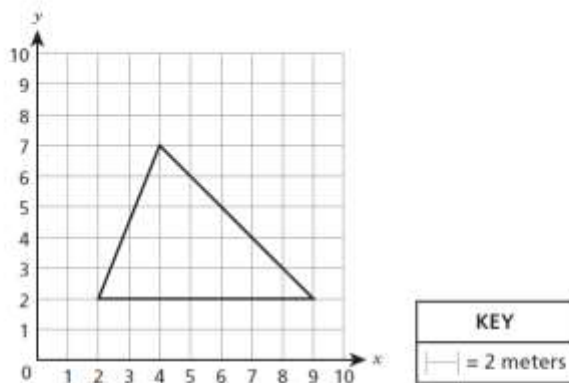
Amount of Time for Company 1 (minutes)	Amount of Time for Company 2 (minutes)	Amount of Time for Company 3 (minutes)	Amount of Time for Company 4 (minutes)
24	6	15	13
26	32	15	10
28	9	15	45
23	31	15	12
21	21	15	15

Based on the data, which company **most likely** has the longest average commute time per employee?

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

85.

The scale drawing of a field in the shape of a triangle is shown below.



What is the actual area, in square meters, of this field?

- A 8.75
- B 17.5
- C 35
- D 70

86.

Which expression is equivalent to $\frac{7}{2}h - 3\left(5h - \frac{1}{2}\right)$?

A $-\frac{23}{2}h + \frac{3}{2}$

B $-\frac{23}{2}h - \frac{3}{2}$

C $\frac{37}{2}h + \frac{3}{2}$

D $\frac{37}{2}h - \frac{3}{2}$

87.

Jeanette purchased a concert ticket on a web site. The original price of the ticket was \$75. She used a coupon code to receive a 20% discount. The web site applied a 10% service fee to the discounted price. Jeanette's ticket was less than the original price by what percent?

A 7%

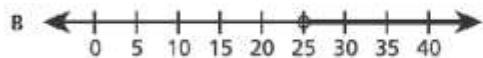
B 10%

C 12%

D 28%

88.

Yolanda participated in a walkathon in which each kilometer walked raised \$10 for charity. Her goal was to raise more than \$300 on Saturday and Sunday. She raised \$50 on Saturday. Which graph shows all the distances, in kilometers, that Yolanda could have walked on Sunday to reach her goal?



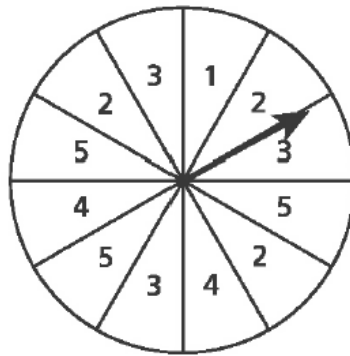
89.

A circle has a diameter of 26 units. What is the area of the circle to the nearest hundredth of a square unit?

- A 81.68
- B 530.93
- C 2,123.72
- D 8,494.87

90.

A board game has a spinner divided into sections of equal size. Each section is labeled with a number between 1 and 5.



Which number is a reasonable estimate of the number of times the spinner will land on a section labeled 5 over the course of 150 spins?

- A 15
- B 25
- C 40
- D 60

91.

What is the decimal equivalent of the fraction $\frac{8}{15}$?

A 0.53

B $0.5\bar{3}$

C $0.\bar{53}$

D 0.533

92.

The circumference of a circle is 15π centimeters. What is the area of the circle in terms of π ?

- A $7.5\pi \text{ cm}^2$
- B $15\pi \text{ cm}^2$
- C $56.25\pi \text{ cm}^2$
- D $225\pi \text{ cm}^2$

93.

A spinner is divided into four colored sections that are not of equal size: red, blue, purple, and orange. The arrow on the spinner is spun several times.

SPINNER RESULTS

Color	Number of Times
Red	15
Blue	24
Purple	12
Orange	9

The arrow on the spinner will be spun one more time. Based on these results, what is the probability that the arrow will land on the purple section?

- A $\frac{1}{4}$
- B $\frac{1}{5}$
- C $\frac{1}{6}$
- D $\frac{1}{12}$

94.

The table below shows the lowest temperature, in degrees Fahrenheit, on each of 5 days for a city.

LOWEST DAILY TEMPERATURES

Day	Temperature(°F)
Monday	-36°
Tuesday	-25°
Wednesday	12°
Thursday	-3°
Friday	18°

What is the mean lowest temperature, in degrees Fahrenheit, in the city for those 5 days?

- A -18.8°
- B -6.8°
- C 6.8°
- D 18.8°

95.

Bonnie deposits \$70.00 into a new savings account.

- The account earns 4.5% simple interest per year.
- No money is added or removed from the savings account for 3 years.

What is the total amount of money in her savings account at the end of the 3 years?

- A \$9.45
- B \$79.45
- C \$94.50
- D \$164.50

96.

Which situation results in a final value of zero?

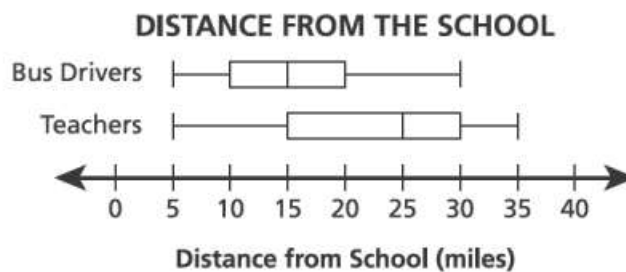
- A The temperature after a decrease of 5°F from a temperature of -5°F .
- B The height of an airplane after taking off from ground level and rising 1,000 feet.
- C The amount of money received in change after making a \$10 purchase with a \$20 bill.
- D The distance above sea level after increasing 24 meters from a depth of 24 meters below sea level.

97.

A farm grew 19.8 tons of wheat in 2013. The farm's wheat output increased by 9.8% from 2013 to 2014 and by 5.1% from 2014 to 2015. Which expression represents a strategy for estimating the total output of wheat, in tons, in 2015?

- A $20 + 10 + 5$
- B $20(10)(5)$
- C $20 + 1.1 + 1.05$
- D $20(1.1)(1.05)$

A principal gathered data about the distance, in miles, that his teachers and bus drivers live from the school. The box plots below show these data.



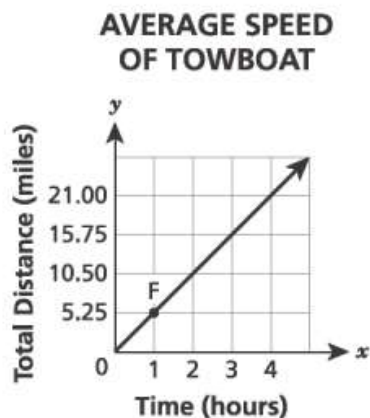
Based on the box plots, which statement is true?

- A The interquartile range of the distances for the bus drivers is twice the interquartile range of the distances for the teachers.
- B The range of the distances for the teachers is twice the range of the distances for the bus drivers.
- C The interquartile range of the distances for the bus drivers is 5 miles less than the interquartile range of the distances for the teachers.
- D The range of the distances for the teachers is 5 miles less than the range of the distances for the bus drivers.

98.

99.

The graph below shows the total distance, in miles, traveled by a towboat over time, in hours.



Which statement **best** describes the meaning of the coordinates of point F on the graph?

- A It shows the unit rate of the graph in hours per mile.
- B It shows the unit rate of the graph in miles per hour.
- C It shows the time, in hours, it takes the towboat to travel 1 mile.
- D It shows the distance traveled, in miles, by the towboat after 5.25 hours.

100.

Which expression can go in the blank to make the equation true?

$$-4.5 + 4.4 + \underline{\quad ? \quad} = 0$$

- A $-6.7 + 6.8$
- B $-6.7 + (-6.6)$
- C $7.2 + (-7.2)$
- D $7.2 + (-7.3)$