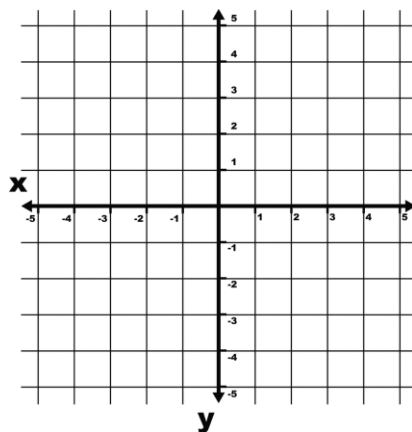


# 7th Grade Math Semester 2 Exam

## Number Sense:

- Use the correct order of operations to find the value of  $2^5 - 12 \div 4$ .
  - 29
  - 5
  - 7
  - 4
- Which of the following sets of ordered pairs lies on the x-axis of a coordinate grid?

- (3,0)
- (0,-2)
- (-4, -2)
- (0,1)

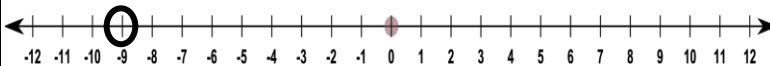


- Cesar has read 89 pages of a book for his English class. If the book has 257 pages and he can read 21 pages per hour, how many hours will it take Cesar to finish the book?
  - 168
  - 8
  - 12
  - 5
- Replace the blank with the appropriate phrase to make a true mathematical sentence.

$$55\% \text{ --- } \frac{11}{20}$$

- Is less than (<)
- Is equal to (=)
- Is not equal to ( $\neq$ )
- Is greater than (>)

- The number line shows the average low temperature in Fairbanks, Alaska during September. What is the absolute value of this temperature?



- 9
  - 0
  - 10
  - 9
- Write the four masses from the table in order from smallest to largest.

- 0.9, 0.815, 0.81, 0.8
- 0.8, 0.81, 0.815, 0.9
- 0.8, 0.9, 0.815, 0.81
- 0.8, 0.9, 0.81, 0.815

| Mass (mg) |
|-----------|
| 0.81      |
| 0.815     |
| 0.8       |
| 0.9       |

## Ratio & Proportion:

- The subtotal of a customer's order at a deli is \$21.70 before she presents a coupon for 25% off the purchase. Which of the following operations can be used to find the amount of money she will save by using the coupon?
  - Divide \$21.70 by 25
  - Multiply \$21.70 by 0.25
  - Divide \$21.70 by 0.25
  - Multiply \$21.70 by 25
- Roberto deposited \$860 in a new account that earns 6% simple interest. How much interest will he have earned after two years?
  - \$51.60
  - \$1,032.00
  - \$103.20
  - \$1238.40

## 7th Grade Math Semester 2 Exam

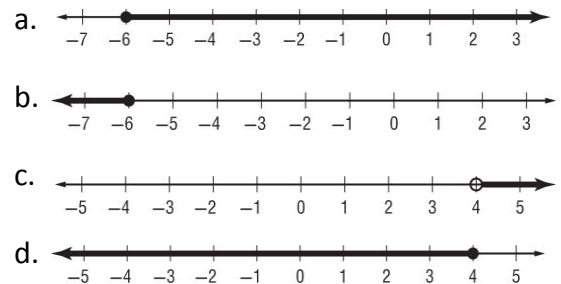
9. On a map, the scale is 1 in = 50 miles. What is the actual distance between two cities if the map distance is 5 inches?
- 10 mi
  - 25 mi
  - 250 mi
  - 300 mi
10. Tony answered 72 questions correctly out of 80 questions on his test. What percent did he score on his test?
- 90%
  - 9%
  - 8%
  - 72%
11. A store sells two dozen rolls of toilet paper for \$4.84. What is the unit rate for one roll of toilet paper?
- \$0.13 per roll
  - \$0.20 per roll
  - \$0.40 per roll
  - \$1.21 per roll
12. Which ratios form a proportion?
- 4/8 and 3/6
  - 4/12 and 6/15
  - 4/10 and 6/16
  - 2/3 and 5/8

### Expressions & Equations:

13. What is the value of  $(5x + 2y + 19) + (9y + 7x - 10)$ ? (combine like terms)
- $26xy$
  - $23xy + 9$
  - $14x + 9y + 9$
  - $12x + 11y + 9$

14. Leah and Zack earned ( $d$ ) dollars an hour for each hour they worked. Leah worked 29 hours. Zack worked 36 hours. Which expression represents the **combined** amount of money Leah and Zack earned?
- $7d$
  - $65d$
  - $7 + d$
  - $65 + d$
15. Lisa paid a surcharge of \$13 plus \$30 per ticket for  $t$  tickets to an Atlanta Hawks basketball game. The total cost of the tickets and surcharge came to \$193. Solve the equation  $13 + 30t = 193$  for  $t$  to find the number of tickets that she bought.
- 5 tickets
  - 8 tickets
  - 6 tickets
  - 7 tickets

16. Which graph is a solution to  $a - 5 \leq -1$ ?



17. What is the solution of  $12x - 5 < -29$ ?

- $x < 3$
- $x > 2$
- $x < -2$
- $x < 22$

18. Solve.  $2y - 1.7 = 3.3$

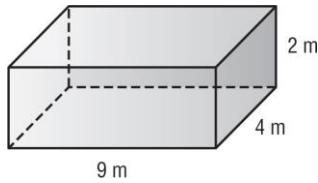
- 0.8
- 2.5
- 3.2
- 10

## 7th Grade Math Semester 2 Exam

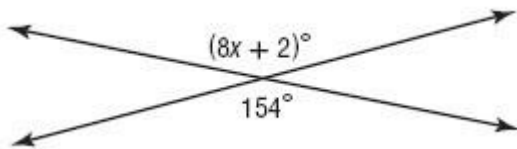
### Geometry:

19. What is the circumference of a circle that has a radius of 9cm?
- 12.1 cm
  - 14.1 cm
  - 28.3 cm
  - 56.5 cm

20. What is the volume of the rectangular prism?



- $36 \text{ m}^3$
  - $62 \text{ m}^3$
  - $72 \text{ m}^3$
  - $124 \text{ m}^3$
21. What is the value of  $x$  in the figure?

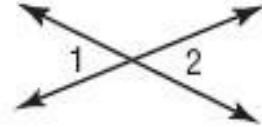


- 180
  - 91
  - 90
  - 19
22. What is the classification of the triangle by its angles and by its sides?

- Right, scalene
- Acute, isosceles
- Obtuse, isosceles
- Acute, scalene



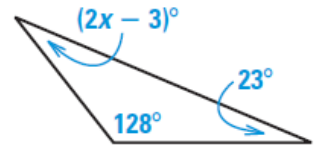
23. What is the classification of the pair of angles shown?



- Vertical
- Adjacent
- Complementary
- Right angles

24. Find the value of  $x$ .

- 8
- 13
- 16
- 29



### Statistics & Probability:

25. Students in drama class are constructing a set for the upcoming play. The following chart shows the number of minutes that the students worked on each day this week. According to the table below, what is the range of minutes that the students worked on the set this week?

| Day       | Minutes |
|-----------|---------|
| Monday    | 155     |
| Tuesday   | 30      |
| Wednesday | 40      |
| Thursday  | 155     |
| Friday    | 120     |

- 120
- 155
- 125
- 100

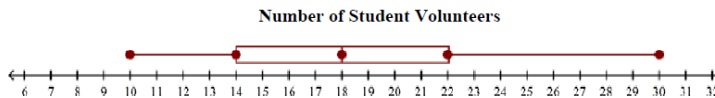
## 7th Grade Math Semester 2 Exam

26. The manager of a hotel wants to know how often his customers rent boats at a nearby lake. Which sampling method will give valid results?

- He asks every 10<sup>th</sup> customer who checks into the hotel
- He posts a question on the hotel's web site
- He randomly surveys households in the neighborhood
- He asks every customer in the hotel lobby at noon

Use the box and whisker plot below to answer questions # 27-28 .

The box and whisker plot shows the number of seventh graders who volunteered each week at a summer camp this year.



27. Refer to the information above. What was the range in the number of student volunteers per week during the summer?

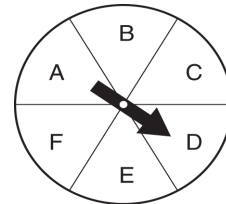
- 20 volunteers
- 10 volunteers
- 30 volunteers
- 18 volunteers

28. What is the median of the data in the box and whisker plot above?

- 10
- 14
- 18
- 22
- 30

29. From the spinner shown, what is the probability of spinning D?

- $\frac{1}{6}$
- $\frac{4}{5}$
- About 50%
- 6



30. In a box containing 115 marbles, 25 are blue, 22 are brown, and 68 are red. What is the probability of randomly selecting a blue marble?

- $\frac{115}{25}$
- $\frac{22}{115}$
- $\frac{5}{23}$
- None of the above