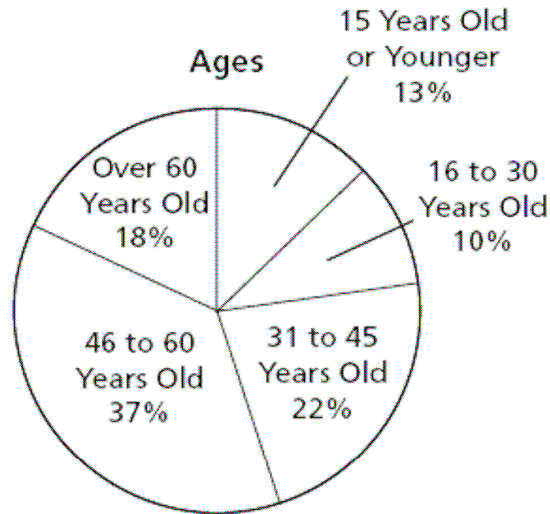


6<sup>th</sup> Grade Math Final Benchmark Test Review

6.1.1

1. The ages of people at a baseball game are shown in the graph.



About 10,000 people are at the baseball game. Based on the information in the graph, what is the closest prediction of the number of people at the baseball game who are over 60 years old?

- A. 1,000                      B. 1,800                      C. 2,300                      D. 3,700

6.1.2

2. Jordan placed 846 photos into 12 photo albums. She put the same number of photos in each album. What is the best estimate of how many photos she put in each album?

- A. 60                              B. 70                              C. 34                              D. 48

6.1.3

3. The temperature at 9:00 a.m. was 68 degrees. By 3:00 p.m., the temperature had decreased by 32 degrees. Which integer is the best representation of the change in temperature between 9:00 a.m. and 3:00 p.m.?

- A. 32                              B. 68                              C. -36                              D. -32

6.1.4

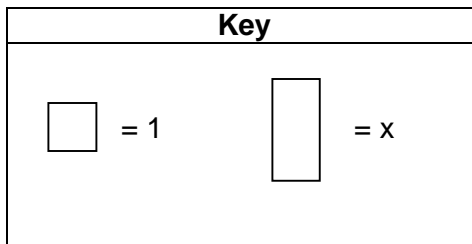
4. A student wrote  $5 \times 4 = 4 \times 5$ . Which property did the student use?

- A. Associative property of multiplication                      B. Commutative property of multiplication  
C. Identity property of multiplication                              D. Distributive property of multiplication

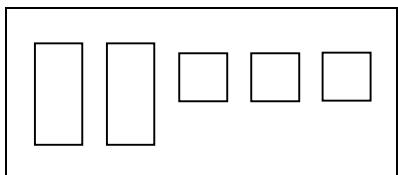
6.1.5

5. Look at the key to the right.

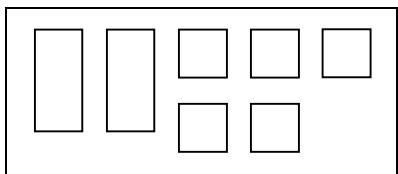
Which model below represents  $2x + 3$ ?



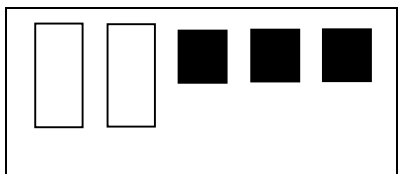
A.



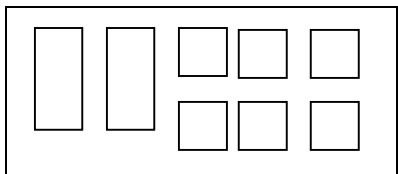
B.



C.



D.



6.2.1

6. Divide:  $\frac{1}{2} \div \frac{3}{4} =$

A.  $\frac{3}{8}$

B.  $\frac{2}{3}$

C.  $\frac{5}{8}$

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

6.2.2

7. A recipe calls for  $2 \frac{1}{4}$  cups of flour to make one batch of cookies. How many cups of flour would it take to make 5 batches of cookies?

A.  $10 \frac{1}{4}$  cups

B.  $5 \frac{1}{2}$  cups

C.  $11 \frac{1}{4}$  cups

D.  $10 \frac{3}{4}$  cups

8. Compute:  $1\frac{3}{4} + 2\frac{3}{8} - 1\frac{1}{2} =$

A. 2

B.  $1 \frac{2}{3}$

C.  $2 \frac{5}{8}$

D.  $1 \frac{5}{8}$

6.2.3

9. Susan wants to run 30 miles each week. On Monday, she ran 9.5 miles. On Wednesday, she ran 10.25 miles. On Friday, she ran exactly enough miles to reach her goal. How many miles did she run on Friday?

A. 10.15 mi

B. 10.2 mi

C. 10.75 mi

D. 10.25 mi

10. Adam worked part-time at the animal shelter last week and earned \$81.60 for 12 hours of work. How much did Adam earn per hour?

- A. \$8.60                      B. \$12.00                      C. \$6.80                      D. \$68.00

6.2.4

11. Ivan had \$28.50 saved for gardening supplies. He spent \$13.75 for plants and \$6.99 for plant food. He wants to spend \$15.99 for flower bulbs. Based on how much he has left, how much more money will he need?

- A. \$7.76                      B. \$8.23                      C. \$20.74                      D. \$23.75

12. Randall had 7 pizzas delivered for the school party.  $3\frac{1}{2}$  pizzas were eaten during the party and  $2\frac{1}{4}$  pizzas were taken to the faculty lunchroom. How much pizza was left for Randall to take home?

- A.  $1\frac{1}{4}$  pizzas                      B.  $2\frac{1}{2}$  pizzas                      C.  $1\frac{3}{4}$  pizzas                      D.  $\frac{1}{4}$  pizza

6.2.5

13. Amy cut a piece of yarn 3.05 inches long for a bracelet she was making. Which length is equivalent to 3.05 inches?

- A.  $3\frac{1}{2}$  in.                      B.  $3\frac{1}{5}$  in.                      C.  $3\frac{1}{20}$  in.                      D.  $3\frac{1}{4}$  in.

6.2.6

14. The area of the floor in Rogelio's room is 400 square feet. A rug covers 80 square feet of the floor. What percent of the family room floor does the rug cover?

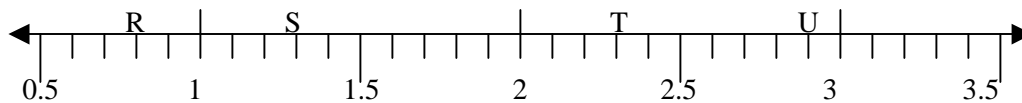
- A. 5%                      B. 50%                      C. 20%                      D. 80%

15. Joey solves math problems at a rate of 3 problems every 7 minutes. If he continues to work at the same rate, how long will it take Joey to solve 45 problems?

- A. 15 min.                      B. 21 min.                      C. 135 min.                      D. 105 min.

6.2.7

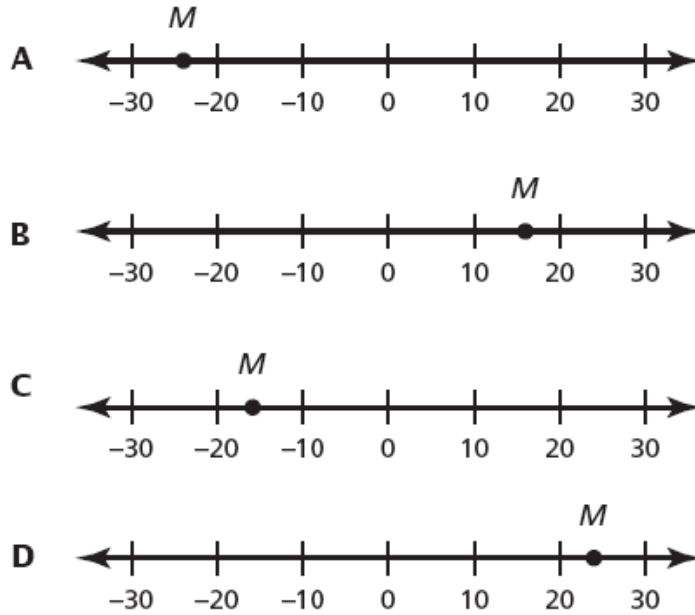
16. Identify the location of 2.3 on the number line below.



- A. R                      B. S                      C. T                      D. U

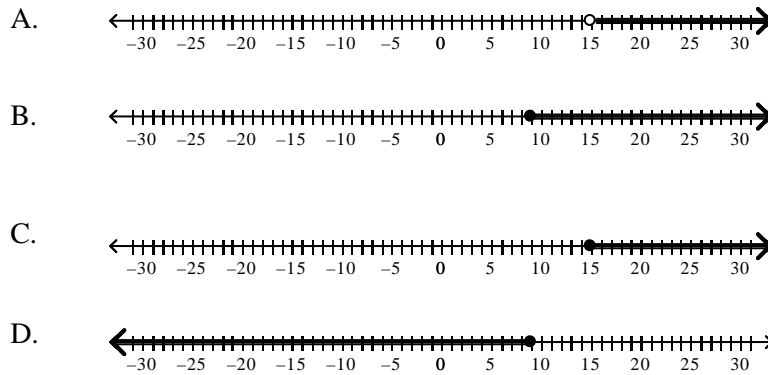
6.2.8

17. Mollie discovered a fossil at 24 feet below sea level. Which number line best shows point  $M$  at  $-24$ ?



6.3.1

18. Which number line shows the solution for  $n + 3 \leq 12$ ?



6.3.2

19. Evaluate the expression  $(15 + 6) - 4 + 8 \div 4$

- A. 32                      B. 19                      C. 5                      D. 3

6.3.3

20. Aaron wrote 8 letters to friends each month for  $x$  months in a row. Write an expression to show how many total letters Aaron wrote.

- A.  $8 + x$                       B.  $8x$                       C.  $8 - x$                       D.  $\frac{8}{x}$

6.3.4

21. Which of the following expressions equals  $6(3 + 8)$ ?

A.  $(6 + 3) \cdot (6 + 8)$

B.  $6 + 3 + 8$

C.  $6 \div 3 + 8$

D.  $(6 \times 3) + (6 \times 8)$

6.3.5

22. Write an algebraic expression for 9 less than the product of 6 and  $y$ .

A.  $9 - 6y$

B.  $(6 - y) - 9$

C.  $6y - 9$

D.  $9 - (6 + y)$

6.3.6

23. Solve for the following equation.  $\frac{t}{5} + 4 = 13$

A. 69

B. 45

C. 17

D. 61

6.3.7

24. The first six terms of a number pattern are shown below.

2, 5, 14, 41, 122, 365, ...

Which expression can be used to find the value of any number in this pattern when  $n$  represents the previous number in the pattern?

A.  $n + 3$

B.  $n - 3$

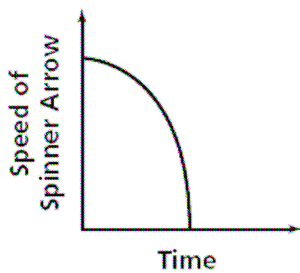
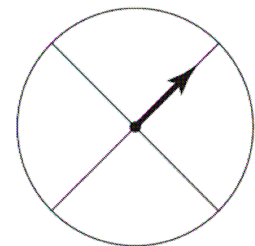
C.  $3n - 1$

D.  $2n + 1$

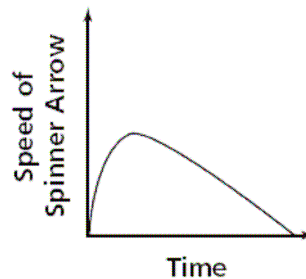
6.3.8

25. Vance played a game using a spinner like the one shown to the right.

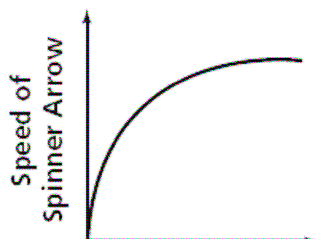
Which graph best represents the speed of the arrow from the moment Vance spun the arrow until the arrow stopped?



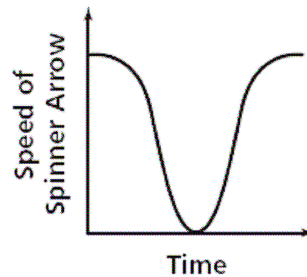
B.



C.



D.



6.3.9

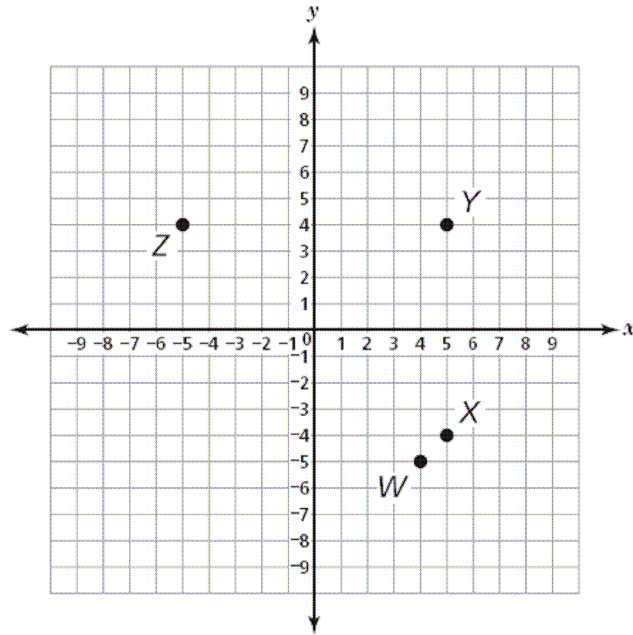
26. Which point is located at  $(-5, 4)$  on the grid below?

A. Point W

B. Point X

C. Point Y

D. Point Z



6.4.1

27. A quadrilateral with exactly one pair of parallel sides is called a \_\_\_\_\_.

A. rectangle

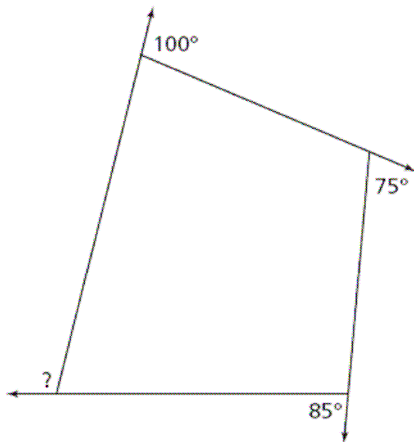
B. trapezoid

C. rhombus

D. kite

6.4.2

28. What is the measure of the missing angle in the figure below?



A.  $90^\circ$

B.  $100^\circ$

C.  $180^\circ$

D.  $360^\circ$

6.4.3

29. Sara is building a triangular pen for her pet rabbit. If two of the sides measure 8 feet and 15 feet, the length of the third side could be

- A. 13 ft.                      B. 3 ft.                      C. 7 ft.                      D. 23 ft.

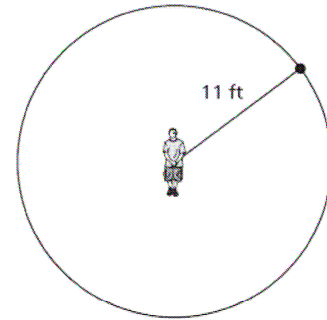
6.4.4

30. Roberto swung a rope with a ball tied to the end of it in a circle. Which measurement is the closest to the circumference of that circle?

- A. 69.08 ft.  
 B. 34.54 ft.  
 C. 14.14 ft.  
 D. 16.14 ft.

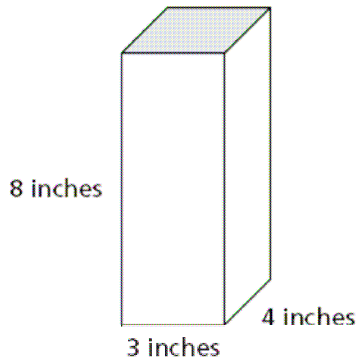
$$C = 2\pi r$$

$$\pi \approx 3.14$$



6.4.5

31. What is the surface area of the rectangular prism shown below?



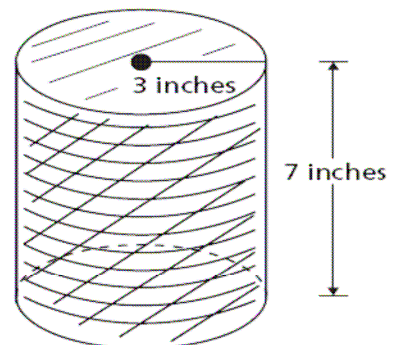
$$\text{Surface area} = \text{sum of the area of all the faces.}$$

$$\text{Area of a rectangle} = l \times w$$

- A. 136 in.<sup>2</sup>                      B. 96 in.<sup>2</sup>                      C. 15 in.<sup>2</sup>                      D. 68 in.<sup>2</sup>

32. Which measurement is closest to the volume of the cylinder to the right?

- A. 197.82 in.<sup>3</sup>  
 B. 131.88 in.<sup>3</sup>  
 C. 65.94 in.<sup>3</sup>  
 D. 21.26 in.<sup>3</sup>



$$\text{Volume} = \pi r^2 h$$

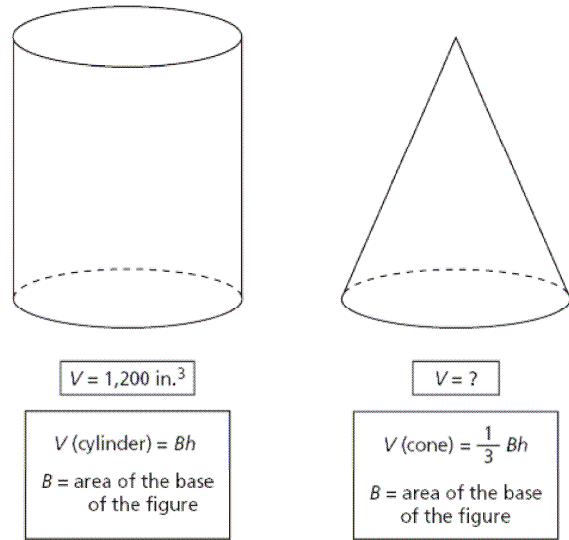
$$\pi \approx 3.14$$

6.4.6

33. A cylinder and a cone are shown below.

If the cylinder and cone have equal heights and bases, what is the volume of the cone?

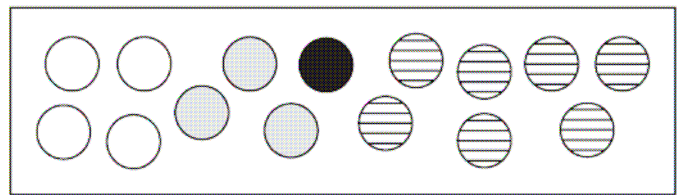
- A. 400 in.<sup>3</sup>
- B. 600 in.<sup>3</sup>
- C. 1,200 in.<sup>3</sup>
- D. 3,600 in.<sup>3</sup>



6.5.1

34. The teacher placed these beads in a bag. She reached in the bag and pulled out one bead. What is the theoretical probability she will pull out a gray bead?

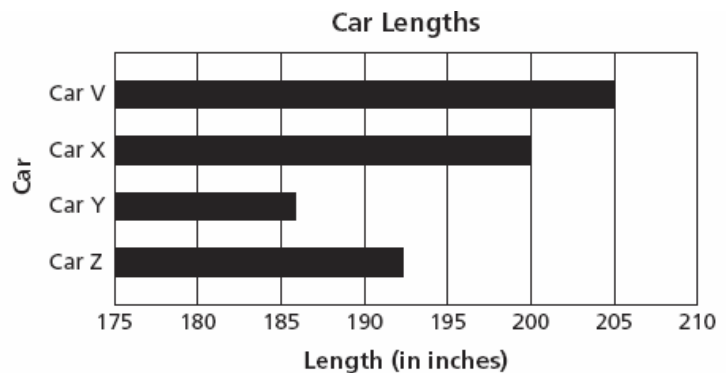
- A.  $\frac{1}{5}$
- B.  $\frac{1}{3}$
- C.  $\frac{1}{15}$
- D.  $\frac{1}{4}$



6.5.2

35. The lengths of 4 cars are displayed on the graph. Identify which feature on the graph may be misleading.

- A. The scale does not start at zero.
- B. The values increase by 5.
- C. The bars are horizontal instead of vertical.
- D. The bars are not in order from longest to shortest.



6.5.3

36. The town mayor wants to know if the residents are in favor of a new football stadium. On Saturday, he randomly surveyed 50 male residents of the town to see if they were in favor of a new stadium. Which sentence *best* explains why the sample is biased?

- A. The sample was taken only on Saturday.
- B. The sample only included males in the survey.
- C. The sample only included residents of the town.
- D. The sample did not include all the male residents of the town.



6<sup>th</sup> Grade Math Final Benchmark Review Answer Key

- 1) B
- 2) B
- 3) D
- 4) B
- 5) A
- 6) B
- 7) C
- 8) C
- 9) D
- 10) C
- 11) B
- 12) A
- 13) C
- 14) D
- 15) D
- 16) C
- 17) A
- 18) D
- 19) B
- 20) B
- 21) D
- 22) C
- 23) B
- 24) C
- 25) B
- 26) D
- 27) B
- 28) B
- 29) A
- 30) A
- 31) A
- 32) A
- 33) A
- 34) A
- 35) A
- 36) B