

Student Name: \_\_\_\_\_

Period: \_\_\_\_\_

**SPRING SEMESTER EXAM REVIEW**  
**8<sup>TH</sup> MATH**

- Estimate to the nearest whole number:  $\sqrt{29}$   
a. 6            b. 5            c. 7            d. 4
- Jose's yard is 30 meters by 40 meters. What is the distance from one corner to the opposite corner?  
a. 8.4 m            b. 70 m            c. 50 m            d. 26.5 m
- A television screen is 7 inches wide, and its diagonal measures 9.5 inches. Find the height of the screen. Round to the nearest tenth if necessary.  
a. about 6.1 in            c. about 16.5 in  
b. about 11.8 in            d. about 4.06 in
- Write  $6.54 \times 10^{-4}$  in standard notation.  
a. 0.0000654            c. 0.00654  
b. 0.000654            d. 6.54000
- Which values are in order from least to greatest?  
a.  $\sqrt{90}$ ,  $9\frac{1}{2}$ , 9.7,  $\sqrt{95}$             c.  $9\frac{1}{2}$ ,  $\sqrt{90}$ , 9.7,  $\sqrt{95}$   
b.  $9\frac{1}{2}$ ,  $\sqrt{90}$ ,  $\sqrt{95}$ , 9.7            d.  $\sqrt{90}$ ,  $9\frac{1}{2}$ ,  $\sqrt{95}$ , 9.7
- Solve  $\frac{c}{15} = \frac{10}{20}$ .  
a. 30            b. 15            c. 13            d. 7.5
- Express *150 tickets for 30 students* as a unit rate.  
a. 5 tickets per student            c. 150 tickets per student  
b.  $\frac{1}{5}$  ticket per student            d.  $\frac{1}{30}$  ticket per student
- Cassie earns \$11 per dog to walk them each day. Is the amount of money she earns proportional to the number of dogs she walks?  
a. The amount of money she earns is proportional to the number of dogs  
b. The distance she walks is proportional to the number of dogs she walks.  
c. Not proportional  
d. Cannot be determined

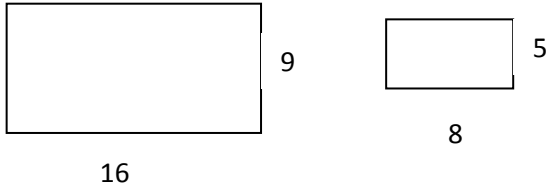
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9. Which pair of ratios form a proportion?

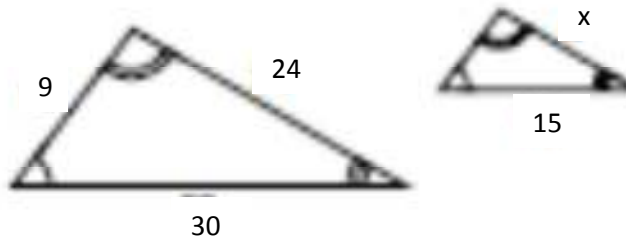
- a.  $\frac{21}{15}, \frac{7}{5}$       b.  $\frac{9}{10}, \frac{10}{11}$       c.  $\frac{5}{6}, \frac{2}{3}$       d.  $\frac{4}{17}, \frac{17}{20}$

10. Is this pair of polygons similar?



- a. Yes      b. No

11. The triangles shown are similar. Find the missing measure.



- a. 18.75      c. 48  
b. 7.5      d. 12

12. Triangle ABC has vertices A (-1, 0), B (-3, 4), and C (2, 3). Find the coordinates of vertex A after the triangle is dilated using a scale factor of 2.

- a. (-1, 2)      c. (-2, 0)  
b. (0, -1)      d. (1, 0)

13. An image that is 10 inches wide on a transparency is 30 inches wide projected onto a screen. What is the scale factor?

- a. 30      b.  $\frac{1}{10}$       c.  $\frac{1}{3}$       d. 3

14. The scale on a map is 1 centimeter = 50 kilometers. Find the actual distance for a map distance of 3 centimeters.

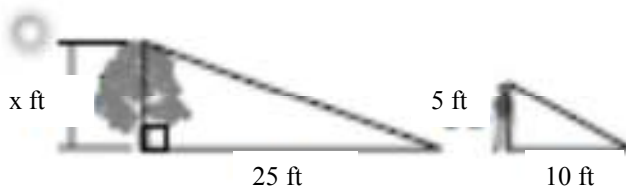
- a. 150 km      b. 3 km      c. 150 cm      d. 3 cm

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15. In a science fiction movie, the model of one of the aliens was 12 inches tall. In the movie, the alien was seen as 6 feet tall. What was the scale used?
- a. 2 in = 1 ft      b. 1 in = 2 ft      c. 1 in = 6 ft      d. 6 in = 1 ft
16. A flagpole casts a 12-foot shadow. A bush next to it is 4 feet tall and casts a 2-foot shadow. How tall is the flagpole?
- a. 24 ft      b. 6 ft      c. 12 ft      d. 36 ft

17. How tall is the tree?



- a. 12.5 ft      b. 24 ft      c. 60 ft      d. 4.2 ft

18. Find the rate of change in the number of boys between 6:00 and 6:15

Time	6:00	6:15	6:18	6:30	6:50
Number of boys	50	65	71	90	87

- a. 50 boys/ min      c. 15 boys/ min  
b. 65 boys/ min      d. 1 boy/ min
19. Express *9 inches 3 yards* in simplest form.
- a. 3:1      b. 1:4      c. 12:1      d. 1:12

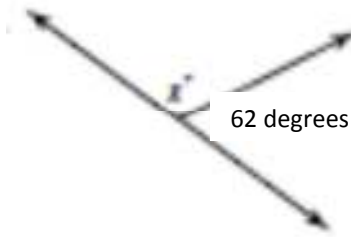
20. Solve  $\frac{a}{36} = \frac{3}{8}$ .

- a.  $\frac{2}{3}$       b. 12      c. 13.5      d. 96
21. A car uses 40 gallons of gasoline to travel 980 miles. How many miles will the car travel on 5 gallons of gasoline?
- a. 4.9 mi      b. 250 mi      c. 175.5 mi      d. 122.5 mi

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22. Find the value of  $x$ .
- a. 298 degrees
  - b. 28 degrees
  - c. 152 degrees
  - d. 118 degrees



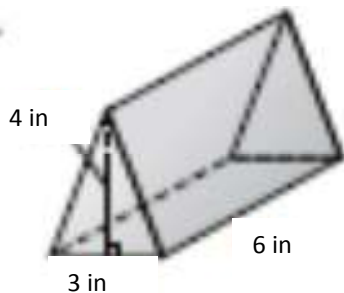
23.  $\triangle EFG$  has vertices  $E(2, -3)$ ,  $F(-2, -1)$ , and  $G(-1, 3)$ . Find the coordinates of the vertex  $E'$  after  $\triangle EFG$  is translated for the rule  $(x+2, y-3)$ .
- a.  $(-1, 0)$
  - b.  $(1, 3)$
  - c.  $(4, -6)$
  - d.  $(3, 0)$

24. Triangle  $LMN$  has vertices  $L(-2, 1)$ ,  $M(2, 3)$ , and  $N(2, -2)$ . Find the coordinates of vertex  $L'$  after a reflection of  $\triangle LMN$  over the  $x$ -axis.
- a.  $(-2, -1)$
  - b.  $(2, 1)$
  - c.  $(1, 2)$
  - d.  $(-1, 2)$

25. Use problem #24: Find the coordinates of  $M'$  after a reflection over the  $x$ -axis by drawing triangle  $LMN$  and its image.
- a.  $(-2, 3)$
  - b.  $(2, -3)$
  - c.  $(-2, -3)$
  - d.  $(2, 3)$

26. Find the circumference of a circle that has a diameter of 6 inches. Round to the nearest tenth.
- a. 18.8 in
  - b. 6 in
  - c. 9.4 in
  - d. 28.3 in

27.



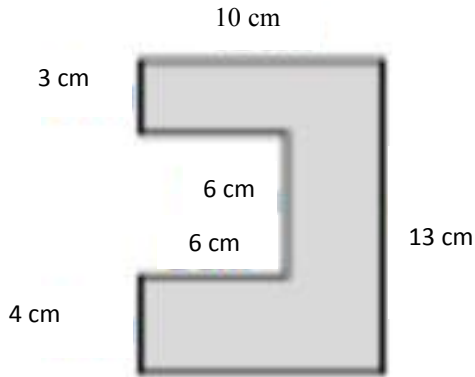
Find the volume.

- a.  $24 \text{ in}^3$
  - b.  $36 \text{ in}^3$
  - c.  $12 \text{ in}^3$
  - d.  $48 \text{ in}^3$
28. Janie wants to leave a 15% tip. Her bill came to \$24. How much tip should she leave?
- a. \$5.00
  - b. \$3.00
  - c. \$2.40
  - d. \$3.60

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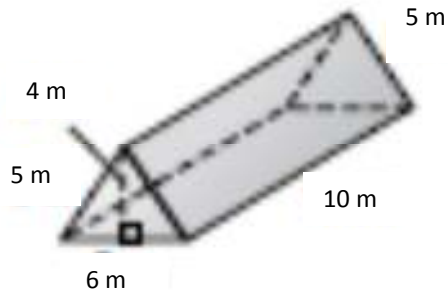
29.



Find the area.

- a.  $130 \text{ cm}^2$
- b.  $114 \text{ cm}^2$
- c.  $94 \text{ cm}^2$
- d.  $122 \text{ cm}^2$

30.



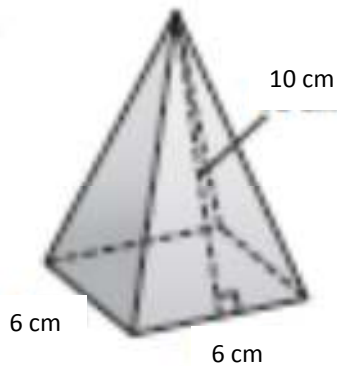
Find the surface area.

- a.  $172 \text{ m}^2$
- b.  $120 \text{ m}^2$
- c.  $184 \text{ m}^2$
- d.  $368 \text{ m}^2$

31. Two cylinders are similar. The dimensions of the first cylinder are halved. The volume of the first cylinder is  $120 \text{ in}^3$ . Find the volume of the second cylinder.

- a.  $30 \text{ in}^3$
- b.  $15 \text{ in}^3$
- c.  $60 \text{ in}^3$
- d.  $120 \text{ in}^3$

32.



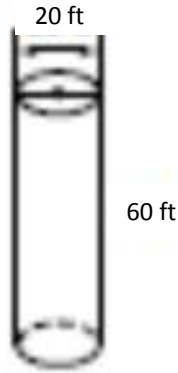
Find the surface area.

- a.  $126 \text{ cm}^2$
- b.  $276 \text{ cm}^2$
- c.  $120 \text{ cm}^2$
- d.  $156 \text{ cm}^2$

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33.



A water storage tank shown at the left is to be painted. What is the surface area to be painted? Assume that the bottom does not need painting.

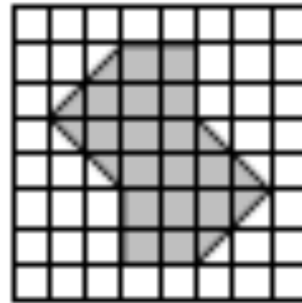
- a.  $4,084.1 \text{ ft}^2$
- b.  $3,768 \text{ ft}^2$
- c.  $18,849.6 \text{ ft}^2$
- d.  $6,283 \text{ ft}^2$

34. For a school project, boxes will be painted white and used to build a model of an igloo. Each box measures 6 inches by 8 inches by 3 inches. What is the surface area of each box?

- a.  $144 \text{ in}^2$
- b.  $17 \text{ in}^2$
- c.  $180 \text{ in}^2$
- d.  $102 \text{ in}^2$

35. What is the area of the figure at the right?

- a.  $16 \text{ units}^2$
- b.  $18 \text{ units}^2$
- c.  $20 \text{ units}^2$
- d.  $28 \text{ units}^2$



36. A deli offers sandwiches made from a choice of 2 kinds of bread, 4 kinds of meat, and 3 kinds of cheese. How many different kinds of sandwiches with one kind of bread, meat, and cheese are available?

- a. 12
- b. 24
- c. 18
- d. 9

37. How many different ways can 3 desserts be chosen from a group of 6 desserts?

- a. 120
- b. 20
- c. 40
- d. 360

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38. A number cube is rolled and a quarter is tossed. Find P(4 and heads).

- a.  $\frac{2}{3}$                       b.  $\frac{1}{2}$                       c.  $\frac{1}{18}$                       d.  $\frac{1}{12}$

39. What is the probability of tossing a penny 2 times and getting tails each time?

- a.  $\frac{3}{4}$                       b.  $\frac{1}{2}$                       c.  $\frac{1}{4}$                       d. 1

40. There are 4 white and 6 blue tokens in a bag. Once a token is selected, it is not replaced. Find the probability of selecting two white tokens.

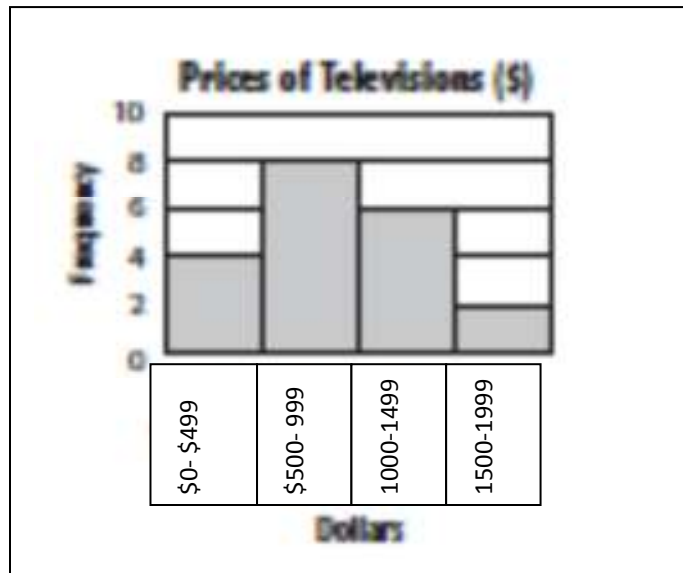
- a.  $\frac{1}{15}$                       b.  $\frac{2}{15}$                       c.  $\frac{4}{15}$                       d.  $\frac{8}{15}$

41. A number cube is rolled twice. Find the probability of rolling an even number on the first roll and an odd on the second.

- a.  $\frac{1}{4}$                       b.  $\frac{1}{2}$                       c.  $\frac{3}{4}$                       d. 1

42. Which interval represents the most televisions:

- a. \$0- \$499  
b. \$500- \$999  
c. \$1,000- \$1,499  
d. \$1,500- \$1,999



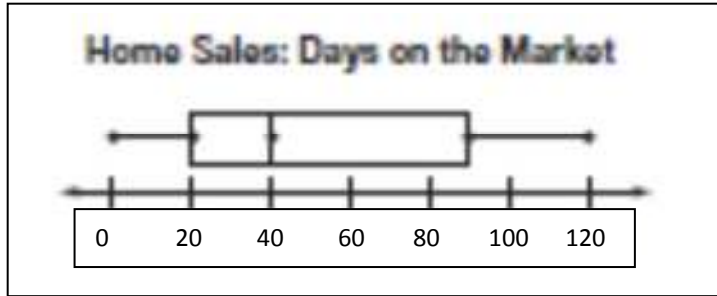
43. Choose the appropriate type of display for the closing price of stock over the past 3 weeks:

- a. Line plot                      b. Line Graph                      c. Circle Graph                      d. Histogram

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44.



What is the greatest number of days on the market?

- a. 40                      b. 50                      c. 90                      d. 120

45. Use the graph from problem #44: Find the median of the data.

- a. 20                      b. 30                      c. 40                      d. 50

46. The salaries at a company are \$125,000, \$25,000, \$15,000, \$150,000, \$100,000, \$75,000, \$100,000, \$15,000, \$15,000, \$25,000, \$150,000, and \$15,000. Which average would most likely attract new employees?

- a. Mean  
b. Mode  
c. Median or Mode  
d. Median

47. The list shows prices of various greeting cards at a local store. Organize the data in a table using the intervals \$0.51- \$1.50, \$1.51- \$2.50 and \$2.51- \$3.50. Use the table to answer the question below.

\$1.25	\$2.99	\$2.79	\$0.97	\$1.99
\$3.29	\$3.09	\$2.84	\$0.99	\$2.76
\$1.69	\$1.99	\$1.39	\$1.49	\$3.49

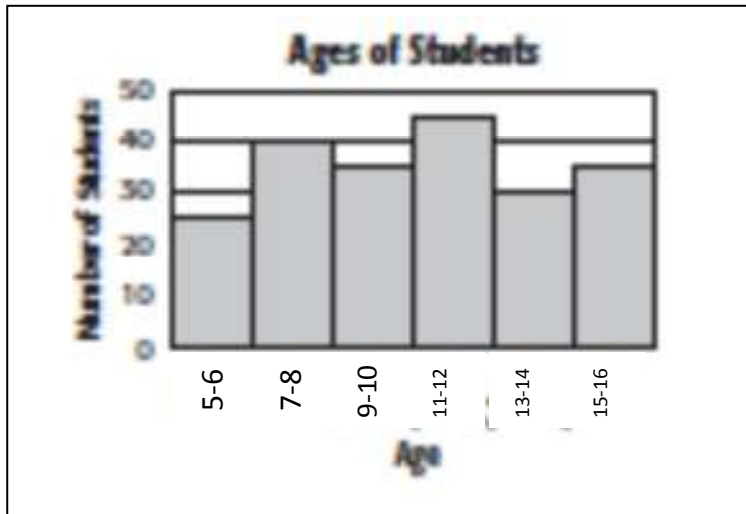
What is the most common interval of prices?

- a. \$0.51- \$1.50                      c. \$2.51- \$3.50  
b. \$1.51- \$2.50                      d. \$3.51- 4.50

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48.



How many students are at least 11 years old?

- a. 65                      b. 110                      c. 125                      d. 145

49. Find the mode of the data 11, 12, 12, 13, 14, 14, 15

- a. 13                      b. 14                      c. 12 and 14                      d. no mode

50. Choose the most appropriate display for the following data set and situation:

Percent of women who work outside the home full-time, compared with those who have part-time jobs and those who do not work outside the home.

- a. Table                      c. Line Graph  
b. Line Plot                      d. Circle Graph