

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

## hs assessment

### Simplify:

- $2 + 2(3 + 4)^2$ 
  - 25
  - 196
  - 198
  - 100
- Simplify  $\frac{5x + 10}{5}$ 
  - $x + 10$
  - $5x + 2$
  - $x + 5$
  - $x + 2$
- Simplify  $10 \times 3 + 4 - 10 \div 5$ .
  - 4.8
  - 27
  - 32
  - 28.8
- Evaluate.  $-(-4) - (-5) + 6$ 
  - 3
  - 3
  - 5
  - 15
- Find the product.  $(-8)(2)(5)$ 
  - 1
  - 1
  - 80
  - 80
- Find the product  $(-8)|-10|$ .
  - 18
  - 18
  - 80
  - 80

7. Find the quotient.  $12 \div \left(-\frac{4}{9}\right)$

- $-\frac{1}{27}$
- $-\frac{16}{3}$
- $\frac{9}{4}$
- 27

8. Evaluate the expression.  $2\left[21 - \frac{1}{2}(8 + 2)\right]$

- 24
- 44
- 32
- 30

### Simplify:

- $\sqrt{25}$ 
  - 5
  - 25
  - 0.5
  - 50
- $\sqrt{300}$ 
  - $10\sqrt{30}$
  - $10\sqrt{3}$
  - $\sqrt{30}$
  - $3\sqrt{10}$
- $\sqrt{10} \cdot \sqrt{4}$ 
  - $2\sqrt{10}$
  - $4\sqrt{5}$
  - $2\sqrt{5}$
  - $\sqrt{40}$

12.  $\sqrt{\frac{49}{100}}$   
 a.  $\frac{7}{50}$   
 b.  $\frac{3}{4}$   
 c.  $\frac{7}{100}$   
 d.  $\frac{7}{10}$

13. Approximate to the nearest integer  $\sqrt{300}$   
 a. 30  
 b. 10  
 c. 17  
 d. 18

14. Approximate to the nearest integer  $\sqrt{7}$   
 a. 3  
 b. -3  
 c. 49  
 d. -49

15. Approximate to the nearest integer  $\sqrt{10} \cdot \sqrt{4}$   
 a. 40  
 b. 7  
 c. 6  
 d. 20

**Simplify:**

16.  $\sqrt{32} + \sqrt{72}$   
 a.  $2\sqrt{10}$   
 b.  $46\sqrt{2}$   
 c.  $\sqrt{104}$   
 d.  $10\sqrt{2}$

17.  $2\sqrt{6} - \sqrt{81} - 4\sqrt{24}$   
 a.  $-6\sqrt{6} - 9$   
 b.  $-11\sqrt{6} - 9 - 4\sqrt{24}$   
 c.  $-5\sqrt{24}$   
 d.  $-15\sqrt{6}$

18.  $(-3c^3d^5e^{11}) \cdot (3c^3d^3e)$   
 a.  $-9c^6d^8e^{12}$   
 b.  $9c^5d^6e^8$   
 c.  $-9c^5d^6e^8$   
 d.  $9c^6d^8e^{12}$

19.  $2q^3r^{15} \cdot 5q^6r^6$   
 a.  $7q^9r^{21}$   
 b.  $7q^4r^{21}$   
 c.  $10q^9r^{11}$   
 d.  $10q^9r^{21}$

20.  $a^{-11} \cdot a^{-11}$   
 a.  $\frac{1}{a^{22}}$   
 b.  $a^{22}$   
 c.  $-22^a$   
 d.  $\frac{1}{a^{-22}}$

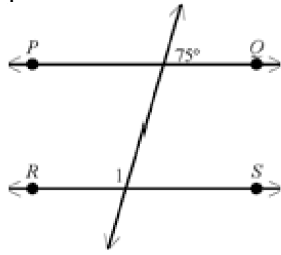
21. Which expression is equivalent to  $8^6 \times 8^{-9}$ ?  
 a.  $\frac{1}{8^3}$   
 b.  $\frac{1}{8^{54}}$   
 c.  $8^{15}$   
 d.  $8^3$

22. Simplify  $\left(\frac{1}{16}\right)^{\frac{1}{2}}$   
 a.  $1/8$   
 b. 4  
 c.  $1/4$   
 d. 8

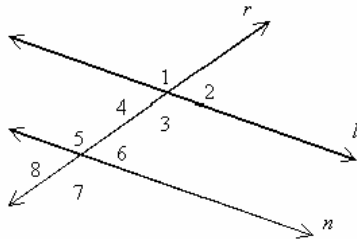
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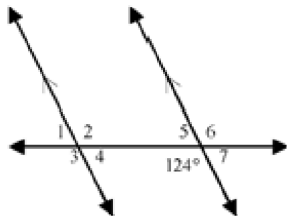
23. Find  $m\angle 1$  in the figure below.  $\overleftrightarrow{PQ}$  and  $\overleftrightarrow{RS}$  are parallel.



- a.  $105^\circ$   
 b.  $75^\circ$   
 c.  $115^\circ$   
 d.  $15^\circ$
24. In the figure,  $l \parallel n$  and  $r$  is a transversal. Which of the following is not necessarily true?

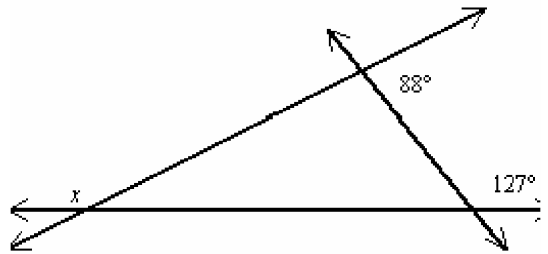


- a.  $\angle 8 \cong \angle 2$   
 b.  $\angle 2 \cong \angle 6$   
 c.  $\angle 5 \cong \angle 3$   
 d.  $\angle 7 \cong \angle 4$
25. Use the figure to find the measure of  $\angle 6$ .

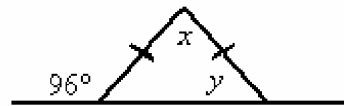


- a.  $124^\circ$   
 b.  $56^\circ$   
 c.  $79^\circ$   
 d.  $146^\circ$

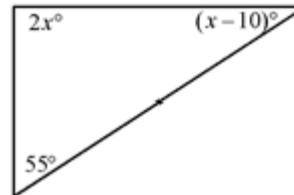
26. Find the value of  $x$ :



- a.  $127^\circ$   
 b.  $35^\circ$   
 c.  $88^\circ$   
 d.  $145^\circ$
27. Find the values of  $x$  and  $y$ .

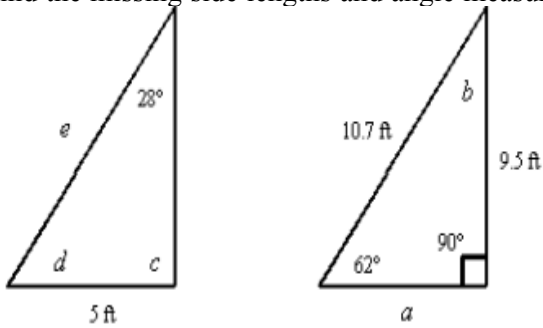


- a.  $x = 84^\circ, y = 96^\circ$   
 b.  $x = 84^\circ, y = 64^\circ$   
 c.  $x = 12^\circ, y = 96^\circ$   
 d.  $x = 12^\circ, y = 84^\circ$
28. Use the figure below to solve for  $x$ .



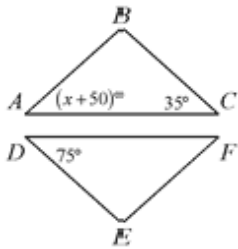
- a. 55  
 b. 90  
 c. 145  
 d. 45

29. The two triangle-shaped gardens are congruent. Find the missing side lengths and angle measures.



- a.  $a = 5$  ft;  $b = 28^\circ$ ;  $c = 90^\circ$ ;  $d = 62^\circ$ ;  $e = 5$  ft  
 b.  $a = 5$  ft;  $b = 28^\circ$ ;  $c = 62^\circ$ ;  $d = 90^\circ$ ;  $e = 5$  ft  
 c.  $a = 9.5$  ft;  $b = 28^\circ$ ;  $c = 90^\circ$ ;  $d = 62^\circ$ ;  $e = 10.7$  ft  
 d.  $a = 5$  ft;  $b = 28^\circ$ ;  $c = 90^\circ$ ;  $d = 62^\circ$ ;  $e = 10.7$  ft

30. In the diagram,  $\angle B \cong \angle E$  and  $\angle C \cong \angle F$ . Find the value of  $x$ .



- a.  $x = 50$   
 b.  $x = 25$   
 c.  $x = 75$   
 d.  $x = 35$
31. While attending a school carnival, you estimate the ratio of children to adults as 2:1. If there are 180 people at the carnival, about how many children are in attendance?
- a. about 180  
 b. about 150  
 c. about 60  
 d. about 120

32. A map has a scale of  $\frac{1}{2}$  inch : 20 miles. If the actual distance between the two cities is 320 miles, how far apart are they on the map?
- a. 8 inches  
 b. 16 inches  
 c. 32 inches  
 d. 4 inches

Write the equivalent rate.

33.  $\frac{99 \text{ inches}}{\text{hour}} = \frac{? \text{ feet}}{\text{hour}}$
- a. 1188  
 b. 297  
 c. 8.25  
 d. 33

34. Write the rate as a unit rate.  $\frac{\$462.50}{10 \text{ nights}}$

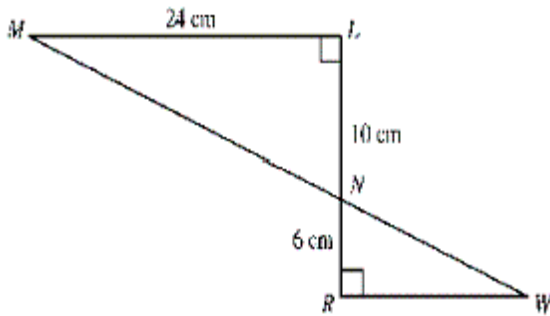
- a.  $\frac{\$92.50}{1 \text{ night}}$   
 b.  $\frac{\$462.50}{1 \text{ night}}$   
 c.  $\frac{\$46.25}{1 \text{ night}}$   
 d.  $\frac{\$23.13}{1 \text{ night}}$

35. Write the equivalent rate.  $\frac{99 \text{ km}}{\text{hour}} = \frac{? \text{ km}}{\text{min}}$

- a. 15  
 b. 2.5  
 c. 1.65  
 d. 5940

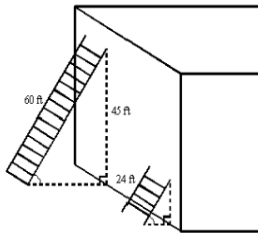
36. According to a recent survey, 20 out of every 25 students do not walk to school. What is the ratio of the number of students who walk to school to the total number of students?
- $\frac{1}{5}$
  - 5
  - $\frac{4}{5}$
  - $\frac{1}{4}$

37. Triangles  $LMN$  and  $NWR$  are right triangles.



What is the length of  $\overline{NW}$ ?

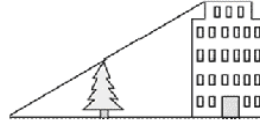
- 2.5 cm
  - 10 cm
  - 15.6 cm
  - 14.4 cm
38. Two ladders are leaning against a wall at the same angle as shown.



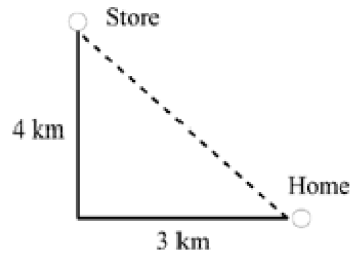
How long is the shorter ladder?

- 18 ft
- 32 ft
- 28 ft
- 56 ft

39. Bill wants to find the height of the tallest building in his city. He stands 400 feet away from the building. There is a tree 40 feet in front of him, which he knows is 20 feet tall. How tall is the building?



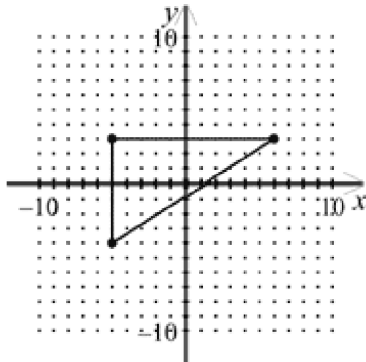
- 210 feet
  - 200 feet
  - 44 feet
  - 220 feet
40. If the sides of a square are made eight times longer, how many times the area of the original figure is the area of the new figure?
- 128 times
  - 8 times
  - 64 times
  - 640 times
41. To get to the store from his house, Sam jogged 3 kilometers due west and then 4 kilometers due north. On the way back he cut across a field, taking the shortest possible route home.



How far did Sam jog on the round-trip?

- 14 km
- 5 km
- 12 km
- 7 km

42. Which is the approximate length of the hypotenuse of the right triangle?

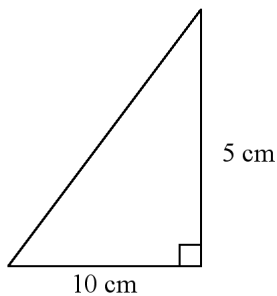


- a. 11.05  
b. 7.07  
c. 13.04  
d. 1.41

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43. Given the right triangle below, what is the length (to the nearest integer) of the hypotenuse?



44. Find the midpoint of  $(4, 16)$  and  $(9, -2)$ .
- a.  $(\frac{13}{2}, 7)$   
b.  $(13, 14)$   
c.  $(10, \frac{7}{2})$   
d.  $(-13, -14)$

45.  $M(0, -8)$  is the midpoint of  $\overline{RS}$ . If  $S$  has coordinates  $(-2, -14)$ , find the coordinates of  $R$ .
- a.  $(2, -2)$   
b.  $(2, -6)$   
c.  $(3, -2)$   
d.  $(3, -6)$

46. Find the distance between the two points to the nearest integer.  
 $(-4, -2), (2, 3)$

- a. 6  
b. 7  
c. 8  
d. 9

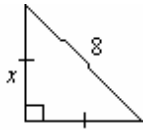
47. Find the distance between the two points.  
 $(-2, 7), (4, -1)$

- a. 8  
b. 9  
c. 10  
d. 11

48. In a  $45^\circ-45^\circ-90^\circ$  triangle, the ratio of the length of the hypotenuse to the length of a side is

- \_\_\_\_\_.
- a. 1:1  
b.  $\sqrt{3}:1$   
c.  $\sqrt{2}:1$   
d. 2:1

49. Find the value of  $x$ .



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

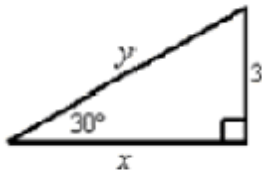
50. What is the length of the diagonal of a square with side lengths  $7\sqrt{2}$ ?

- a. 7
- b. 14
- c.  $\sqrt{2}$
- d.  $7\sqrt{3}$

51. Which of the following *cannot* be the lengths of a  $30^\circ$ - $60^\circ$ - $90^\circ$  triangle?

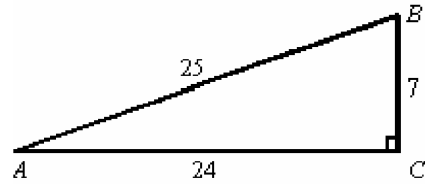
- a. 14, 28,  $14\sqrt{3}$
- b.  $\frac{5}{3}$ ,  $\frac{10}{3}$ ,  $\frac{5}{3}\sqrt{3}$
- c. 17, 34,  $17\sqrt{3}$
- d. 9, 18,  $18\sqrt{3}$

52. Find the value of  $x$  and  $y$ .



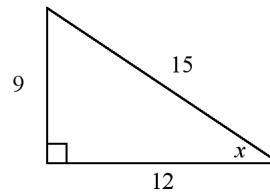
- a.  $x = 6$        $y = 3\sqrt{3}$
- b.  $x = 3\sqrt{3}$      $y = 3\sqrt{2}$
- c.  $x = 3\sqrt{3}$      $y = 6$
- d.  $x = 3\sqrt{2}$      $y = 3\sqrt{3}$

53. Write  $\cos B$ .



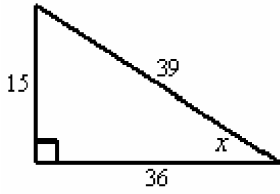
- a.  $\frac{24}{25}$
- b.  $\frac{7}{25}$
- c.  $\frac{7}{24}$
- d.  $\frac{24}{7}$

54. Write  $\tan x$  as a fraction in lowest terms.



- a.  $\frac{3}{4}$
- b.  $\frac{3}{5}$
- c.  $\frac{4}{5}$
- d.  $1\frac{1}{4}$

55. Use the diagram to find  $\sin x$  as a fraction in simplest form.

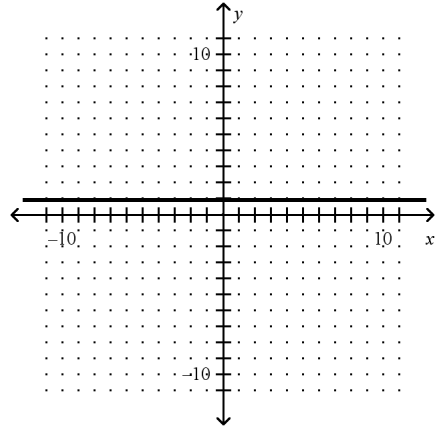


- a.  $\frac{12}{13}$   
 b.  $2\frac{2}{5}$   
 c.  $\frac{5}{12}$   
 d.  $\frac{5}{13}$
56. What is the  $y$ -intercept of the line with the equation  $4x + 5y = -40$ ?
- a.  $(0, 10)$   
 b.  $(0, 8)$   
 c.  $(0, -8)$   
 d.  $(0, -10)$
57. State the  $x$ - and  $y$ -intercepts of the line with the equation  $y = -2x + 4$ .
- a.  $x$ -intercept: 4;  $y$ -intercept: 2  
 b.  $x$ -intercept: 2;  $y$ -intercept: 4  
 c.  $x$ -intercept: -4;  $y$ -intercept: -2  
 d.  $x$ -intercept: -2;  $y$ -intercept: -4
58. Find the slope (rate of change) and  $y$ -intercept of the line with the equation  $8x + 2y = 32$ .
- a.  $m = 4, b = -16$   
 b.  $m = -16, b = 4$   
 c.  $m = -4, b = 16$   
 d.  $m = 16, b = -4$
59. Find the rate of change of the following function  
 $f(x) = 3x + 4$
- a. 3  
 b. 4  
 c. 7  
 d.  $f(x)$

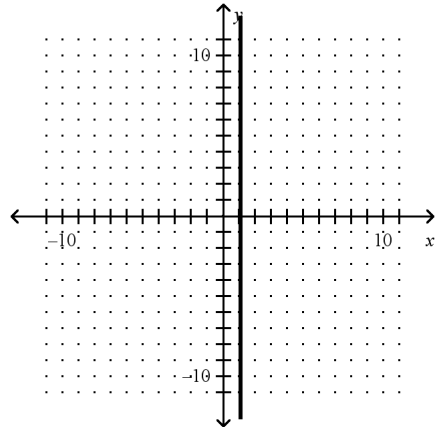
**Graph the equation. (Beside EACH graph, write the slope of the graph as well!!)**

60.  $y = 1$

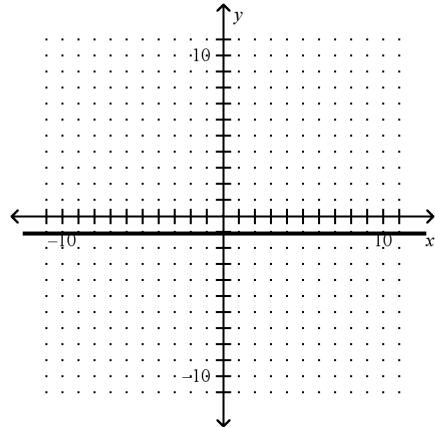
a.



b.

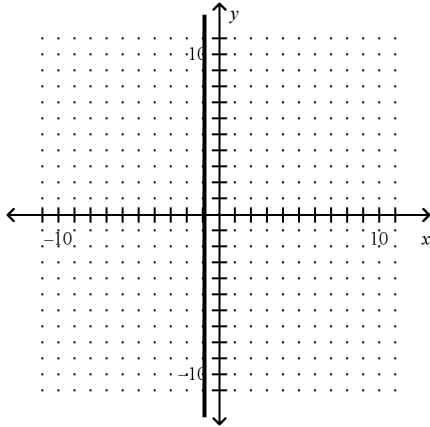


c.





d.



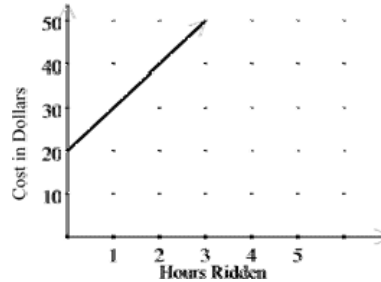
61. Find the slope (rate of change) of  $(-8, 2)$  and  $(7, -4)$ .
- $-\frac{2}{5}$
  - $-\frac{5}{2}$
  - 0
  - undefined

62. The cost of a school banquet is \$71 and then \$18 for each person attending. Write an equation estimating the equation used to find the total cost if 92 people are attending.
- $y = 70 \cdot 90 - 20$
  - $y = 70 \cdot 90 + 20$
  - $y = 20 \cdot 90 - 70$
  - $y = 20 \cdot 90 + 70$

63. Kwame sells ice cream cones at the county fair. He has to rent the equipment for \$26 and spend \$0.43 on ingredients for each cone. How many ice cream cones must he sell at \$1.20 each in order to make a profit? Write an inequality that represents the equation you would use to find how many ice cream cones must be sold to make a profit.
- $26 > 0.43x + 1.20x$
  - $26 < 43x + 1.20x$
  - $26 > 0.43 + 1.20x$
  - $26 < 0.43x + 1.20x$
- STOP HERE FOR TODAY!!!

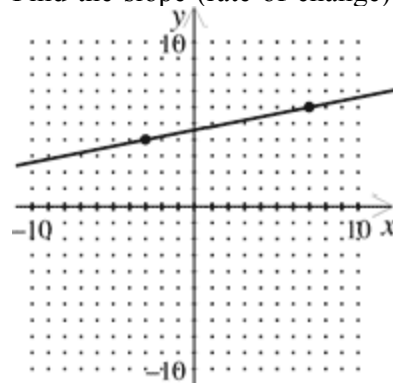


64. The graph for a stable that charges a \$20 flat fee plus \$10 per hour for horseback riding is shown below. How will the graph change if the stable changes its charges to a flat fee of \$45 plus \$30 per hour?



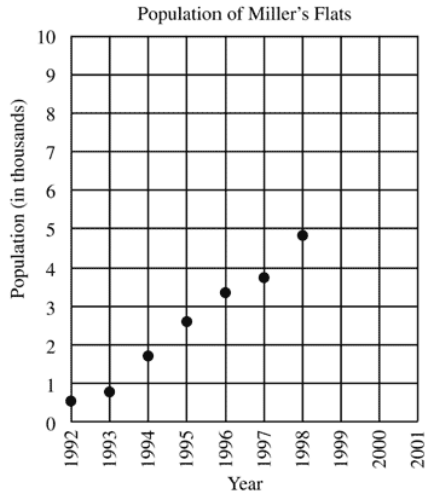
- The rate of change will be 30 and the y-intercept will be 45.
- The rate of change will be 10 and the y-intercept will be 45.
- The rate of change will be 30 and the y-intercept will be 20.
- The rate of change will be 45 and the y-intercept will be 30.

65. Find the slope (rate of change) of the line.



- $\frac{5}{2}$
- 5
- $\frac{2}{5}$
- $\frac{1}{5}$

66. The graph below shows the population of a 5-square-mile area called Miller's Flats, just outside a city's Urban Growth Boundary, from 1992 to 1998.



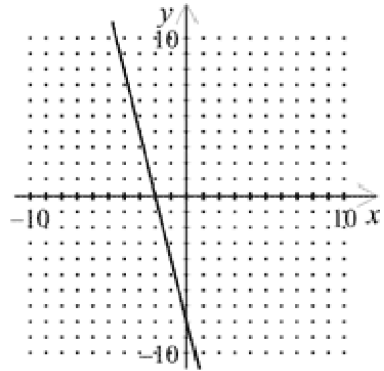
Assume that the population of the Miller's Flats area continues to grow at a fairly steady rate as shown in the graph. What is a good estimate of the population in 2001?

- a. 3500 to 4500
- b. 6500 to 7500
- c. 8500 to 9500
- d. 4500 to 5500

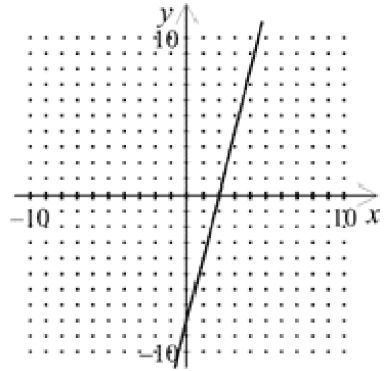
**Graph the equation.**

67.  $4x - 8 = 0$

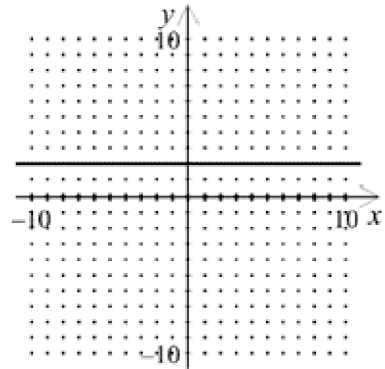
a.



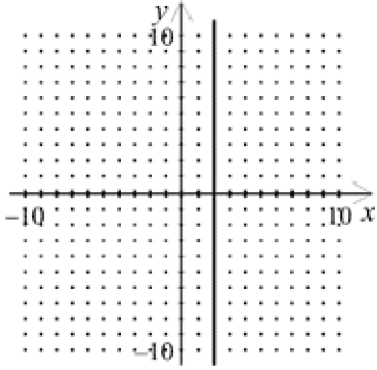
b.



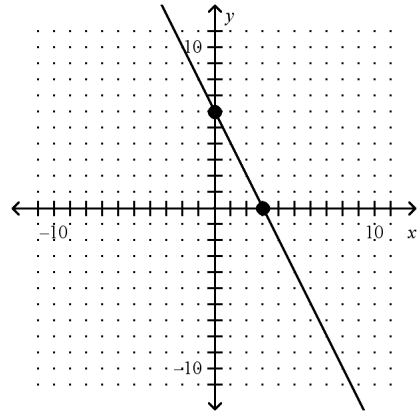
c.



d.

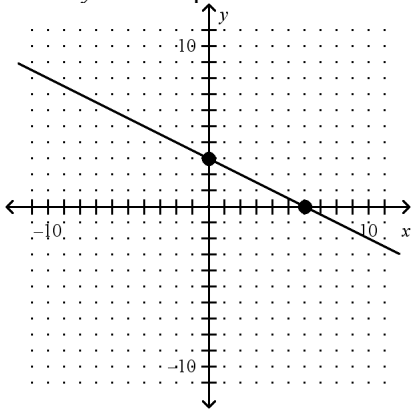


c.

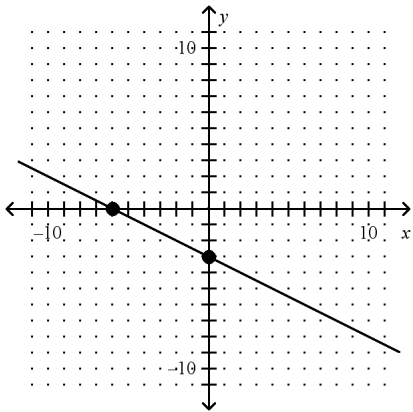


68. Graph the linear equation  $3x + 6y = 18$  by finding the  $x$ - and  $y$ -intercepts.

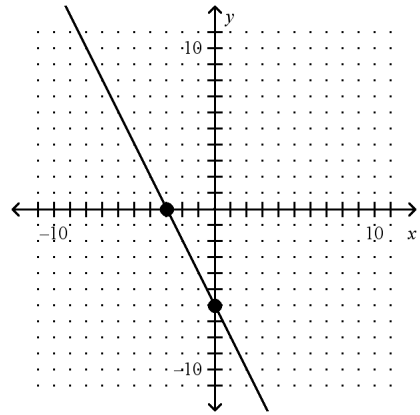
a.



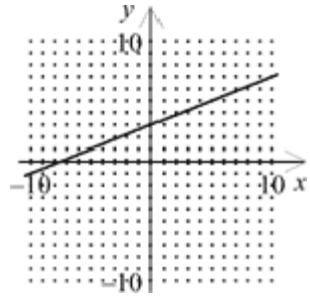
b.



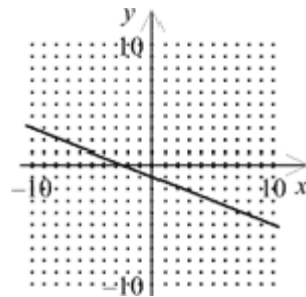
d.



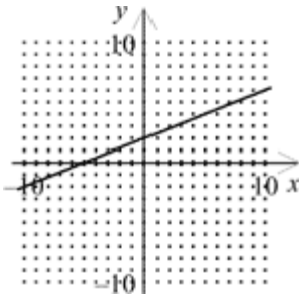
69. The equation  $y = \frac{2}{5}x + 3$  is graphed below. Which graph shows the result of changing the 3 in the equation to  $-1$ ?



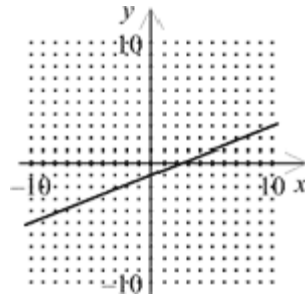
a.



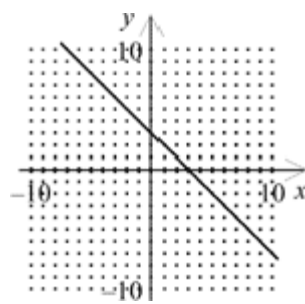
b.



c.



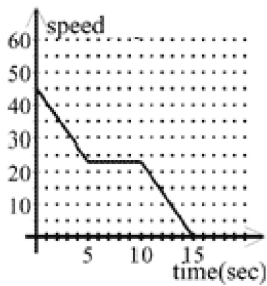
d.



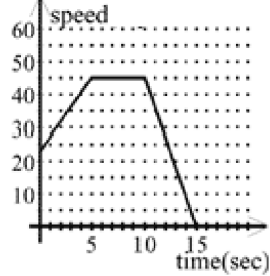
70. Which graph below would match the situation described?

A car travelling at 23 mi/h accelerates to 45 mi/h in 5 seconds. It maintains that speed for the next 5 seconds, and then slows to a stop during the next 5 seconds.

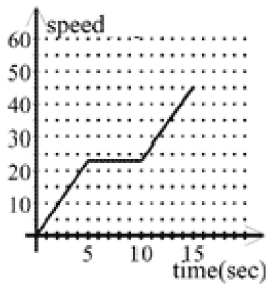
a.



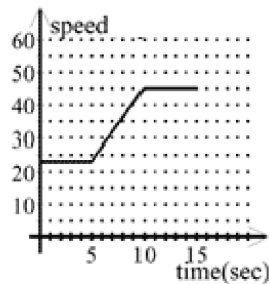
c.



b.

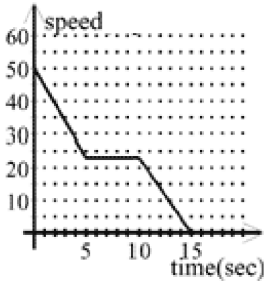


d.

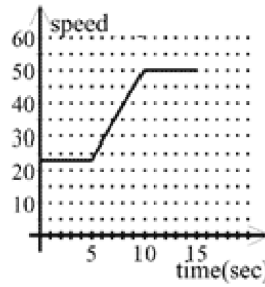


71. Which graph below would match the situation described?  
 A car travelling at 23 mi/h for 5 seconds. It accelerates to 50 mi/h in the next 5 seconds, and then maintains that speed for another 5 seconds.

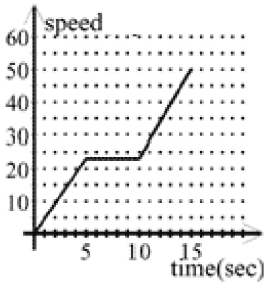
a.



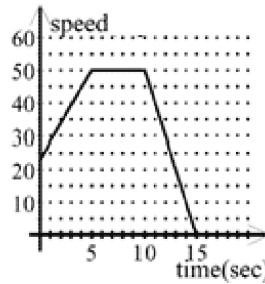
c.



b.



d.



72. What are the x intercepts of the equation?

$$x^2 - 10x + 24 = 0$$

- a. (-1, 0) (-24, 0)
- b. (-4, 0) (-6, 0)
- c. (0, 4) (0, 6)
- d. (4, 0) (6, 0)

74. Make a table of values for the function

$$f(x) = 2x + 3 \text{ using } x\text{-values of } 1, 2, 3, 4, \text{ and } 5.$$

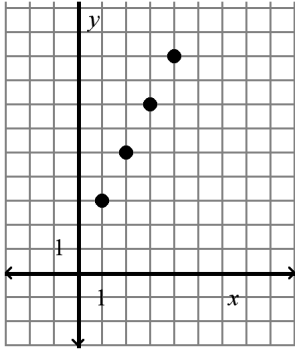
- a.  $f(x) = 3, 7, 9, 11, 13$
- b.  $f(x) = 6, 12, 18, 24, 30$
- c.  $f(x) = 5, 7, 9, 11, 13$
- d.  $f(x) = 5, 6, 7, 8, 9$

73. What are the x intercepts of the equation?

$$x^2 - 6x = 0$$

- a. (0, 0) (6, 0)
- b. (0, 0) (-6, 0)
- c. (-6, 0) (6, 0)
- d. (1, 0) (6, 0)

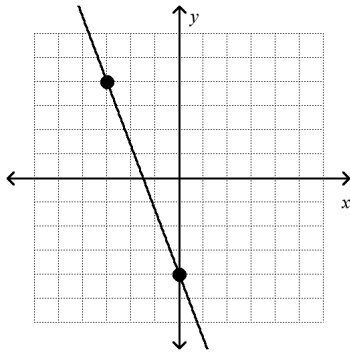
75. Which equation matches the graph?



- a.  $y = 2x + 1$
- b.  $y = 2x - 1$
- c.  $y = 2 - 2x$
- d.  $y = 1 - 2x$

d.  $y = \frac{3}{8}x - 4$

76. Write an equation in slope-intercept form of the graph.



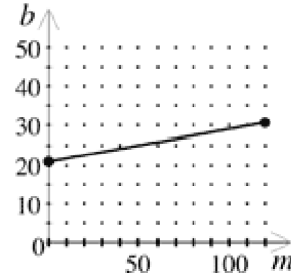
- a.  $y = -\frac{8}{3}x - 4$
- b.  $y = \frac{8}{3}x - 4$
- c.  $y = -\frac{3}{8}x - 4$

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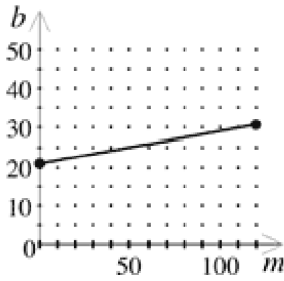
77. A monthly phone bill,  $b(m)$ , consists of a \$28 service fee plus \$0.13 per minute,  $m$ , of long distance calls, given by the function  $b(m) = 28 + 0.13m$ . Draw a graph for up to and including 120 minutes of long distance calls made in a month. Estimate the bill if 84 minutes of long distance calls are made.

a. a.



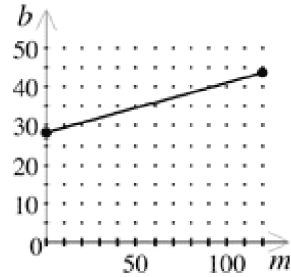
b. \$20

b. a.



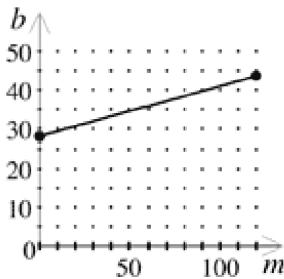
b. \$29

c. a.



b. \$39

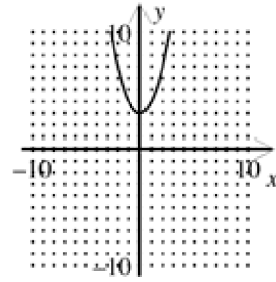
d. a.



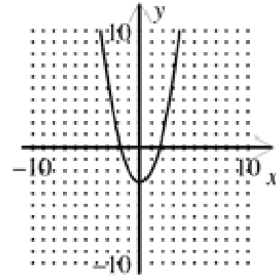
b. \$45

78. Graph:  $y = x^2 + 3$

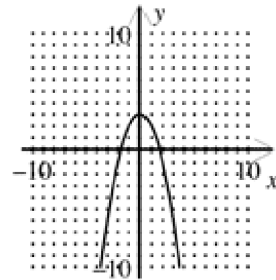
a.



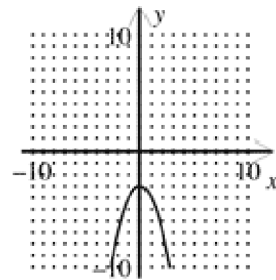
b.



c.



d.



**Find the sum or difference.**

79.  $(5h^3 + 8h - 9) - (6h^3 + 6h - 4)$

- a.  $-h^3 + 2h - 5$
- b.  $-h^3 + 2h - 13$
- c.  $-h^3 + 14h - 13$
- d.  $-h^3 - 2h - 5$

**Simplify the expression.**

80.  $(5q^5 + 4) - (2q^3 + 9) + (6q^5 - q^3)$
- a.  $11q^5 - 3q^3 - 5$
  - b.  $-3q^5 + 11q^3 - 5$
  - c.  $11q^3 + 3q^5 + 5$
  - d.  $11q^5 + 3q^3 + 5$

**Find the product.**

81.  $(6y^2 + 3y + 2)(y - 7)$
- a.  $6y^3 - 39y^2 - 19y - 14$
  - b.  $6y^3 - 45y^2 - 19y + 14$
  - c.  $6y^3 - 39y^2 - 21y - 14$
  - d.  $6y^3 - 45y^2 - 21y + 14$

84. Fifteen mothers were asked how many months old their babies were when they cut their first tooth. The results are shown below.

8, 8, 6, 8, 9, 10, 5, 7, 9, 5, 9, 7, 6, 8, 7

Find the range and the outlier(s), if any, of the data set. Also state if this number set is normal, positively skewed, or negatively skewed.

- a. range 6; outlier 10
  - b. range 5; outlier 5
  - c. range 6; no outliers
  - d. range 5; no outliers
85. Eighteen mothers were asked how many months old their babies were when they slept all night. The results are shown below. Describe the general shape of the data.

2, 1, 2, 8, 9, 9, 10, 8, 7, 8, 10, 7, 8, 6, 5, 6, 1, 8

- a. Normal
- b. Positively Skewed
- c. Negatively Skewed
- d. Inverse Normal Curve

**Find the product.**

82.  $(5x^2 - 5)^2$
- a.  $25x^4 - 25$
  - b.  $25x^2 - 10x + 25$
  - c.  $25x^4 - 50x^2 + 25$
  - d.  $25x^4 - 50x^2 - 25$

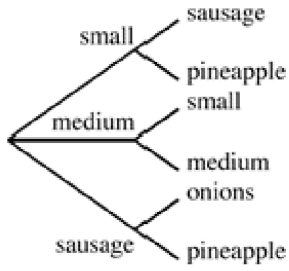
83.  $(5c + 6)(5c - 6)$
- a.  $25c^2 - 36$
  - b.  $25c^2 + 36$
  - c.  $25c^2 + 60c - 36$
  - d.  $25c^2 + 60c + 36$



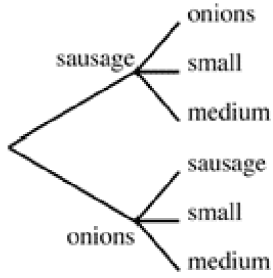
86. Two urns each contain green balls and black balls. Urn I contains four green balls and six black balls and Urn II contains five green balls and three black balls. A ball is drawn from each urn at random. What is the probability that both balls are black?
- a.  $\frac{9}{83}$                       b.  $\frac{20}{81}$                       c.  $\frac{9}{82}$                       d.  $\frac{9}{40}$

**You randomly choose a letter from the word ENGAGEMENT. Find the probability of choosing either of the given letters.**

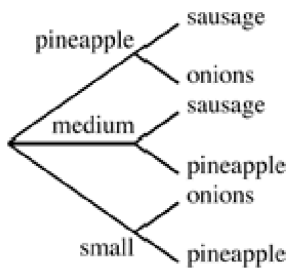
87. N or A
- a.  $\frac{3}{10}$
- b.  $\frac{1}{5}$
- c.  $\frac{1}{3}$
- d.  $\frac{7}{10}$
88. A coin is tossed and a die is rolled. What is the probability that the coin shows tails and the die shows 2?
- a.  $\frac{5}{6}$
- b.  $\frac{1}{3}$
- c.  $\frac{1}{12}$
- d.  $\frac{1}{6}$
89. A drawer contains 2 red socks, 7 white socks, and 9 blue socks. Without looking, you draw out a sock and then draw out a second sock without returning the first sock. What is the probability that the first sock and the second sock are both red?
- a.  $\frac{4}{17}$
- b.  $\frac{1}{81}$
- c.  $\frac{1}{153}$
- d.  $\frac{1}{4}$
90. Elaine went to the mall to buy a shirt for a friend. Her choices for the shirt were plaid and striped. Both of the choices came in purple, green, and red. How many choices did she have? Use a tree diagram to help find your answer.
- a. 7
- b. 5
- c. 12
- d. 6
91. Tell whether the events are independent or dependent. A drawer contains 9 black socks, 8 gray socks, and 7 blue socks. Without looking, you draw out a sock and then draw out a second sock without returning the first sock. What is the probability that the two socks you draw are the same color?
- a. dependent
- b. independent
- c. .
- d. .
92. At a pizza parlor, Jerome has a choice of pizza toppings and sizes. The topping choices are sausage, onions, or pineapple. The size choices are small or medium. Draw a tree diagram that shows the number of possible pizza combinations that Jerome can order. ALSO state the probability of getting a small sausage pizza (next to your correct answer) if you chose a pizza by chance.



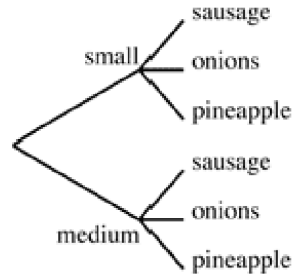
a.



b.

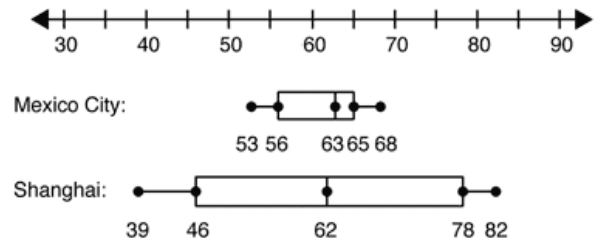


c.



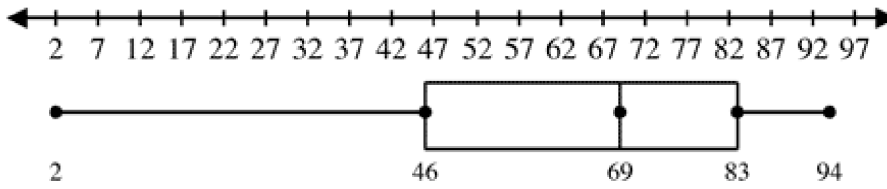
d.

The box-and-whisker plots below show the mean monthly temperatures ( $^{\circ}\text{F}$ ) for Mexico City, Mexico, and Shanghai, China.



93. What percent of the temperatures for Shanghai fall between  $39^{\circ}\text{F}$  and  $46^{\circ}\text{F}$ ? Which Box and Whisker has a larger Interquartile Range? Write your answer behind your choice below.
- 25%
  - 50%
  - 75%
  - 100%

94. Ms. Alison drew a box-and-whisker plot to represent her students' scores on a mid-term test. Also, state if the data is symmetric or skewed, write your answer behind your choice below.



Jose earned 46 on the test. Describe how his score compares with those of his classmates.

- about 50% scored higher; about 50% scored lower
- about 75% scored higher; about 25% scored lower
- about 25% scored higher; about 75% scored lower
- about 75% scored higher; about 50% scored lower

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95. Tell whether the events are independent or dependent. Then answer the question. Two urns both contain red balls and white balls. Urn I contains 3 red balls and 3 white balls, and Urn II contains 5 red balls and 2 white balls. A ball is drawn from each urn. What is the probability that both balls are white?
- Independent  $2/14$
  - Independent  $5/13$
  - Dependent  $2/7$
  - Dependent  $2/14$

96. You spin a spinner divided into eight equal parts numbered 1 through 8. Tell whether the events are Mutually exclusive/disjoint or not mutually exclusive/not disjoint/overlapping. Then find  $P(A \text{ or } B)$ .

Event A: Spinner stops on an even number  
Event B: Spinner stops on a multiple of 3.

- Mutually exclusive/disjoint  $3/4$
- Mutually exclusive/disjoint  $1/2$
- not mutually exclusive/not disjoint/overlapping  $3/4$
- not mutually exclusive/not disjoint/overlapping  $1/2$

97. You spin a spinner divided into eight equal parts numbered 1 through 8. Tell whether the events are Mutually exclusive/disjoint or NOT mutually exclusive/NOT disjoint. Then find  $P(A \text{ or } B)$ .

Event A: Spinner stops on an odd number  
Event B: Spinner stops on an even number greater than 4.

- Mutually exclusive/disjoint  $3/8$
- Mutually exclusive/disjoint  $1/2$
- NOT mutually exclusive/NOT disjoint  $3/8$
- NOT mutually exclusive/NOT disjoint  $1/2$

98. What is the value of the function for  $f(5)$ ?

$$f(x) = 4x + 9$$

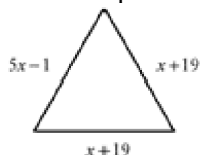
- 20
- 1
- 18
- 29

99. What is the value of the function for  $f(6) + 3$ ?  
 $f(x) = 4x + 9$   
 a. 27  
 b. 33  
 c. 36  
 d. 81

100. Ricky's mother drove 55 miles per hour for 5 hours and 70 miles per hour for 3 hours. Use the expression  $55 \cdot 5 + 70 \cdot 3$  to find how far she drove in all.  
 a. 500 mi  
 b. 485 mi  
 c. 125 mi  
 d. 440 mi

101. Find the unknown length, width, or height of the rectangular prism.  
 $V = 300 \text{ ft}^3, l = 10 \text{ ft}, w = 2 \text{ ft}, h = \underline{\quad}$   
 a. 5 ft  
 b. 30 ft  
 c. 25 ft  
 d. 15 ft

102. Find the perimeter of the triangle.



- a.  $7x + 39$   
 b.  $6x + 37$   
 c.  $7x + 37$   
 d.  $6x - 1$

103. Complete the input-output table for the function  $y = 2x - 3$ .

Input	Output
2	?
?	5
3	?
?	9

a.

Input	Output
2	3
4	5
3	4
6	9

b.

Input	Output
2	1
4	5
3	3
6	9

c.

Input	Output
2	1
5	5
3	3
6	9

d.

Input	Output
2	1
4	5
3	3
8	9

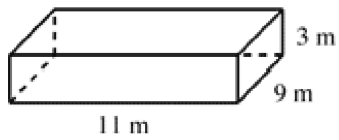
104. Which function rule matches the input-output table?

Input, $x$	1	2	3	4	5
Output, $y$	7	11	15	19	23

- a.  $y = 3 + 5x$
- b.  $y = 3 + 4x$
- c.  $y = 4 + 3x$
- d.  $y = 2 + 4x$

Find the volume of the rectangular prism.

105.



- a.  $318 \text{ m}^3$
- b.  $148.5 \text{ m}^3$
- c.  $23 \text{ m}^3$
- d.  $297 \text{ m}^3$