

## Summer Review

Draw a histogram for each data set.

1)

## Sales Tax

State	Percent	State	Percent	State	Percent	State	Percent
New Hampshire	0	Wyoming	4	Oregon	0	Montana	0
Arizona	5.6	Maryland	6	Minnesota	6.875	Vermont	6
Alabama	4	Texas	6.25	Tennessee	7	Mississippi	7
South Carolina	6	North Carolina	4.75	District of Columbia	5.75	Connecticut	6.35

2)

## Shoe Size

9 11.5 6 7.5 8 9 8  
 7 8 9 7 9 7.5 10  
 7 7

3)

## Hours Slept

7.5 6.5 9.25 6.25 8.25  
 7 6.5 7.25 6.25 7.5  
 6 5.75 7.5 6.5 8.25

Evaluate each using the values given.

4)  $y - 1 - z$ ; use  $y = -3$ , and  $z = 5$

5)  $x^2 + y$ ; use  $x = 4$ , and  $y = 2$

6)  $(z)(y^2)$ ; use  $y = 2$ , and  $z = -4$

7)  $\frac{z}{5} - y$ ; use  $y = -5$ , and  $z = 5$

8)  $y + (x + x) \div 6$ ; use  $x = 6$ , and  $y = 3$

9)  $3^2 - (z + y)$ ; use  $y = 4$ , and  $z = -3$

10)  $xz + 2z$ ; use  $x = 4$ , and  $z = 2$

11)  $(pm)(|m|)$ ; use  $m = -2$ , and  $p = 2$

12)  $x - y + 4 \div 4$ ; use  $x = 2$ , and  $y = 6$

13)  $yz - (z - y)$ ; use  $y = 5$ , and  $z = -6$

Evaluate each expression.

14)  $5 \div (|1| + 4)$

15)  $8 \div (3 + (-1)^3)$

16)  $-3 - 6 - (6 - 2)$

17)  $-1 + 4 - (1 - -5)$

18)  $-5 + -1 - (-2 - -5)$

19)  $(4)(-4 \div 4) - 6$

20)  $2 \div 2\frac{1}{2} + 1\frac{1}{2}$

21)  $\frac{5}{4} \div \frac{1}{2} - 2\frac{1}{4}$

22)  $\frac{3}{2} - \left(1\frac{2}{3} - \frac{-1}{2}\right)$

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

24)  $\frac{1}{2} - 1 - 1$

25)  $(-2)\left(\frac{3}{4} - 2\frac{1}{3}\right)$

26)  $\left(2 \div \frac{2}{3}\right)^2$

27)  $-1 - \frac{-1}{2} - 2\frac{1}{4}$

Solve each equation.

28)  $314 = -9m - 10$

29)  $\frac{a - 11}{8} = -3$

30)  $2 = \frac{15 + a}{3}$

31)  $10 + \frac{a}{12} = 13$

32)  $12 - 11m = -109$

33)  $\frac{x - 2}{-6} = 3$

34)  $\frac{11 + p}{2} = 13$

35)  $8 + 6x = 56$

36)  $\frac{-10 + n}{2} = -14$

37)  $\frac{n + 11}{21} = 1$

38) Darryl had some paper with which to make note cards. On his way to his room he found two more pieces to use. In his room he cut each piece of paper in half. When he was done he had 18 half-pieces of paper. With how many sheets of paper did he start?

39) Nicole spent half of her weekly allowance on candy. To earn more money her parents let her clean the gutters for \$9. What is her weekly allowance if she ended with \$17.30?

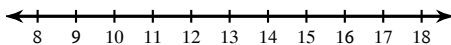
40) Kim had some candy to give to her five children. She first took one piece for herself and then evenly divided the rest among her children. Each child received three pieces. With how many pieces did she start?

41) Abhasra had some candy to give to her five children. She first took three pieces for herself and then evenly divided the rest among her children. Each child received three pieces. With how many pieces did she start?

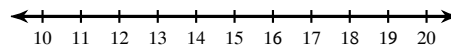
42) Mary spent \$25.80 on a magazine and some candy bars. If the magazine cost \$3.96 and each candy bar cost \$2.73, then how many candy bars did she buy?

Solve each inequality and graph its solution.

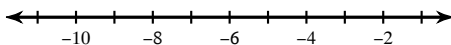
43)  $-3n - 8 \leq -53$



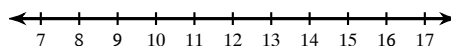
44)  $1 + \frac{a}{4} < 4$



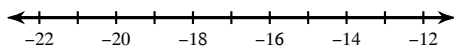
45)  $-1 \leq \frac{r - 7}{14}$



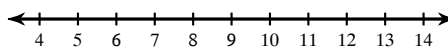
46)  $3b - 7 \geq 26$



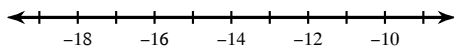
$$47) \frac{x}{-7} + 8 \geq 10$$



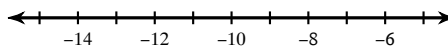
$$48) -3m + 4 \geq -20$$



$$49) -1 \geq \frac{a-6}{21}$$



$$50) 41 \leq -1 - 6r$$



Write each as an algebraic expression or equation.

51) the product of  $u$  and 7 is equal to 8

52) 21 divided by a number

53) 30 divided by  $x$

54) the sum of  $z$  and 12 is 13

Write each as a verbal expression.

55)  $2v \geq 48$

56)  $x - 16$

57)  $y + 11 > 11$

58)  $d - 7 \leq 20$

Simplify each expression.

59)  $-2(1 + 4b)$

60)  $7(4 - 7a)$

61)  $-3(-9m + 5)$

62)  $9(4 - 5a)$

63)  $5(8p - 7)$

Write each number in scientific notation.

64)  $45 \times 10^{-1}$

65) 0.000000682

66) 0.000156

67) 174

Write each number in standard notation.

68)  $3.34 \times 10^1$

69)  $5.02 \times 10^{-4}$

70)  $8.53 \times 10^{-2}$

71)  $6.4 \times 10^{-1}$

Solve each proportion.

72)  $\frac{12}{4} = -\frac{k}{2}$

73)  $\frac{n}{3} = \frac{7}{8}$

74)  $\frac{n}{3} = \frac{6}{4}$

75)  $-\frac{3}{p} = \frac{5}{12}$

Answer each question and round your answer to the nearest whole number.

76) Wilbur reduced the size of a rectangle to a width of 3 in. What is the new height if it was originally 6 in wide and 2 in tall?

77) The currency in Kuwait is the Dinar. The exchange rate is approximately 1 Dinar to \$3. At this rate, how many Dinars would you get if you exchanged \$45?

78) If you can buy three star fruit for \$6, then how many can you buy with \$18?

79) A frame is 2 in wide and 4 in tall. If it is enlarged to a width of 4 in, then how tall will it be?

80) A 18 ft tall statue standing next to a telephone booth casts a 9 ft shadow. If the telephone booth casts a shadow that is 4 ft long, then how tall is it?

81) Find the distance between Abbots Rise and Mount Pleasant on a map with a scale of 2 in : 5 mi if they are actually 15 mi apart.

82) If a 12 ft tall ladder casts a 6 ft long shadow, then how long is the shadow that a 14 ft tall adult giraffe casts?

83) A 14 ft tall adult giraffe standing next to a baby giraffe casts a 7 ft shadow. If the baby giraffe casts a shadow that is 3 ft long, then how tall is it?

Answer each question. Round your answer to the nearest tenth. Round dollar amounts to the nearest cent.

84) Adam enlarged the size of a triangle to a width of 13.6 in. What is the new height if it was originally 1.9 in tall and 3.4 in wide?

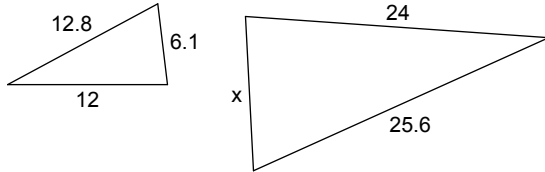
85) 20 bunches of fennel cost \$46. How many bunches of fennel can you buy for \$11.50?

86) A painting is 20.1 in wide and 7.5 in tall. If it is reduced to a height of 2.5 in, then how wide will it be?

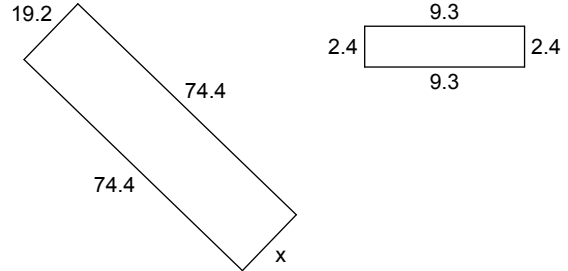
87) The money used in Tonga is called the Pa'anga. The exchange rate is \$4.50 for every 1 Pa'anga. Find how many dollars you would receive if you exchanged 31.2 Pa'anga.

Each pair of figures is similar. Find the missing side.

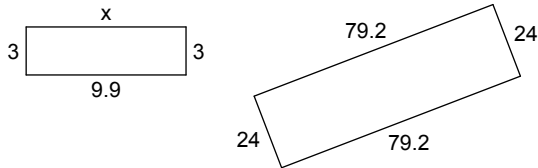
88)



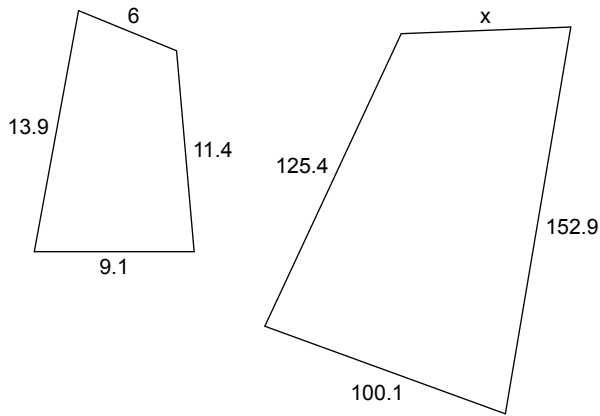
89)



90)



91)



Find the selling price of each item.

92) Original price of a comic book: \$1.05  
Tax: 4%

93) Original price of a CD: \$19.50  
Tax: 5%

94) Original price of a tie: \$28.50  
Tax: 4%

95) Original price of a motorcycle: \$4,500.00  
Tax: 5%

96) Original price of a camera: \$1,000.00  
Discount: 50%

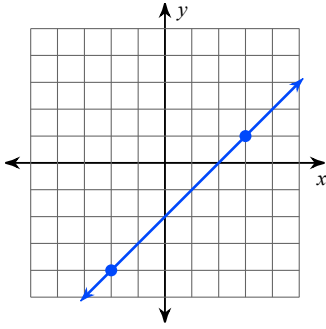
97) Original price of a camera: \$549.95  
Discount: 58%

98) Original price of a computer game: \$40.00  
Discount: 10%

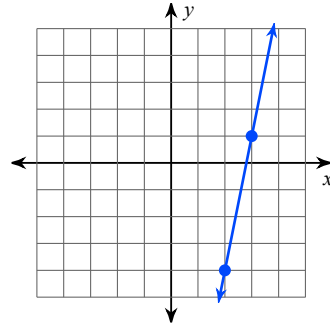
99) Original price of a car: \$20,100.00  
Discount: 40%

Find the slope of each line.

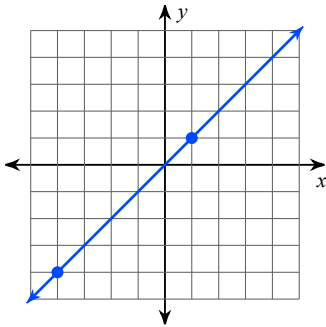
100)



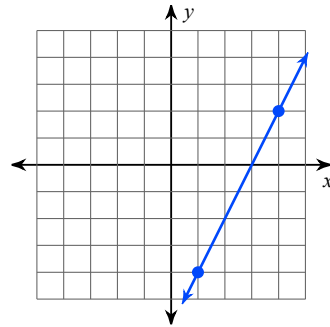
101)



102)



103)



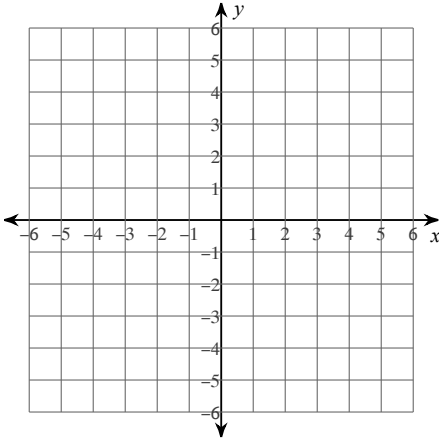
104)  $y = x - 2$

105)  $y = x + 4$

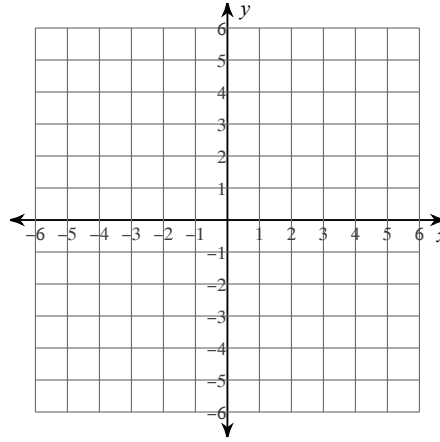
106)  $y = 4x$

Sketch the graph of each line.

107)  $y = x - 4$

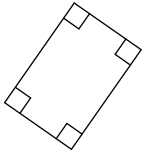


108)  $y = x$

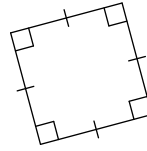


Classify each quadrilateral with the name that best describes it.

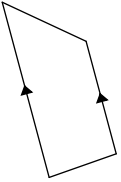
109)



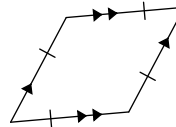
110)



111)

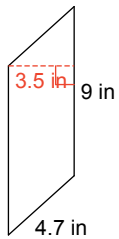


112)

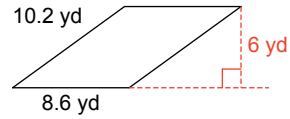


Find the area of each.

113)

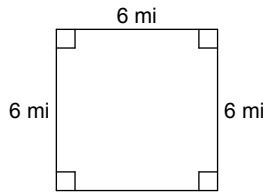


114)

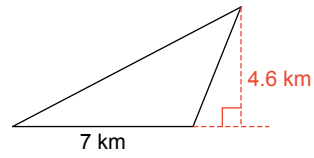




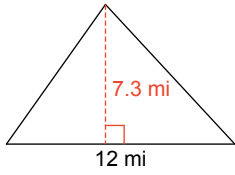
115)



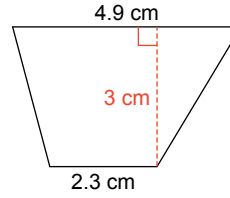
116)



117)

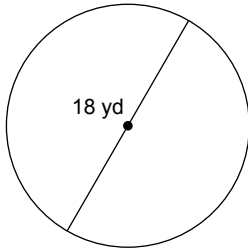


118)

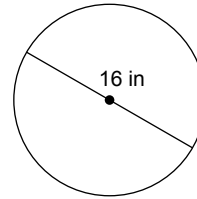


Find the area of each. Round your answer to the nearest tenth.

119)

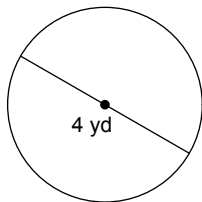


120)

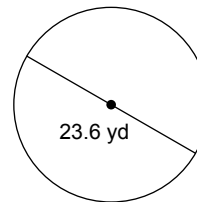


Find the circumference of each circle. Round your answer to the nearest tenth.

121)

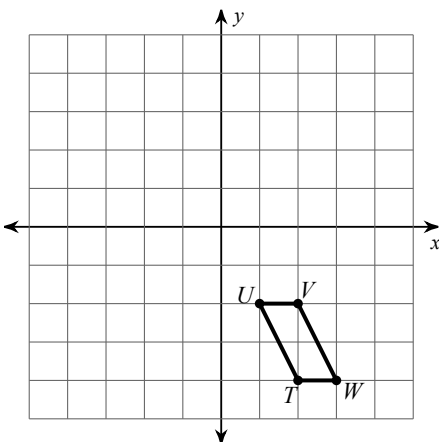


122)

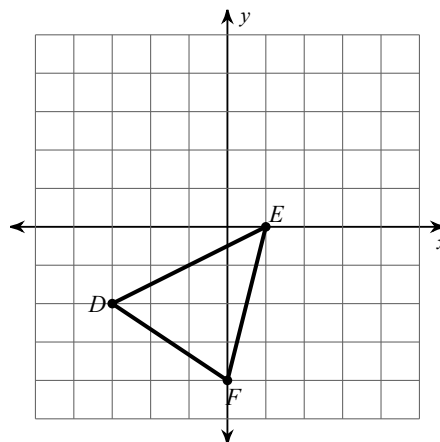


Graph the image of the figure using the transformation given.

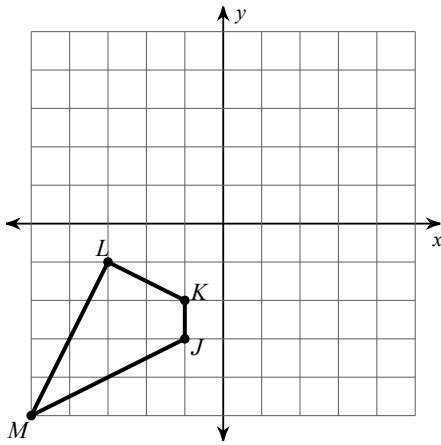
123) translation: 5 units left and 4 units up



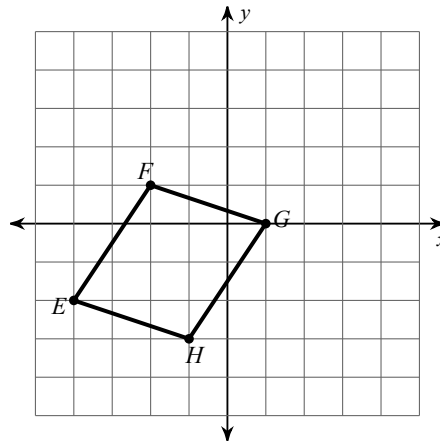
124) reflection across the x-axis



125) reflection across the y-axis

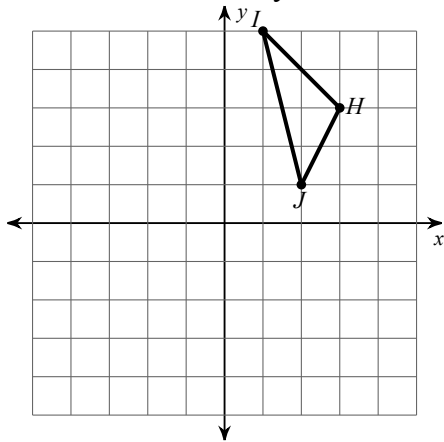


126) translation: 4 units right and 2 units down

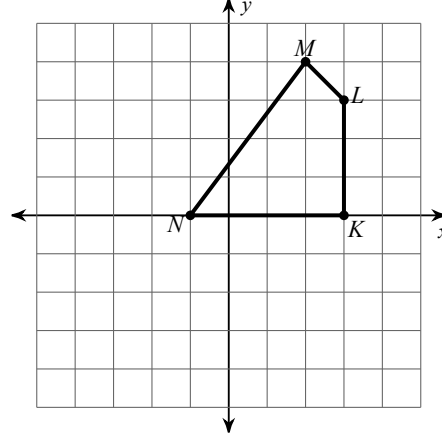


Find the coordinates of the vertices of each figure after the given transformation.

127) reflection across the y-axis



128) translation: 4 units left and 5 units down



Find each square root.

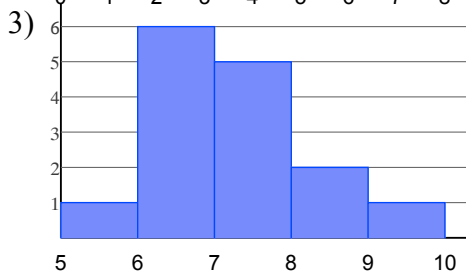
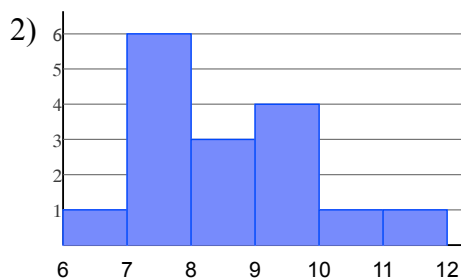
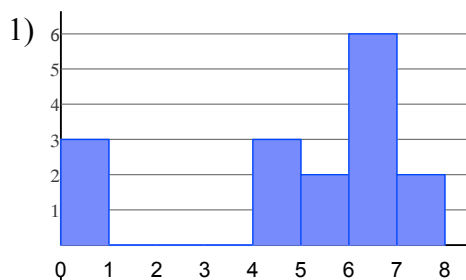
129)  $\sqrt{25}$

130)  $\sqrt{144}$

131)  $\sqrt{1}$

132)  $\sqrt{121}$

# Answers to Summer Review



4) -9      5) 18

6) -16      7) 6  
10) 12      11) -8  
14) 1      15) 4  
18) -9      19) -10

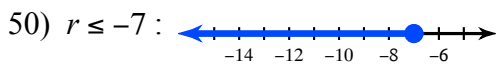
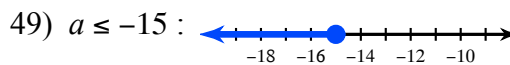
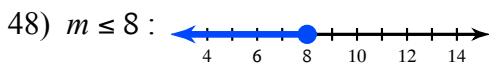
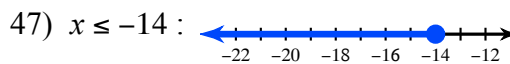
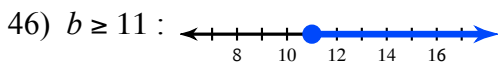
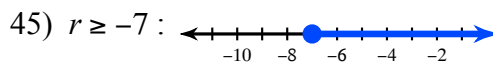
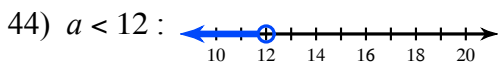
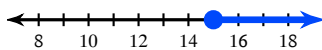
8) 5      9) 8  
12) -3      13) -19  
16) -13      17) -3

22)  $\frac{-2}{3}$       23)  $\frac{-7}{6}$   
26) 9      27)  $-\frac{11}{4}$

20)  $\frac{23}{10}$       21)  $\frac{1}{4}$   
24)  $-\frac{3}{2}$       25)  $\frac{19}{6}$   
28)  $\{-36\}$       29)  $\{-13\}$

30)  $\{-9\}$       31)  $\{36\}$   
34)  $\{15\}$       35)  $\{8\}$   
38) 7      39) \$16.60  
42) 8      43)  $n \geq 15$  :

32)  $\{11\}$       33)  $\{-16\}$   
36)  $\{-18\}$       37)  $\{10\}$   
40) 16      41) 18



51)  $u \cdot 7 = 8$       52)  $\frac{21}{n}$

53)  $\frac{30}{x}$       54)  $z + 12 = 13$

55) twice v is greater than or equal to 48

56) 16 less than x      57) y increased by 11 is greater than 11

58) the difference of d and 7 is less than or equal to 20

59)  $-2 - 8b$       60)  $28 - 49a$       61)  $27m - 15$       62)  $36 - 45a$

63)  $40p - 35$       64)  $4.5 \times 10^0$       65)  $6.82 \times 10^{-7}$       66)  $1.56 \times 10^{-4}$

67)  $1.74 \times 10^2$       68) 33.4      69) 0.000502      70) 0.0853

71) 0.64      72)  $\{-6\}$       73)  $\left\{\frac{21}{8}\right\}$       74)  $\left\{\frac{9}{2}\right\}$

75)  $\left\{-\frac{36}{5}\right\}$       76) 1 in      77) 15 Dinars      78) 9

79) 8 in      80) 8 ft      81) 6 in      82) 7 ft

83) 6 ft      84) 7.6 in      85) 5      86) 6.7 in

87) \$140.40

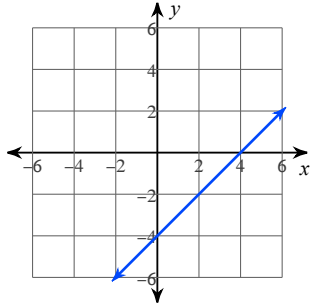
91) 66

95) \$4,725.00

99) \$12,060.00

103) 2

107)



88) 12.2

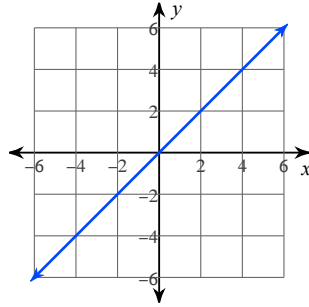
92) \$1.09

96) \$500.00

100) 1

104) 1

108)



89) 19.2

93) \$20.48

97) \$230.98

101) 5

105) 1

90) 9.9

94) \$29.64

98) \$36.00

102) 1

106) 4

109) Rectangle

110) Square

114) 51.6 yd<sup>2</sup>

118) 10.8 cm<sup>2</sup>

122) 74.1 yd

111) Trapezoid

115) 36 mi<sup>2</sup>

119) 254.5 yd<sup>2</sup>

123)

112) Rhombus

116) 16.1 km<sup>2</sup>

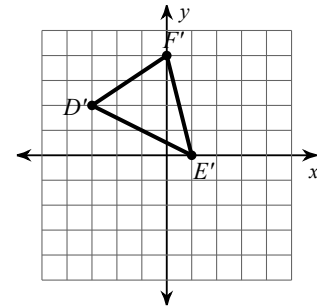
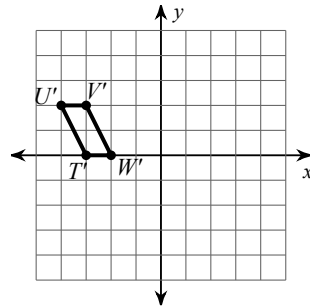
120) 201.1 in<sup>2</sup>

124)

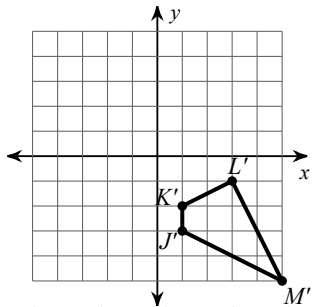
113) 31.5 in<sup>2</sup>

117) 43.8 mi<sup>2</sup>

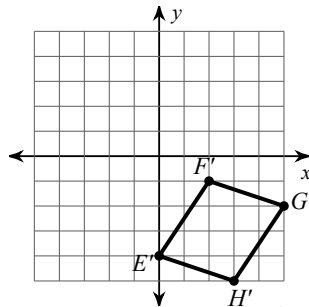
121) 12.6 yd



125)



126)



127)  $I'(-1, 5), H'(-3, 3), J'(-2, 1)$

129) 5

130) 12

128)  $N'(-5, -5), M'(-2, -1), L'(-1, -2), K'(-1, -5)$

131) 1

132) 11