

Show work in the spaces provided or on a separate sheet of paper.

Part I: Vocabulary

Match the definition with a word from the word bank.

Symmetry	Rotation	Scalene	Obtuse
Acute	Isosceles	Translation	Equilateral
Supplementary	Area	Complementary	Reflection
Perimeter	Right	Volume	Angle
Dilation	Pythagorean Theorem		

1. _____ The number of square units enclosed by a plane figure.
2. _____ An angle whose measure is more than 90° , but less than 180° .
3. _____ A formula used to find the missing side of a right triangle.
4. _____ A transformation about a point. (turn)
5. _____ The distance around a polygon.
6. _____ A triangle with no congruent sides or angles.
7. _____ Two angles whose sum is 90° .
8. _____ A transformation with a line of symmetry. (flip)
9. _____ A triangle with at least two congruent sides and angles.
10. _____ An angle whose measure is 90° .
11. _____ An isometry that maps the figure onto its self.
12. _____ An angle whose measure is less than 90° .
13. _____ A triangle with three congruent sides and angles.
14. _____ A figure formed by rays with a common vertex.
15. _____ Two angles whose sum is 180° .
16. _____ A transformation that moves points the same distance and in the same direction. (slide)
17. _____ The measure of space a figure occupies.
18. _____ A transformation with a center and has a scale factor of $n > 0$, that is a reduction or an enlargement.

Follow the instructions for each problem. Write your answer in the simplest form in the blank provided.

19. What is the solution to $5x - 14 + 8x = 7x + 28$?

20. Find the midpoint between the given points. (3, -8) and (-5, -13)

21. Find the distance between the points. Leave your answer as a simplified square root. (-8, 5), (-1, 1)

22. A map has a scale of 1 inch : 20 miles. If two cities are 240 miles apart, how far apart are they on the map ?

23. The measure of an angle is 46° . The measure of the complement is _____. The measure of the supplement is _____.

24. What is the slope of a line through (-3, 4) and (5, 6) ?

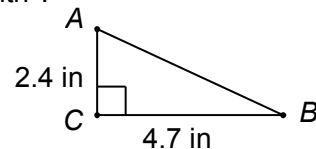
25. Solve for x.

$$\frac{x}{20} = \frac{1}{5}$$

26. What is the solution to $y - 9 > 4 + 2y$?

27. What is the value of the expression $-x(y - 3)^2$ for $x = -2$, $y = 6$?

28. What is the area of $\triangle ABC$, to the nearest tenth ?



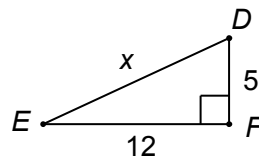
29. A painter leans a ladder against the side of a house that is 3 feet from the base. If the top of the ladder reaches 16 feet, how long is the ladder ?

30. What is the solution to $\frac{5}{8} = \frac{m}{12}$?

31. Solve for w.

$$\frac{3w+6}{28} = \frac{3}{4}$$

32. What is the value of x for $\triangle DEF$?



33. Simplify: $a^2 \cdot a^4$

34. Simplify: $\frac{a^5 b^8}{a^4 b^{10}}$

Follow the instructions for each problem. Write your answer in the simplest form in the blank provided.

35. What is the equation of the line that is parallel to $y = 4x + 3$ and passes through the point (2, 6) ?

36. What is the solution to $x + 3 = -6$?

37. What is the slope of the equation ?

$$y = \frac{-3}{4}x + 2$$

38. What is the solution to $2(x - 6) = 14$?

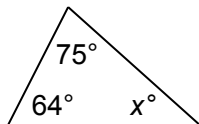
39. Simplify: $-13 + 12 \div (-4) + 2$

40. Simplify: $8(2x - 2)$

41. What is the simplest form of $\sqrt{20}$?

42. Simplify: $7x - 3 + 4y - 8 + 5x - 6y$

43. What is the value of x in the triangle below ?

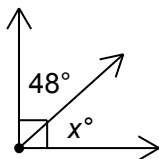


44. What is the solution to $-2y + 8 \leq 20$?

45. Simplify the algebraic expression below:
 $15 + 5(2x - 3)$

46. What is the perimeter of a rectangle with length 20 in. and width 12 in. ?

47. What is the value of x below ?



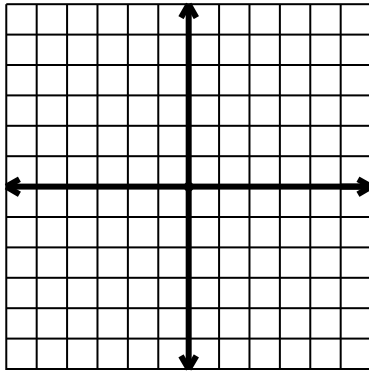
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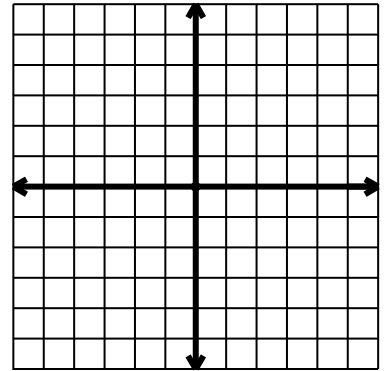
50.

Follow the instructions for each problem.

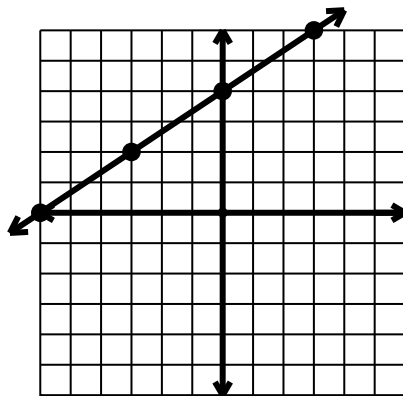
51. Graph the equation: $y = \frac{3}{4}x - 3$



52. Graph the equation: $3y - 5x = -12$

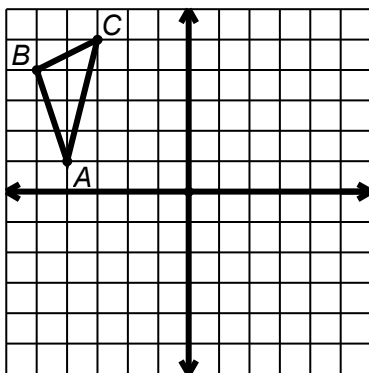


53. Write the equation of the line from the graph.

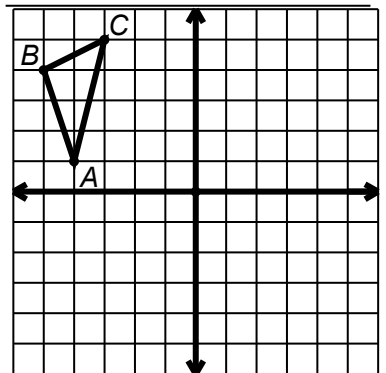


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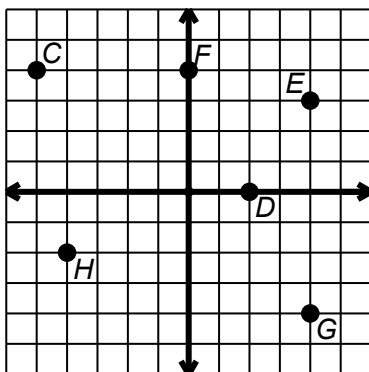
55. Graph the reflection of $\triangle ABC$ after a reflection over the y -axis.



56. Graph the reflection of $\triangle ABC$ after a reflection over the x -axis.

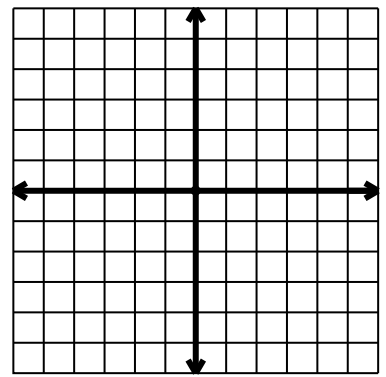


57. List the ordered pairs for each point.



58. Graph each ordered pair and identify the quadrant the point is in.

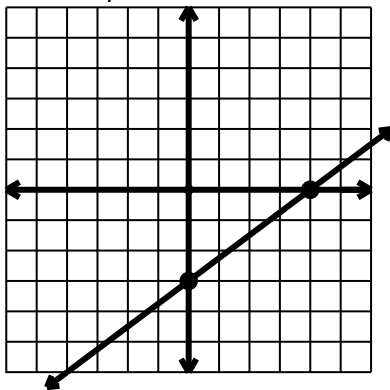
- A (-4, 5)
- B (3, -2)
- C (-5, -4)
- D (2, 3)



(Answer Key)

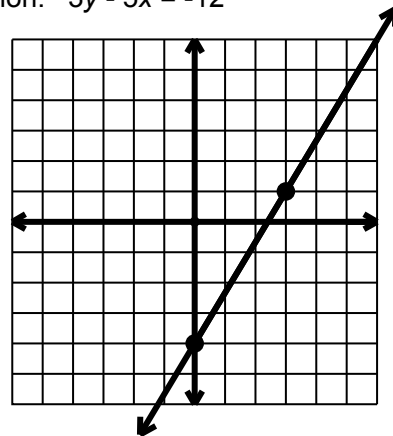
- | | | |
|------------------------|---|---------------------------|
| 1. Area | 19. $x = 7$ | 20. $(-1, -\frac{21}{2})$ |
| 2. Obtuse | 21. $\sqrt{65}$ | 22. 12 inches, 1 foot |
| 3. Pythagorean Theorem | 23. complement 44°
supplement 134° | 24. $\frac{1}{4}$ |
| 4. Rotation | 25. 4 | 26. $y < -13$ |
| 5. Perimeter | 27. 18 | 28. 5.6 in^2 |
| 6. Scalene | 29. 16.28 | 30. $m = 7.5$ |
| 7. Complementary | 31. 5 | 32. $x = 13$ |
| 8. Reflection | 33. a^6 | 34. $\frac{a}{b^2}$ |
| 9. Isosceles | 35. $y = 4x - 2$ | 36. $x = -9$ |
| 10. Right | 37. $m = \frac{-3}{4}$ | 38. $x = 13$ |
| 11. Symmetry | 39. -14 | 40. $16x - 16$ |
| 12. Acute | 41. $2\sqrt{5}$ | 42. $12x - 2y - 11$ |
| 13. Equilateral | 43. $x = 41$ | 44. $y \geq -6$ |
| 14. Angle | 45. $10x$ | 46. $P = 64 \text{ in}$ |
| 15. Supplementary | 47. $x = 42$ | 48. $-x^2 - 9x + 15$ |
| 16. Translation | 49. $\frac{1}{2}$ | 50. 5 |
| 17. Volume | | |
| 18. Dilation | | |

51. Graph the equation: $y = \frac{3}{4}x - 3$



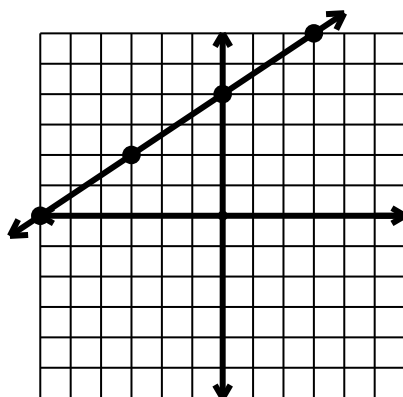
52. Graph the equation: $3y - 5x = -12$

$$y = \frac{5}{3}x - 4$$



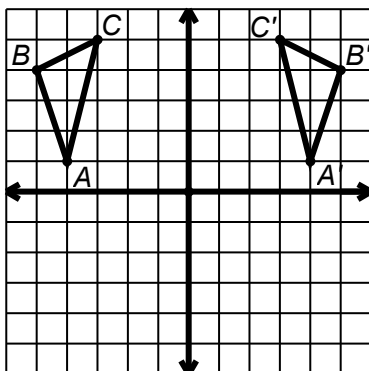
53. Write the equation of the line from the graph.

$$y = \frac{2}{3}x + 4$$

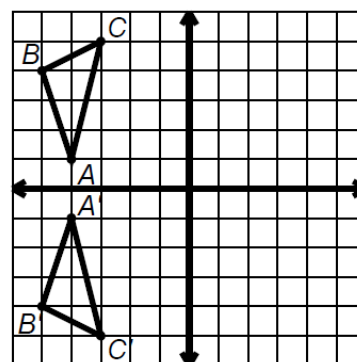


54.

55. Graph the reflection of $\triangle ABC$ after a reflection over the y-axis.

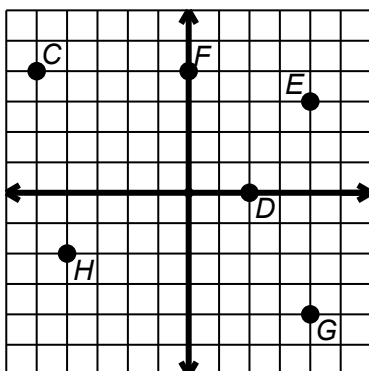


56. Graph the reflection of $\triangle ABC$ after a reflection over the x-axis.



57. List the ordered pairs for each point.

- C (-5, 4)
- D (2, 0)
- E (4, 3)
- F (0, 4)
- G (4, -4)
- H (-4, -2)



58. Graph each ordered pair and identify the quadrant the point is in.

- A (-4, 5) Q II
- B (3, -2) Q IV
- C (-5, -4) Q III
- D (2, 3) Q I

