

Secondary 1 - Unit 6 Review

Simplify the following square roots.

1. $\sqrt{15}$

2. $\sqrt{8}$

3. $\sqrt{690}$

4. $\sqrt{18}$

5. $\sqrt{16}$

6. $\sqrt{1400}$

7. $\sqrt{20}$

8. $\sqrt{35}$

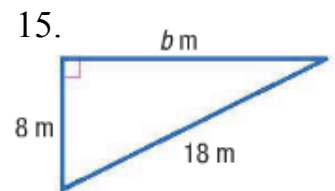
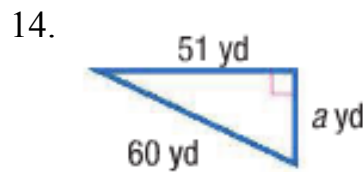
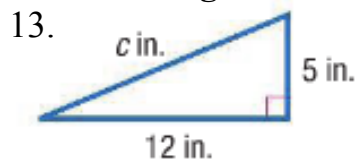
9. $\sqrt{260}$

10. $\sqrt{200}$

11. $\sqrt{75}$

12. $\sqrt{168}$

Find the length of the missing side.



16. A Pythagorean Triple consists of 3 positive integers such that $a^2 + b^2 = c^2$. The table at the right lists some Pythagorean triples with some values missing. The first column is A. The second column is B. The third column is C. Find the missing piece length of the Pythagorean triples in the table.

Pythagorean Triples		
3	4	5
6		10
9	12	
5		13
	15	17

Do the following side lengths make a right triangle?

17) 28, 195, 197

18) 30, 122, 125

19) 12, 14, $\sqrt{340}$

20) $\sqrt{2}$, $\sqrt{8}$, 10

Use the distance formula to find the distance between the following coordinate points.

21. (6,4) (-3,-2)

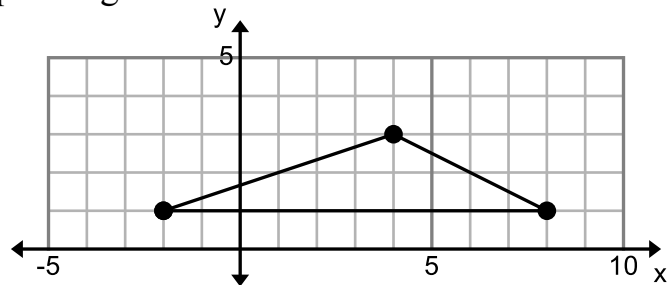
22. (4,-5) (-9,8)

23. (-3,1) (-5, -9)

24. (2,8) (14,3)

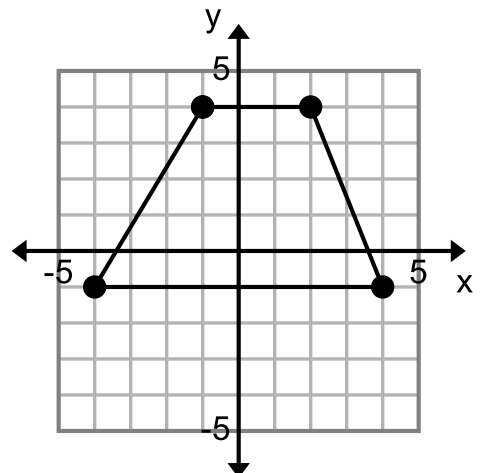
25. Find the perimeter and area of the graphed figure.

A(-2,1) B(4,3) C(8,1)

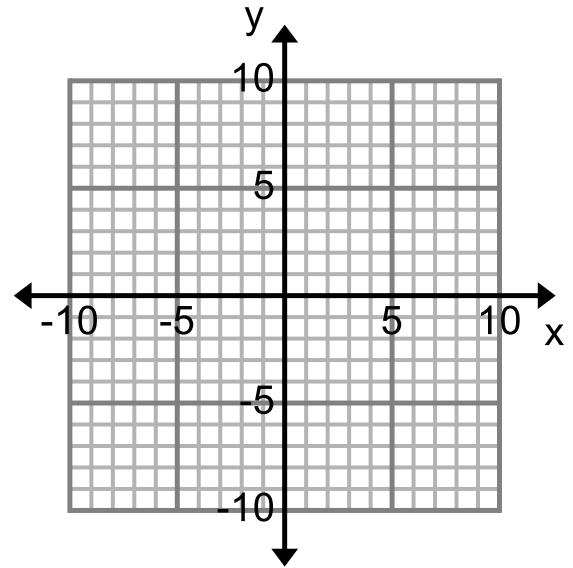


26. Find the perimeter and area of the graphed figure.

A(-1,4) B(2, 4) C(4,-1) D(-4,-1)

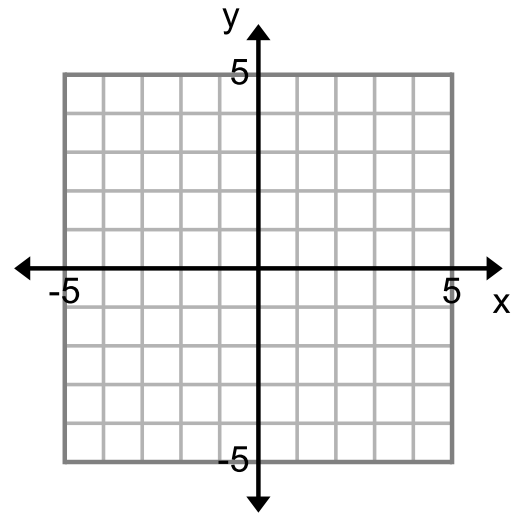


27. Find the circumference and area of a circle with the center at (4,2) and radius that goes from the center to (7,7).



28. Determine what type of quadrilateral is formed by the following points based on the properties of quadrilaterals. Justify your reasoning.

A(-4,2) B(1,2) C(4,-2) D(-1,-2)

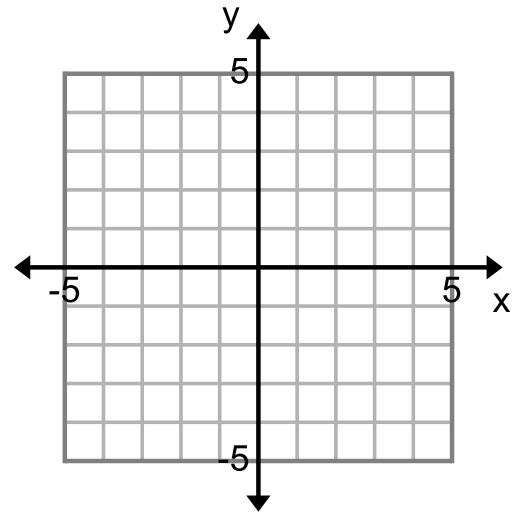


Slope of the Sides:			
Length of the Sides:			
Angle Measures:			
Diagonals:			
Length:	Slope:	Relationship:	

Type of quadrilateral: _____ Explain:

29. Determine what type of quadrilateral is formed by the following points based on the properties of quadrilaterals. Justify your reasoning.

A(-2, 2) B(1, 3) C(3, 0) D(-3, -2)



Slope of the Sides:			
Length of the Sides:			
Angle Measures:			
Diagonals:			
Length:	Slope:	Relationship:	

Type of quadrilateral: _____ Explain:

30. Find the slope for \overrightarrow{QR} and \overrightarrow{ST} , then decide whether the lines are parallel, perpendicular, or neither.
 Q (-6, -7) R(12, 14) S(5,-4) T(11,3)

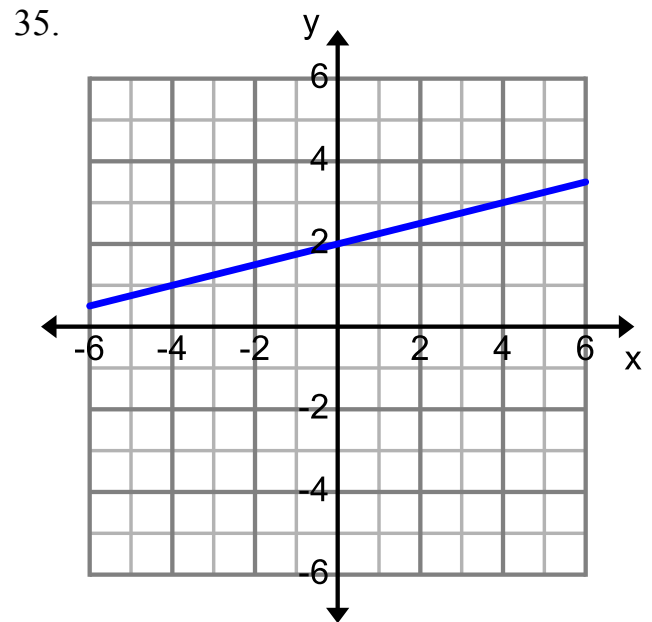
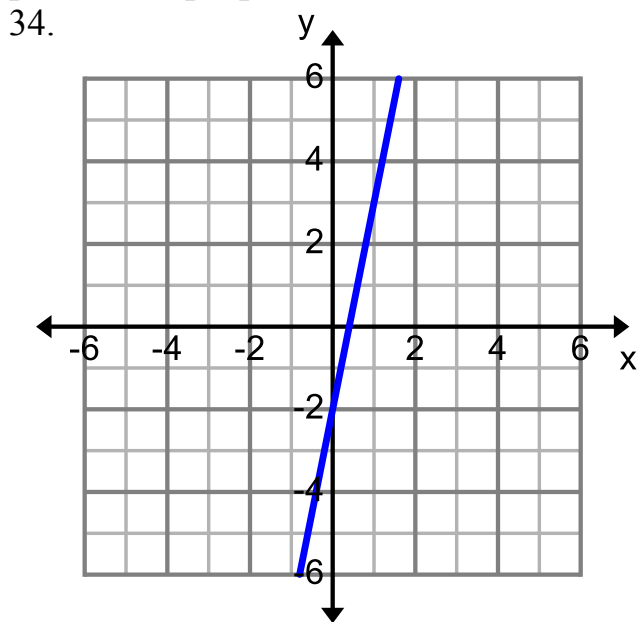
31. Find the slope for \overrightarrow{VW} and \overrightarrow{XY} , then decide whether the lines are parallel, perpendicular, or neither.
 X (2,9) Y(15, 21) V(-12,19) W(-24,32)

Are the following lines parallel, perpendicular or neither?

32. $y = 2x + 7$
 $2x + 4y = -9$

33. $3x + 4y = 12$
 $4x + 3y = -3$

Draw a line parallel and perpendicular to the given line and explain how you know each is parallel or perpendicular.



Write an equation in slope-intercept form that satisfies the given information.

36. Parallel to the line in question #34 and contains the point (2,6).

37. Perpendicular to the line in question #35 and contains the point (1,-5).

38. Parallel to $y = 3x - 7$ and passes through (-3,-5).

39. Write an equation that is perpendicular to $y = 5x - 9$ and passes through (-15,12).

Write an equation in slope-intercept form that satisfies the given information.

40. Write an equation that is parallel to $2x + 3y = 9$ and contains the point $(-6, 10)$.

41. Write an equation that is perpendicular to $x + 3y = -4$ and passes through $(-4, -7)$.

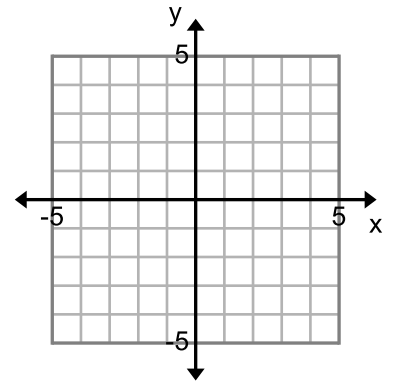
42. Write two equations that are perpendicular to each other.

43. Given a circle with a center at the origin and a point on the circle at $(0, 5)$, determine if the points are on the circle. Justify your answer by showing your work.

a. Identify the radius:

b. $(-3, 4)$

c. $(\sqrt{10}, \sqrt{15})$



44. Given a circle with the center at $(4, 1)$ and a point on the circle at $(2, 4)$, determine if the points are on the circle. Justify your answer by showing your work.

a. Identify the radius:

b. $(7, 3)$

c. $(0, 1)$

