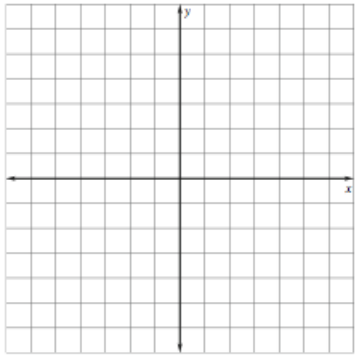
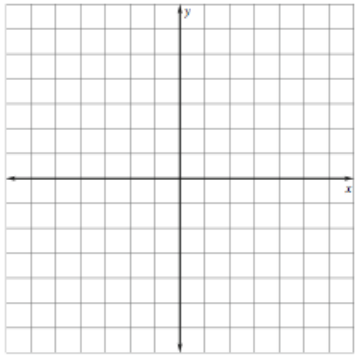
Chapter 9 Test Review **Name**_____

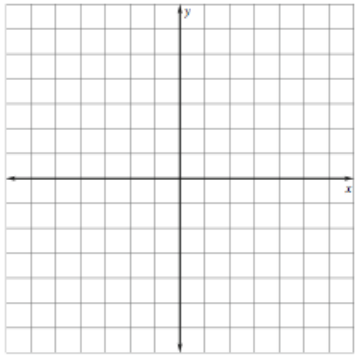
(1-7) a) Identify the graph of each equation as a circle or a parabola.

b) Fill in the table with all applicable information. If a value does not apply to the specific conic section, write 'n/a'.

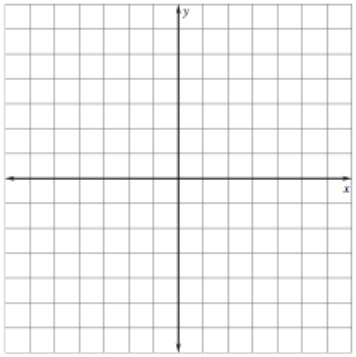
c) Sketch a graph of the equation. Label your graph. If your equation is a parabola with vertex (0,0), then also find a table of values.

1.	$x^2 = 16y$		
a.)	Conic Section		c.) 
b.)	Center		
	Radius		
	Vertex		
	Axis of Symmetry		
	Directrix		
	Focus		

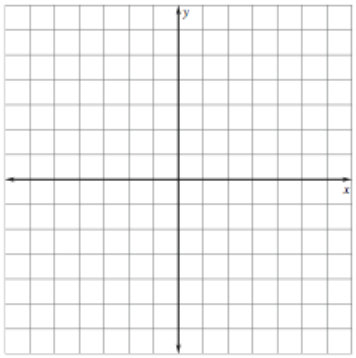
2.	$x^2 = 40 - y^2$		
a.)	Conic Section		c.) 
b.)	Center		
	Radius		
	Vertex		
	Axis of Symmetry		
	Directrix		
	Focus		

3.	$(y + 6)^2 = -12(x - 3)$		
a.)	Conic Section		c.) 
b.)	Center		
	Radius		
	Vertex		
	Axis of Symmetry		
	Directrix		
	Focus		

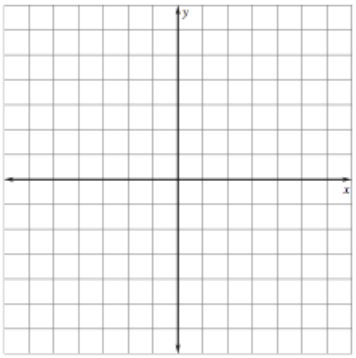
4. $8x^2 + 8y^2 = 192$

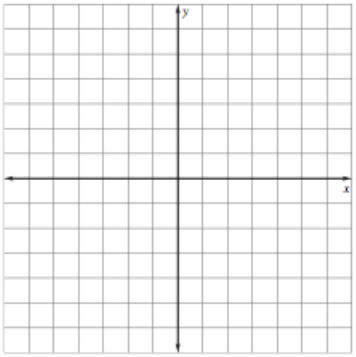
a.)	Conic Section		c.) 
b.)	Center		
	Radius		
	Vertex		
	Axis of Symmetry		
	Directrix		
	Focus		

5. $x^2 + y^2 - 6x + 8y - 11 = 0$

a.)	Conic Section		c.) 
b.)	Center		
	Radius		
	Vertex		
	Axis of Symmetry		
	Directrix		
	Focus		

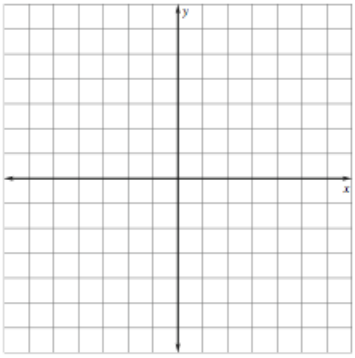
6. $(y - 5)^2 = 5x - 30$

a.)	Conic Section		c.) 
b.)	Center		
	Radius		
	Vertex		
	Axis of Symmetry		
	Directrix		
	Focus		

7.	$x^2 + y^2 + 4x - 14y + 17 = 0$		
a.)	Conic Section		c.) 
b.)	Center		
	Radius		
	Vertex		
	Axis of Symmetry		
	Directrix		
	Focus		

8. Find the distance between the points (-4, 3) and (2, -1). Then find the midpoint.

9. The vertices of a triangle are A(3,5), B(6,9), and C(11,9). Find the length of each side. Classify as scalene, isosceles, or equilateral.



(10-11) Use the given distance d between the two points to find the value(s) of x or y.

10. (0,3), (x,5); d = $2\sqrt{10}$

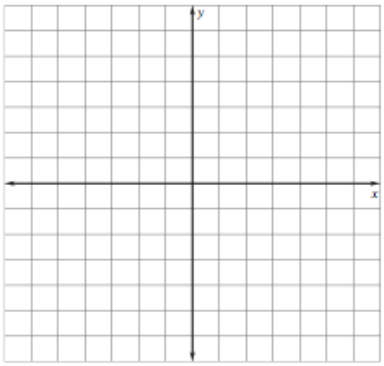
11. (1,y), (8, 13); d = $\sqrt{74}$

(12-16) Write an equation for the conic using the given information.

12. Parabola with focus (-5, 0) and vertex (0, 0)

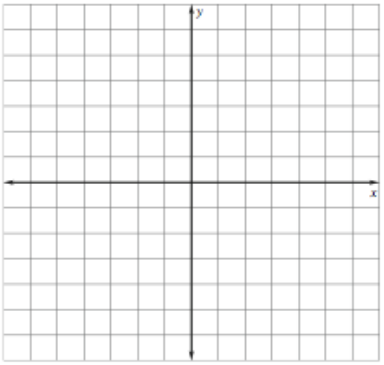
13. Parabola with directrix y = -6 and vertex (0, 0)

14. Circle passing through (5, 9) with center (-1, 2)



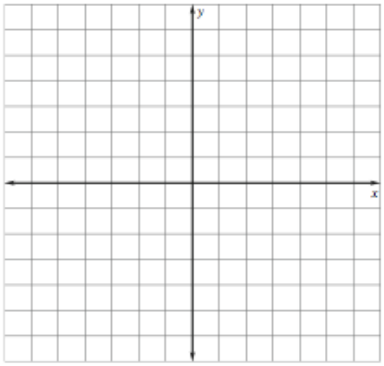
15. Circle with center at the origin and radius $2\sqrt{5}$

16. Parabola with vertex at (-4, 3) and focus at (-4, -1)



17) Solve the system using a graphing calculator

$$x^2 + y^2 - 17 = 0$$
$$y + 2x + 1 = 0$$



18) Solve the system using elimination.

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

19) Solve the system using substitution.

$x^2 + y^2 - 54 = 0$
$-x + y = 2$

(20-21) Solve the system using the substitution or elimination method.

20.

$$\begin{cases} y^2 - x^2 + 2x - 5 = 0 \\ x^2 + y^2 - 2x - 3 = 0 \end{cases}$$

21.

$$\begin{cases} -2x + y = -6 \\ (y-2)^2 = 4x - 4 \end{cases}$$