

Pre-Calculus Lessons & Assignments for Day 16-20

Day 16

- Complete the worksheets titled Day 16 Assignment (2 pages).

Day 17

- Complete the worksheets titled Day 17 Assignment (3 pages).

Day 18

- Complete the worksheets titled Day 18 Assignment (2 pages).

Day 19

- Watch the videos and take notes on paper:
<https://www.youtube.com/watch?v=LoECFVOcgSU> and
<https://www.youtube.com/watch?v=U0TdKisenkw>
- Complete the worksheet titled Day 19 Assignment (1 page).

Day 20

- Complete the worksheet titled Day 20 Assignment (1 page).

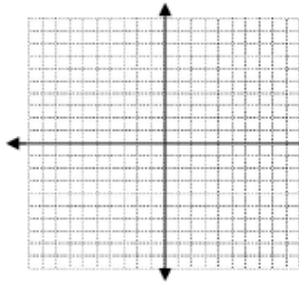
Pre-Calculus
Ellipses HW Worksheet

Ellipses

Name _____
March 2014

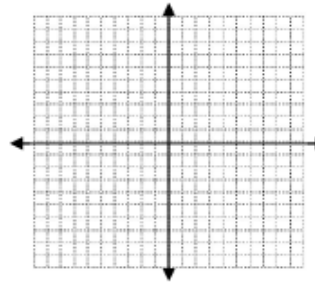
Graph the ellipse and identify the center, vertices, and foci.

1. $\frac{x^2}{16} + \frac{y^2}{4} = 1$



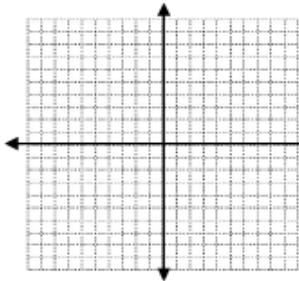
Center: _____
Vert: _____
CV: _____
Foci: _____

2. $\frac{x^2}{9} + \frac{y^2}{36} = 1$



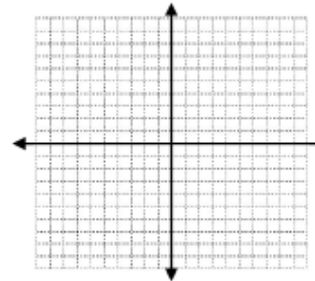
Center: _____
Vert: _____
CV: _____
Foci: _____

3. $25x^2 + 4y^2 = 100$



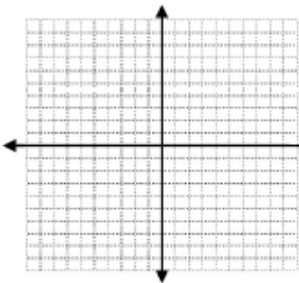
Center: _____
Vert: _____
CV: _____
Foci: _____

4. $7x^2 = 35 - 5y^2$



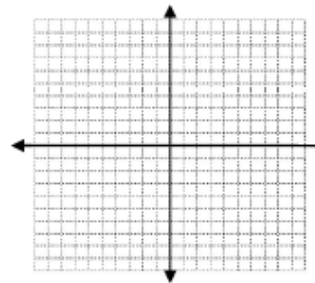
Center: _____
Vert: _____
CV: _____
Foci: _____

5. $\frac{(x-2)^2}{9} + \frac{(y-1)^2}{4} = 1$



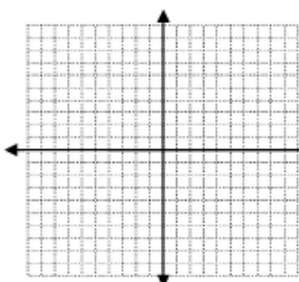
Center: _____
Vert: _____
CV: _____
Foci: _____

6. $\frac{(x-4)^2}{9} + \frac{(y+2)^2}{25} = 1$



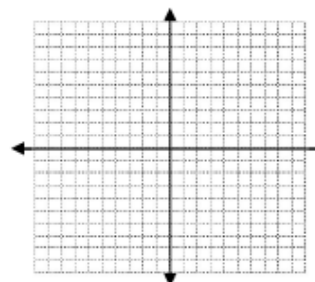
Center: _____
Vert: _____
CV: _____
Foci: _____

7. $(x+3)^2 + 4(y-2)^2 = 16$



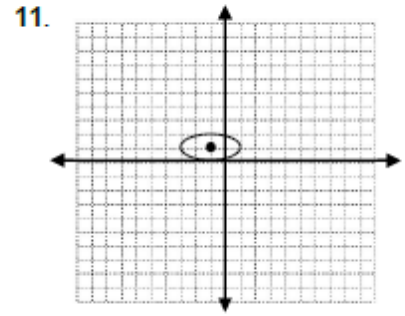
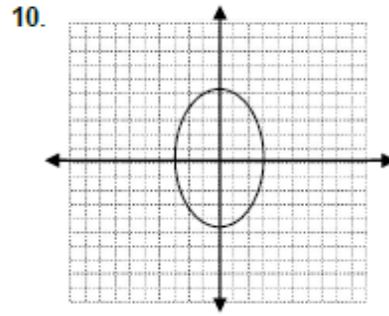
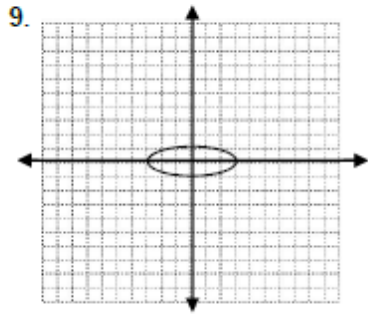
Center: _____
Vert: _____
CV: _____
Foci: _____

8. $\frac{x^2}{25} + \frac{(y-2)^2}{36} = 1$



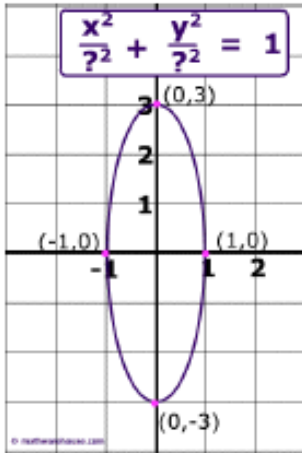
Center: _____
Vert: _____
CV: _____
Foci: _____

Find the standard form of the equation of each ellipse.

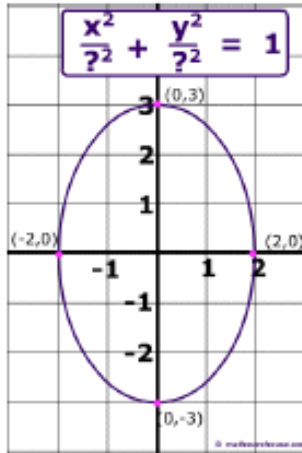


Directions: Find the values of a and b and write the equation for each ellipse.

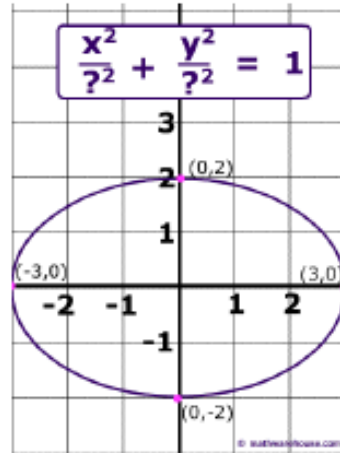
1)



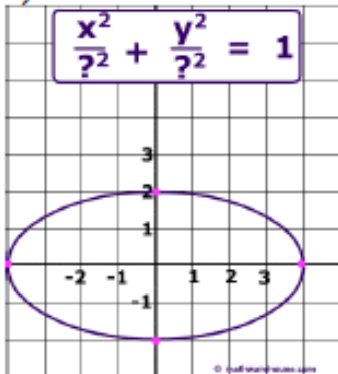
2)



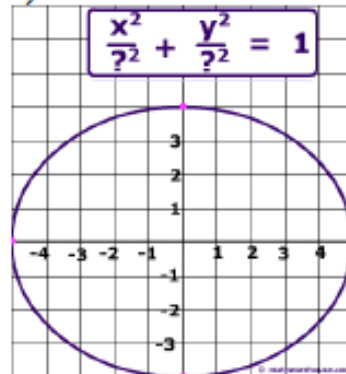
3)



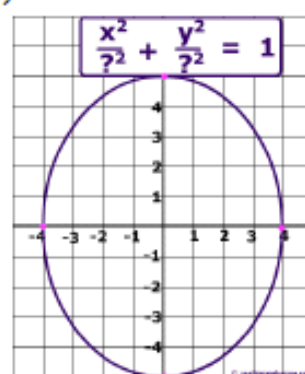
4)



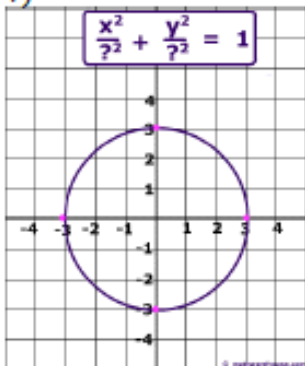
5)



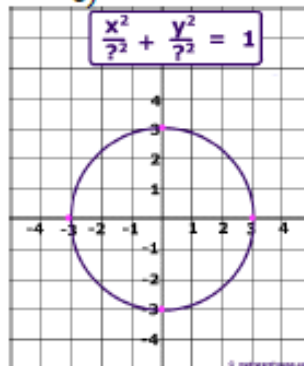
6)



7)

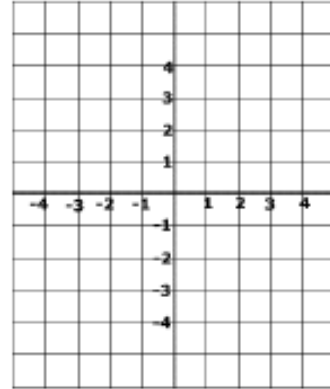
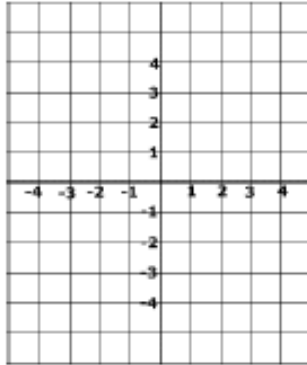
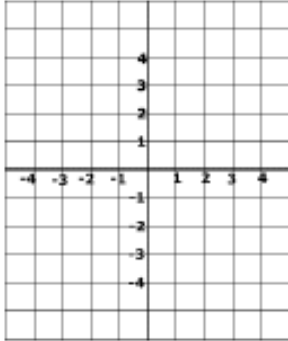


8)

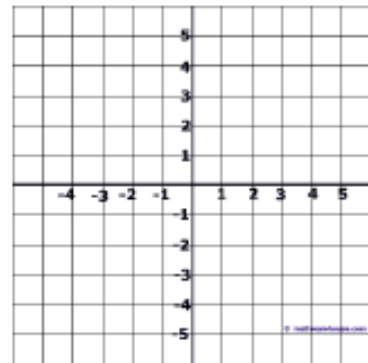
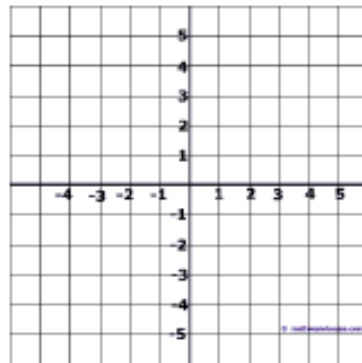
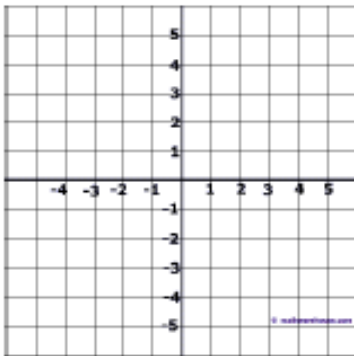


Part II **Directions:** Graph ellipses with the following equations

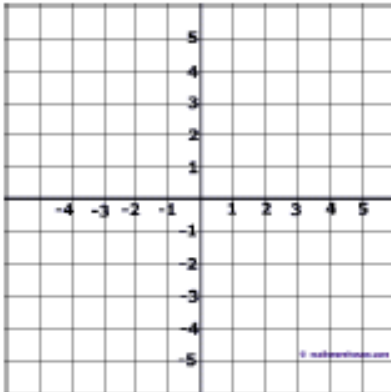
1) $\frac{x^2}{2^2} + \frac{y^2}{5^2} = 1$ 2) $\frac{x^2}{25} + \frac{y^2}{9} = 1$ 3) $\frac{x^2}{25} + \frac{y^2}{36} = 1$



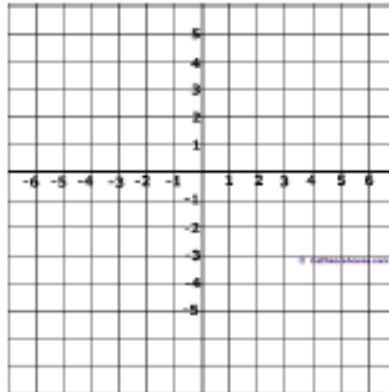
4) $\frac{x^2}{36} + \frac{y^2}{25} = 1$ 5) $\frac{x^2}{36} + \frac{y^2}{4} = 1$ 6) $\frac{x^2}{1} + \frac{y^2}{36} = 1$



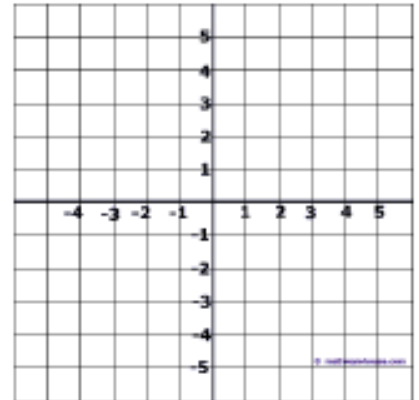
7) $\frac{x^2}{36} + \frac{y^2}{4} = 1$



8) $\frac{x^2}{49} + \frac{y^2}{9} = 1$



9) $9x^2 + 4y^2 = 36$



Algebra II
9.4 Ellipse Worksheet

Name _____ Hr _____

Identify the center, vertices, co-vertices, and foci of each.

1.) $\frac{x^2}{49} + \frac{y^2}{64} = 1$

C:

V:

CV:

F:

2.) $\frac{x^2}{25} + \frac{y^2}{4} = 1$

C:

V:

CV:

F:

3.) $x^2 + \frac{y^2}{36} = 1$

C:

V:

CV:

F:

4.) $\frac{x^2}{100} + \frac{y^2}{16} = 1$

C:

V:

CV:

F:

Identify the center, vertices, co-vertices, and foci of each. Then graph.

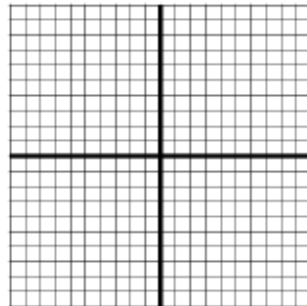
5.) $\frac{x^2}{36} + \frac{y^2}{4} = 1$

C:

V:

CV:

F:



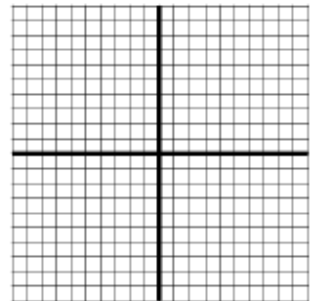
6.) $\frac{x^2}{25} + \frac{y^2}{49} = 1$

C:

V:

CV:

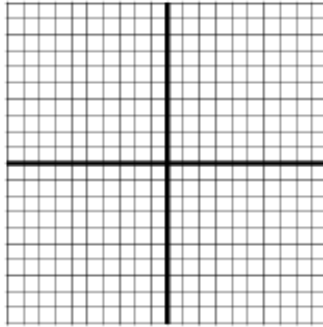
F:



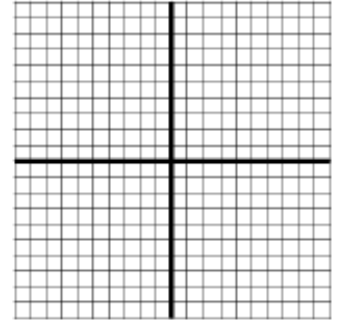
7.) $\frac{x^2}{16} + y^2 = 1$

8.) $\frac{x^2}{16} + \frac{y^2}{9} = 1$

C:
V:
CV:
F:



C:
V:
CV:
F:

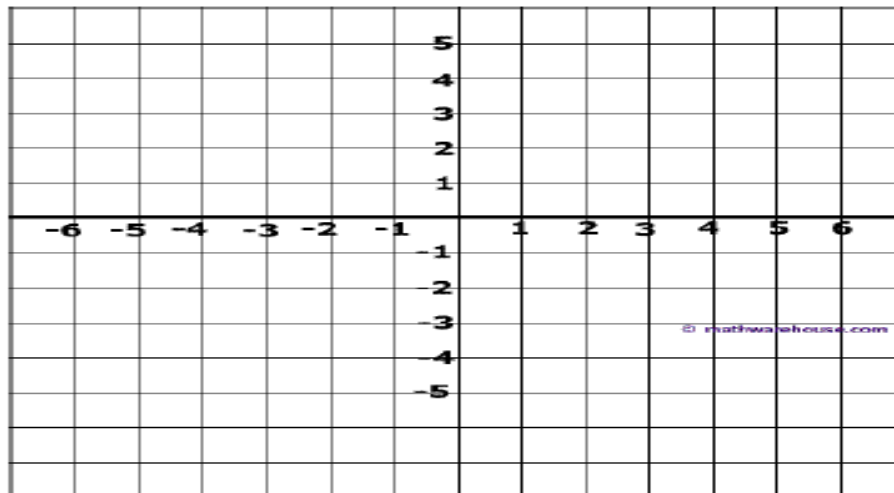


Equation of Ellipse Activity

Task #1) Pick a number to be a and b for an ellipse.
a: ___ b: ___

Task #2) Write the equation of the ellipse:
Equation: _____

Task #3) Graph the ellipse and label each of the following
Major axis: _____
Minor Axis: _____
Vertices: _____
Co-Vertices: _____



Name : _____ Score : _____

Teacher : _____ Date : _____

Writing Ellipses Equations

Use the given information to write the standard form equation of the ellipse.

1) Center: $(7, 3)$, Vertex: $(7, 10)$
Co-vertex: $(13, 3)$

6) Center: $(-8, 0)$, Vertex: $(4, 0)$
Co-vertex: $(-8, 5)$

2) Vertices : $(8, 0)$, $(-16, 0)$
Co-vertices: $(-4, 4)$, $(-4, -4)$

7) Vertices : $(5, 8)$, $(-13, 8)$
Co-vertices: $(-4, 13)$, $(-4, 3)$

3) Vertices : $(-8, 7)$, $(-8, -9)$
Co-vertices: $(-1, -1)$, $(-15, -1)$

8) Center: $(-4, 6)$, Vertex: $(6, 6)$
Co-vertex: $(-4, 9)$

4) Vertices : $(18, -4)$, $(-2, -4)$
Co-vertices: $(8, -1)$, $(8, -7)$

9) Center: $(-4, 0)$, Vertex: $(5, 0)$
Co-vertex: $(-4, 7)$

5) Center: $(0, 1)$, Vertex: $(9, 1)$
Co-vertex: $(0, 7)$

10) Vertices : $(6, 0)$, $(-4, 0)$
Co-vertices: $(1, 3)$, $(1, -3)$

Name : _____ Score : _____

Teacher : _____ Date : _____

Writing Ellipses Equations

Use the given information to write the standard form equation of the ellipse.

- | | |
|---|---|
| 1) Center: $(-1, -2)$, Vertex: $(10, -2)$
Co-vertex: $(-1, 5)$ | 6) Center: $(6, 0)$, Vertex: $(6, 10)$
Co-vertex: $(11, 0)$ |
| 2) Center: $(7, 0)$, Vertex: $(7, 7)$
Co-vertex: $(13, 0)$ | 7) Center: $(8, 0)$, Vertex: $(8, 11)$
Co-vertex: $(12, 0)$ |
| 3) Vertices : $(16, 3)$, $(-2, 3)$
Co-vertices: $(7, 4)$, $(7, 2)$ | 8) Center: $(-5, 0)$, Vertex: $(4, 0)$
Co-vertex: $(-5, 1)$ |
| 4) Vertices : $(-6, 14)$, $(-6, -6)$
Co-vertices: $(3, 4)$, $(-15, 4)$ | 9) Vertices : $(9, 2)$, $(-7, 2)$
Co-vertices: $(1, 3)$, $(1, 1)$ |
| 5) Vertices : $(12, 2)$, $(-12, 2)$
Co-vertices: $(0, 13)$, $(0, -9)$ | 10) Vertices : $(2, 4)$, $(2, -20)$
Co-vertices: $(8, -8)$, $(-4, -8)$ |