

Name _____

Conic Sections (without hyperbolas)

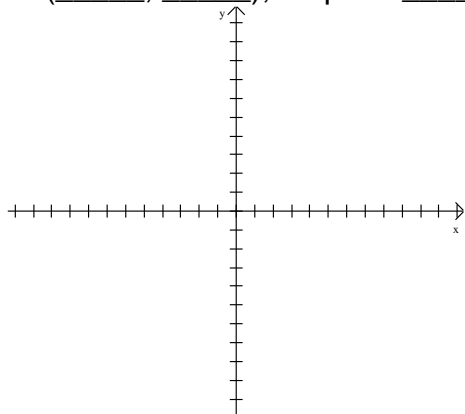
Hour _____

Date _____

The first four problems are parabolas. You are to fill in the missing information and sketch the graph.

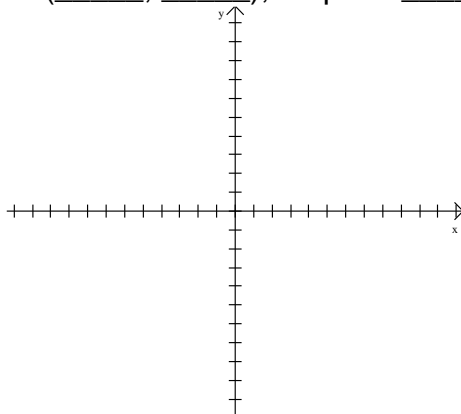
1. $y = -(x+1)^2 - 2$

Vertex is (_____, _____); It opens _____.



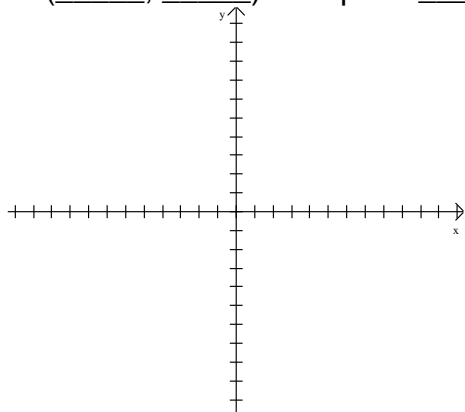
2. $y = (x-4)^2 + 2$

Vertex is (_____, _____); It opens _____.



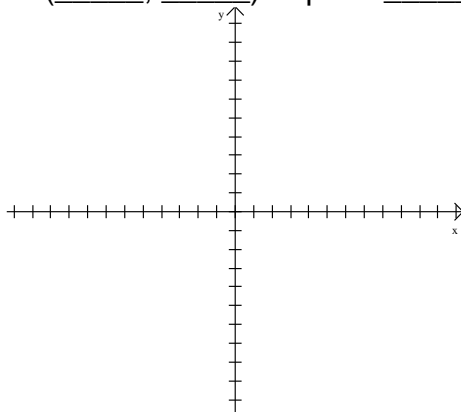
3. $x = (y+2)^2 - 3$

Vertex is (_____, _____) It opens _____.



4. $x = -(y-1)^2 + 2$

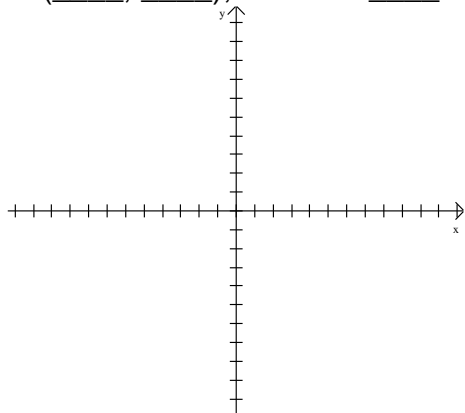
Vertex is (_____, _____) It opens _____.



The next two problems are circles. You are to fill in the missing information and sketch the graph.

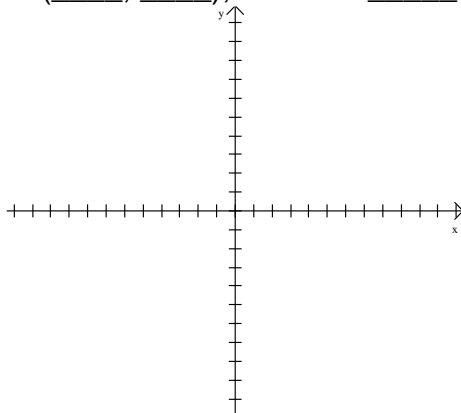
5. $(x+1)^2 + (y-4)^2 = 9$

center is (_____, _____); radius is _____



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

center is (_____, _____); radius is _____



Then next four problems are ellipses. You are to fill in the missing information and sketch the graph.

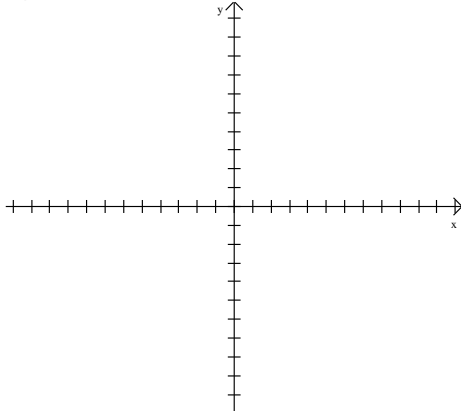
7. $\frac{x^2}{4} + \frac{y^2}{9} = 1$

Center is (____, ____)

The major axis is parallel to the ____-axis.

The length of the major axis is _____.

The length of the minor axis is _____.



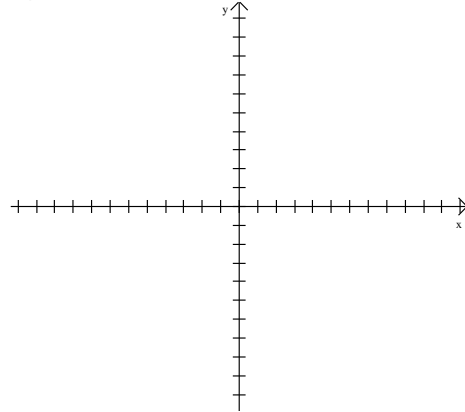
8. $\frac{(x-1)^2}{16} + \frac{(y+1)^2}{4} = 1$

Center is (____, ____)

The major axis is parallel to the ____-axis.

The length of the major axis is _____.

The length of the minor axis is _____.



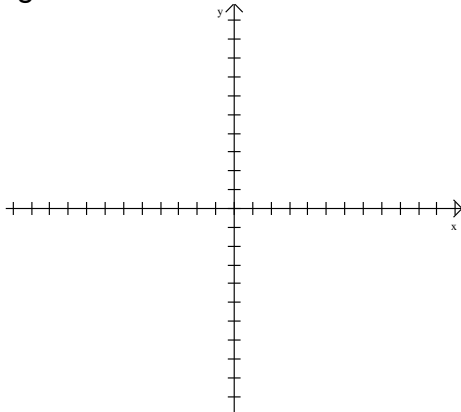
9. $\frac{(x+2)^2}{9} + \frac{(y-3)^2}{4} = 1$

Center is (____, ____)

The major axis is parallel to the ____-axis.

The length of the major axis is _____.

The length of the minor axis is _____.



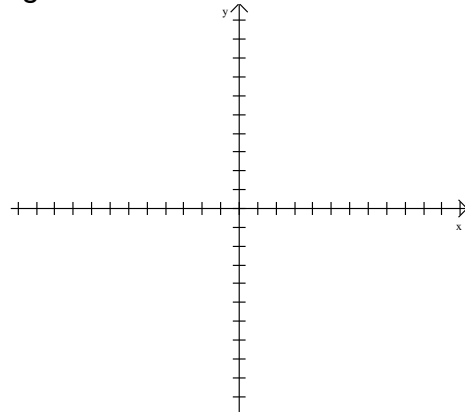
10. $\frac{(x-4)^2}{4} + (y+5)^2 = 1$

Center is (____, ____)

The major axis is parallel to the ____-axis.

The length of the major axis is _____.

The length of the minor axis is _____.



11. $4x^2 - 16x + 12y^2 + 72y + 123 = 0$

12. $9x^2 + 36x + y^2 + 2y + 36 = 0$