Algebra 2
Unit: Conic Sections
Section: Ellipses

Review Worksheet Key

1) Name the center, vertices, co-vertices and foci of the following ellipses. Then graph the ellipse.

a. $\frac{x^2}{25}+\frac{y^2}{9}=1$

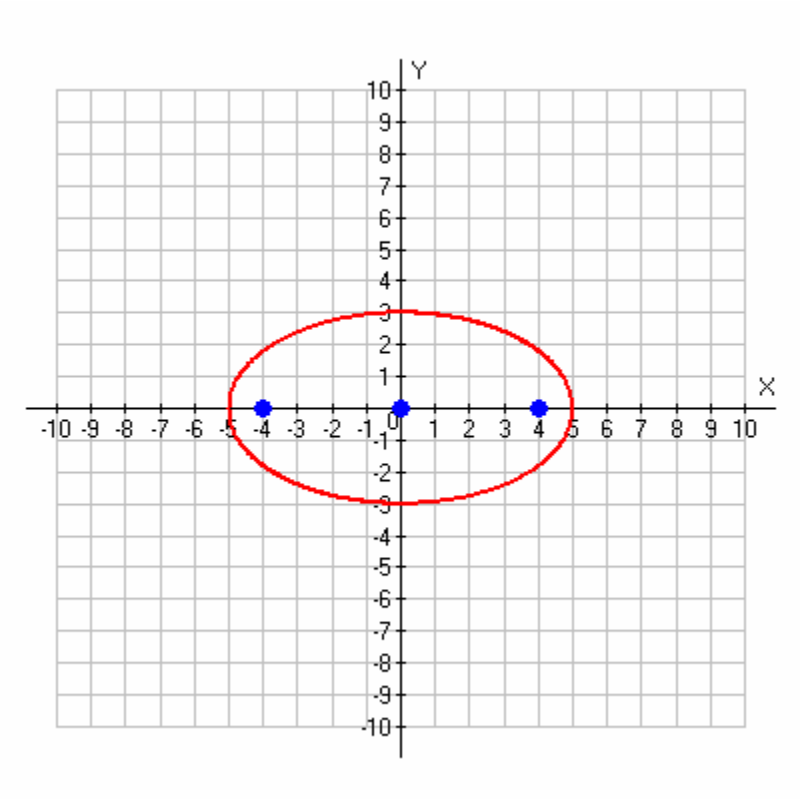
Center: (0, 0)

Vertices: (-5, 0) and (5, 0)

Co-vertices: (0, -3) and (0, 3)

Foci: (-4, 0) and (4, 0)

Graph:



b. $\frac{(x-5)^2}{16}+\frac{(y+2)^2}{9}=1$

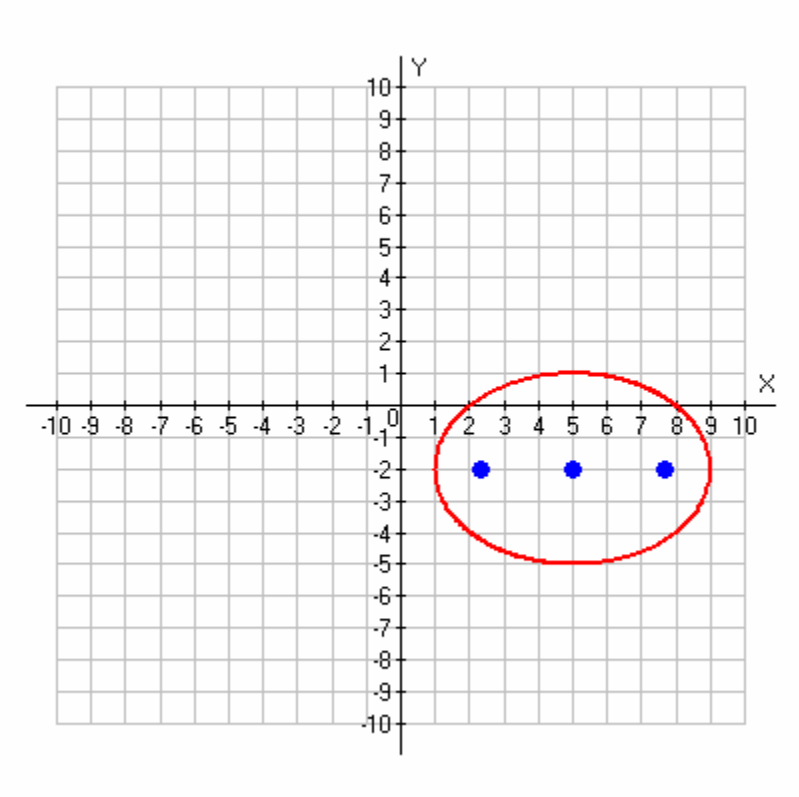
Center: (5, -2)

Vertices: (1, -2) and (9, -2)

Co-vertices: (5, -5) and (5, 1)

Foci: $(5 - \sqrt{7}, -2)$ and $(5 + \sqrt{7}, -2)$

Graph:



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

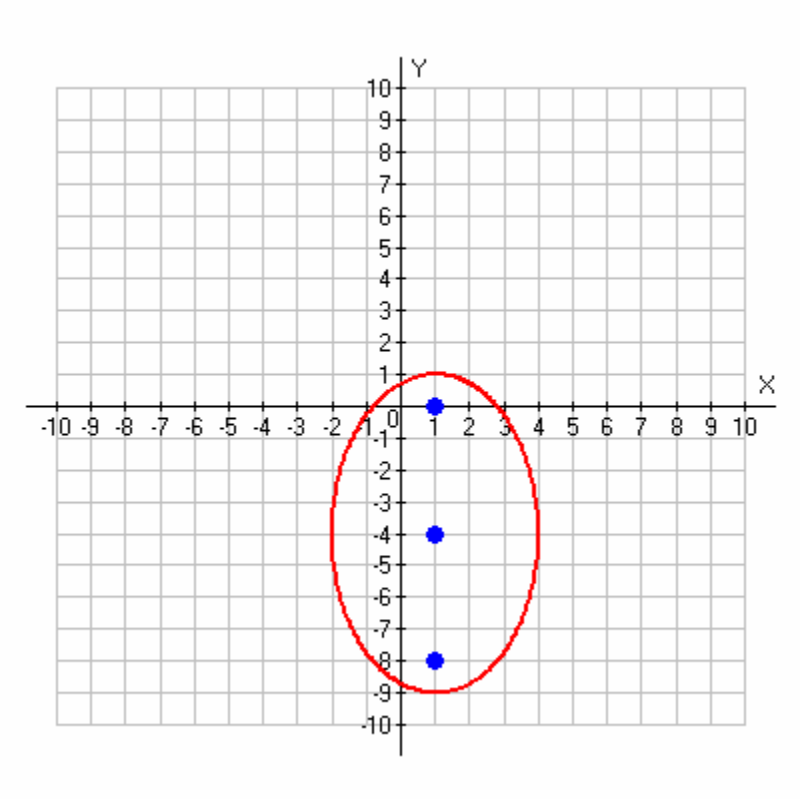
Center: (1, -4)

Vertices: (1, -9) and (1, 1)

Co-vertices: (-2, -4) and (4, -4)

Foci: (1, -8) and (1, 0)

Graph:


Y
X
10
9
8
7
6
5
4
3
2
1
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10