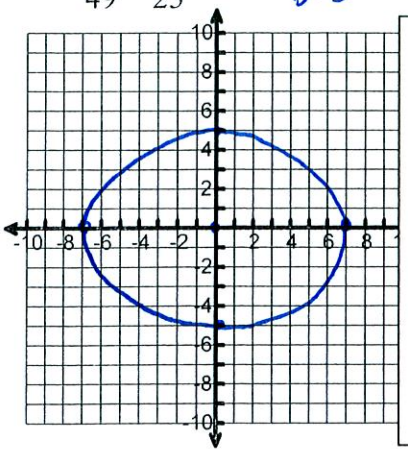
GSE PreCalculus: Unit 2 – Conics
WS 2.3: Graphing Ellipses

Name_____
Date_____ Period_____

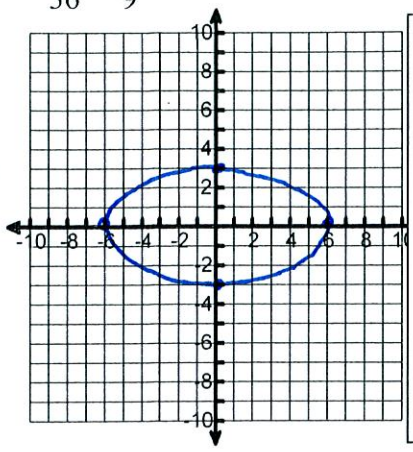
Identify the center, vertices, co-vertices, foci, length of major axis, length of minor axis. Then sketch the graph.

1. $\frac{x^2}{49}+\frac{y^2}{25}=1$ $a=7$ $b=5$



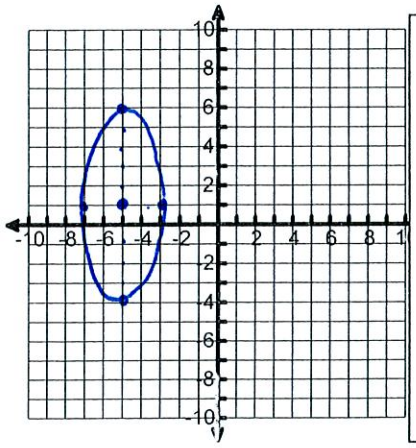
Center: (0,0)
Vertices: (7,0)(-7,0)
Co-vertices: (0,5)(0,-5)
Foci: (-4.9,0)(4.9,0)
Major: 14
Minor: 10

2. $\frac{x^2}{36}+\frac{y^2}{9}=1$ $a=6$ $b=3$



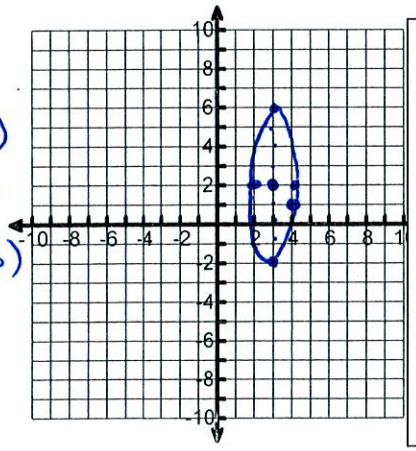
Center: (0,0)
Vertices: (6,0)(-6,0)
Co-vertices: (0,3)(0,-3)
Foci: (-5.2,0)(5.2,0)
Major: 12
Minor: 6

3. $\frac{(x+5)^2}{4}+\frac{(y-1)^2}{25}=1$ $a=5$ $b=2$



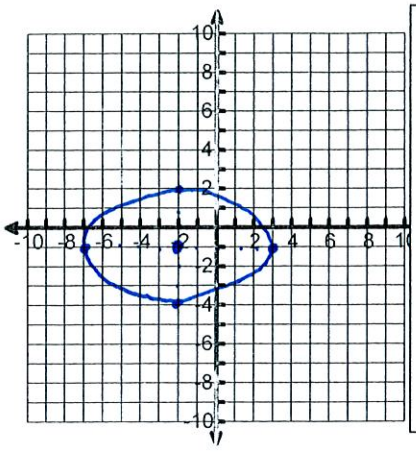
Center: (-5,1)
Vertices: (-5,6)(-5,-4)
Co-vertices: (-7,1)(-3,1)
Foci: (-5,-3.6)(-5,5.6)
Major: 10
Minor: 4

4. $(x-3)^2+\frac{(y-2)^2}{16}=1$ $a=4$ $b=1$



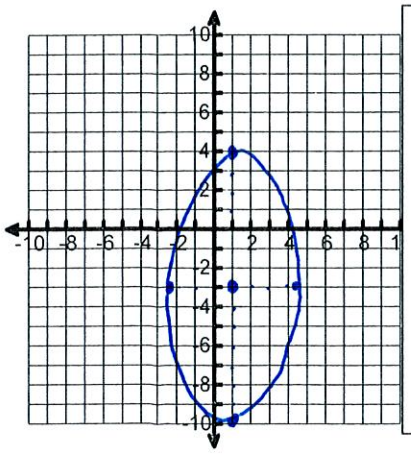
Center: (3,2)
Vertices: (3,6)(3,2)
Co-vertices: (4,2)(2,2)
Foci: (3,-1.9)(3,5.9)
Major: 8
Minor: 2

5. $\frac{(x+2)^2}{25}+\frac{(y+1)^2}{9}=1$ $a=5$ $b=3$



Center: (-2,-1)
Vertices: (-7,-1)(3,1)
Co-vertices: (-2,2) (-2,-4)
Foci: (-6,-1)(2,-1)
Major: 10
Minor: 6

6. $\frac{(x-1)^2}{10}+\frac{(y+3)^2}{49}=1$ $a=7$ $b=3.2$



Center: (1,-3)
Vertices: (1,4)(1,-10)
Co-vertices: (4.2,-3) (-2.2,-3)
Foci: (1,-9.2)(1,3.2)
Major: 14
Minor: 6.4