

## 11.2 CA #1 - Ellipses &amp; Circles

Use the information provided to write the standard form equation of each circle.

1) Center:  $(-14, -5)$   
Point on Circle:  $(-10, -3)$

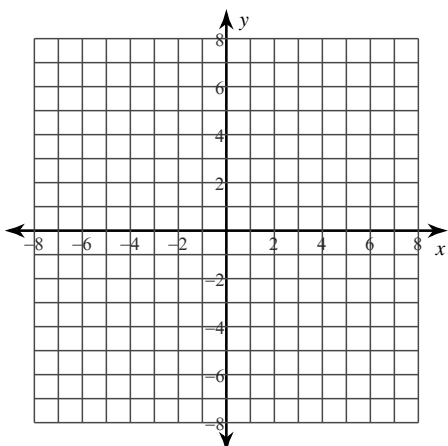
2) Center:  $(-8, -11)$   
Point on Circle:  $(-9, -18)$

3) Center:  $(-1, -13)$   
Point on Circle:  $(2, -11)$

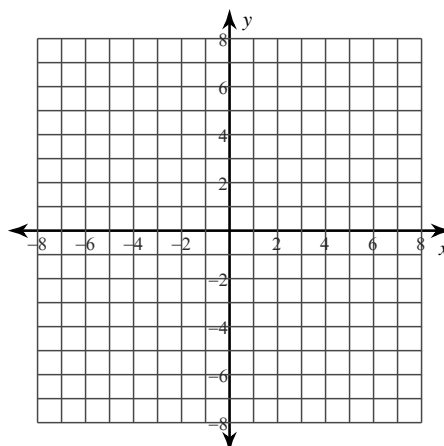
4) Center:  $(-9, -14)$   
Point on Circle:  $(-13, -13)$

Identify the center and radius of each. Then sketch the graph.

5)  $(x - 3)^2 + (y + 2)^2 = 16$

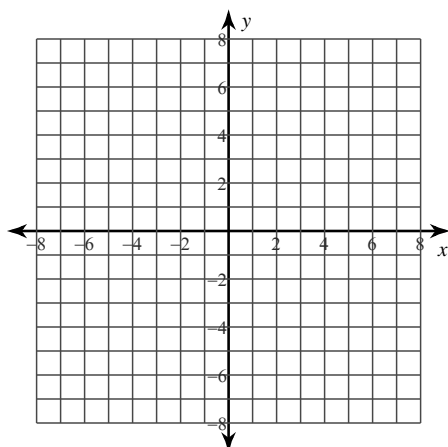


6)  $(x + 2)^2 + (y - 1)^2 = 1$

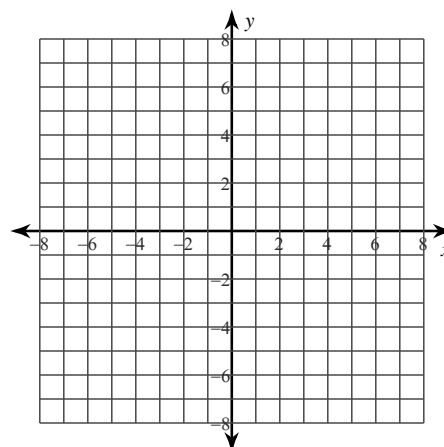


Identify the center, vertices, co-vertices, and foci of each. Then sketch the graph.

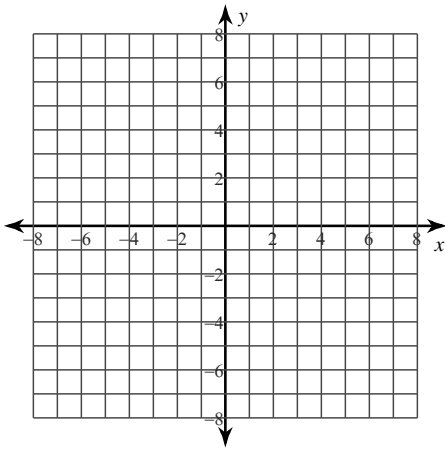
7)  $\frac{(x + 4)^2}{4} + \frac{(y - 3)^2}{16} = 1$



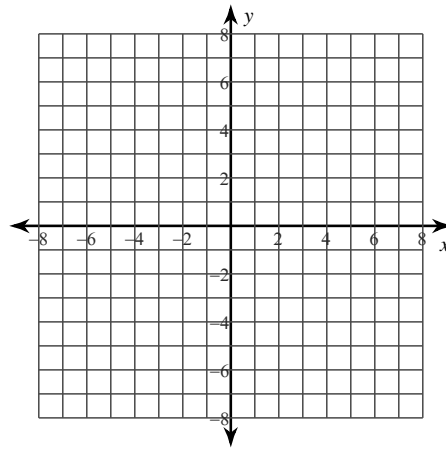
8)  $\frac{x^2}{49} + \frac{(y - 1)^2}{9} = 1$



$$9) (x-1)^2 + \frac{(y+1)^2}{36} = 1$$



$$10) \frac{(x+1)^2}{25} + \frac{(y+1)^2}{9} = 1$$



Use the information provided to write the standard form equation of each ellipse.

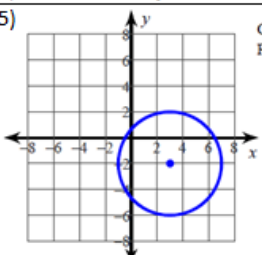
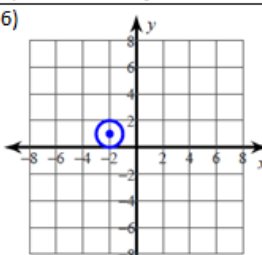
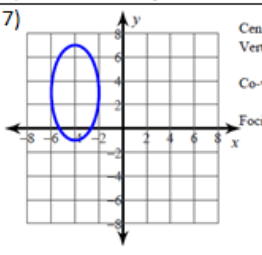
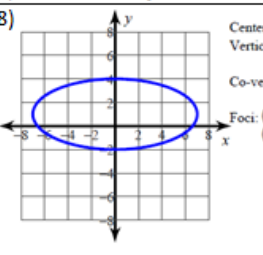
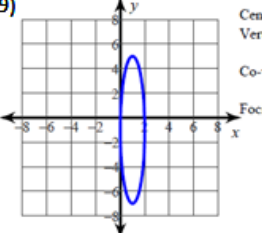
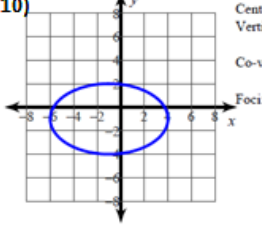
- 11) Vertices:  $(-2, 5), (-10, 5)$   
 Co-vertices:  $(-6, 8), (-6, 2)$

- 12) Vertices:  $(-3, 17), (-3, -3)$   
 Co-vertices:  $(3, 7), (-9, 7)$

- 13) Vertices:  $(18, -6), (-8, -6)$   
 Foci:  $(17, -6), (-7, -6)$

- 14) Vertices:  $(-4, -5), (-4, -15)$   
 Foci:  $(-4, -6), (-4, -14)$

### 11.2 CA #1 – ANSWERS

<p>1) <math>(x+14)^2 + (y+5)^2 = 20</math></p> <p>5)  Center: <math>(3, -2)</math> Radius: 4</p>	<p>2) <math>(x+8)^2 + (y+11)^2 = 50</math></p> <p>6)  Center: <math>(-2, 1)</math> Radius: 1</p>	<p>3) <math>(x+1)^2 + (y+13)^2 = 13</math></p> <p>7)  Center: <math>(-4, 3)</math> Vertices: <math>(-4, 7)</math> <math>(-4, -1)</math> Co-vertices: <math>(-2, 3)</math> <math>(-6, 3)</math> Foci: <math>(-4, 3+2\sqrt{3})</math> <math>(-4, 3-2\sqrt{3})</math></p>	<p>4) <math>(x+9)^2 + (y+14)^2 = 17</math></p> <p>8)  Center: <math>(0, 1)</math> Vertices: <math>(7, 1)</math> <math>(-7, 1)</math> Co-vertices: <math>(0, 4)</math> <math>(0, -2)</math> Foci: <math>(2\sqrt{10}, 1)</math> <math>(-2\sqrt{10}, 1)</math></p>
<p>9)  Center: <math>(1, -1)</math> Vertices: <math>(1, 5)</math> <math>(1, -7)</math> Co-vertices: <math>(2, -1)</math> <math>(0, -1)</math> Foci: <math>(1, -1+\sqrt{35})</math> <math>(1, -1-\sqrt{35})</math></p>	<p>10)  Center: <math>(-1, -1)</math> Vertices: <math>(4, -1)</math> <math>(-6, -1)</math> Co-vertices: <math>(-1, 2)</math> <math>(-1, -4)</math> Foci: <math>(3, -1)</math> <math>(-5, -1)</math></p>	<p>11) <math>\frac{(x+6)^2}{16} + \frac{(y-5)^2}{9} = 1</math></p> <p>12) <math>\frac{(x+3)^2}{36} + \frac{(y-7)^2}{100} = 1</math></p>	<p>13) <math>\frac{(x-5)^2}{169} + \frac{(y+6)^2}{25} = 1</math></p> <p>14) <math>\frac{(x+4)^2}{9} + \frac{(y+10)^2}{25} = 1</math></p>