

## 11.2 CA #2 - Ellipses &amp; Circles

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

1) Center:  $(10, -8)$   
Point on Circle:  $(4, -5)$

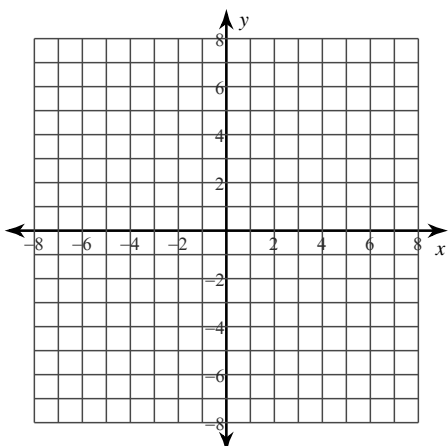
2) Center:  $(-2, -8)$   
Point on Circle:  $(-1, -11)$

3) Center:  $(4, 15)$   
Point on Circle:  $(5, 14)$

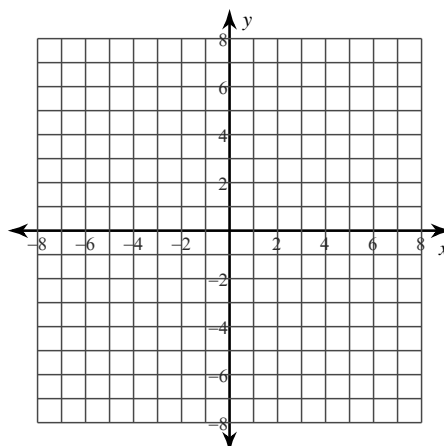
4) Center:  $(-13, -10)$   
Point on Circle:  $(-19, -10)$

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

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

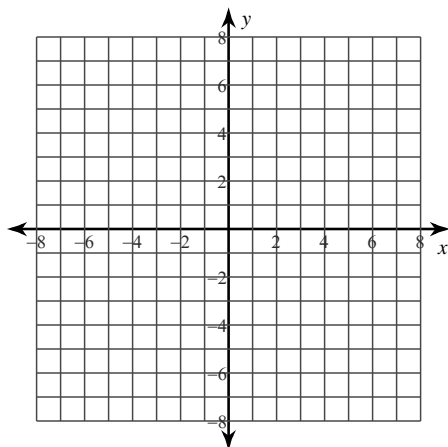


6)  $(x - 2)^2 + (y - 1)^2 = 25$

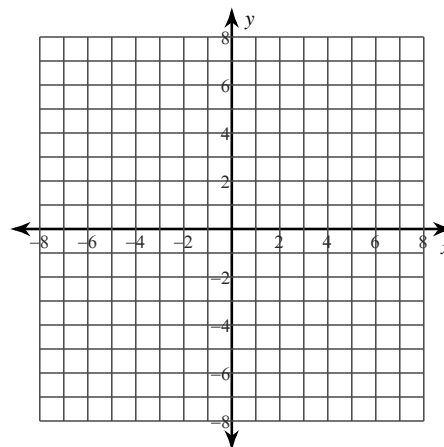


Identify the center, vertices, co-vertices, and foci of each. Then sketch the graph.

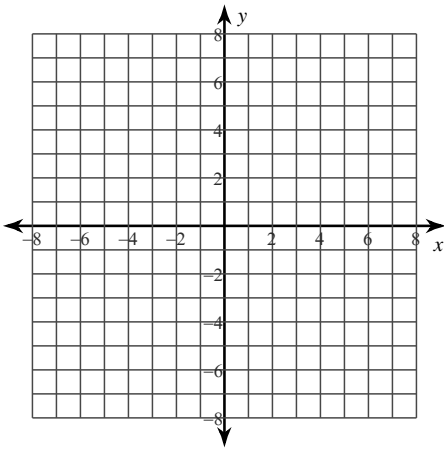
7)  $\frac{(x - 1)^2}{9} + \frac{(y - 1)^2}{36} = 1$



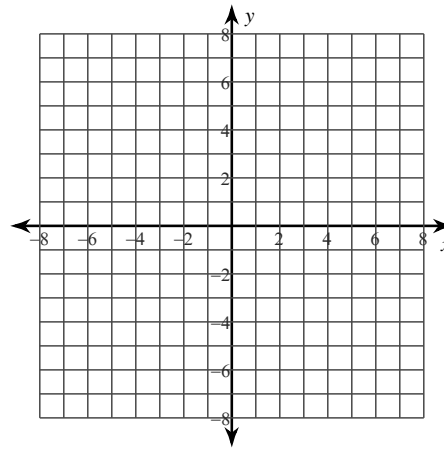
8)  $\frac{x^2}{49} + \frac{(y + 3)^2}{16} = 1$



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



$$10) \frac{(x-4)^2}{9} + \frac{y^2}{25} = 1$$



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

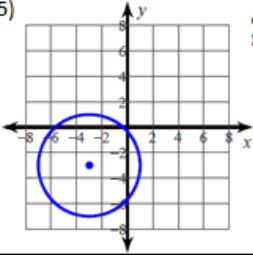
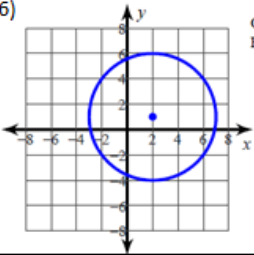
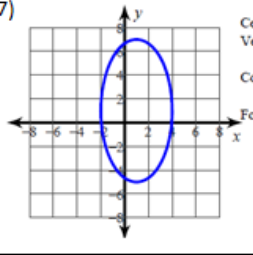
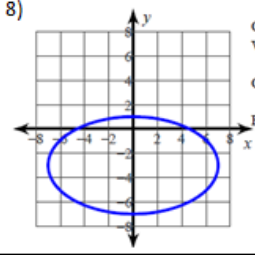
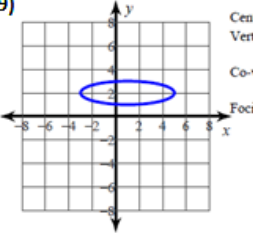
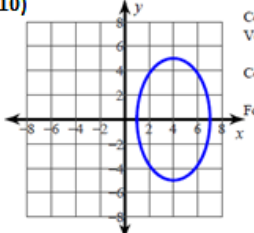
11) Vertices:  $(9, 16), (9, -10)$   
 Co-vertices:  $(18, 3), (0, 3)$

12) Vertices:  $(3, 4), (-19, 4)$   
 Co-vertices:  $(-8, 13), (-8, -5)$

13) Vertices:  $(7, 10), (-19, 10)$   
 Foci:  $(-1, 10), (-11, 10)$

14) Vertices:  $(5, 13), (5, -13)$   
 Foci:  $(5, 5), (5, -5)$

### 11.2 CA #2 – ANSWERS

<p>1) <math>(x-10)^2 + (y+8)^2 = 45</math></p> <p>5)  Center: <math>(-3, -3)</math> Radius: 4</p>	<p>2) <math>(x+2)^2 + (y+8)^2 = 10</math></p> <p>6)  Center: <math>(2, 1)</math> Radius: 5</p>	<p>3) <math>(x-4)^2 + (y-15)^2 = 2</math></p> <p>7)  Center: <math>(1, 1)</math> Vertices: <math>(1, 7)</math> <math>(1, -5)</math> Co-vertices: <math>(4, 1)</math> <math>(-2, 1)</math> Foci: <math>(1, 1 + 3\sqrt{3})</math> <math>(1, 1 - 3\sqrt{3})</math></p>	<p>4) <math>(x+13)^2 + (y+10)^2 = 36</math></p> <p>8)  Center: <math>(0, -3)</math> Vertices: <math>(7, -3)</math> <math>(-7, -3)</math> Co-vertices: <math>(0, 1)</math> <math>(0, -7)</math> Foci: <math>(\sqrt{33}, -3)</math> <math>(-\sqrt{33}, -3)</math></p>
<p>9)  Center: <math>(1, 2)</math> Vertices: <math>(5, 2)</math> <math>(-3, 2)</math> Co-vertices: <math>(1, 3)</math> <math>(1, 1)</math> Foci: <math>(1 + \sqrt{15}, 2)</math> <math>(1 - \sqrt{15}, 2)</math></p>	<p>10)  Center: <math>(4, 0)</math> Vertices: <math>(4, 5)</math> <math>(4, -5)</math> Co-vertices: <math>(7, 0)</math> <math>(1, 0)</math> Foci: <math>(4, 4)</math> <math>(4, -4)</math></p>	<p>11) <math>\frac{(x-9)^2}{81} + \frac{(y-3)^2}{169} = 1</math></p>	<p>12) <math>\frac{(x+8)^2}{121} + \frac{(y-4)^2}{81} = 1</math></p>
		<p>13) <math>\frac{(x+6)^2}{169} + \frac{(y-10)^2}{144} = 1</math></p>	<p>14) <math>\frac{(x-5)^2}{144} + \frac{y^2}{169} = 1</math></p>