

Name : _____

Score : _____

Teacher : _____

Date : _____

Writing Circle Equations

Use the given information to write the standard form equation of the circle.

1) Center: $(-10, -5)$
Radius: 3

6) Ends of a Diameter:
 $(-6, -2)$ and $(16, -2)$

2) Center: $(1, -4)$
Radius: 8

7) Center: $(6, -2)$
Point on the Circle: $(6, -3)$

3) Center: $(-4, 12)$
Point on the Circle: $(-4, 5)$

8) Center: $(-9, -5)$
Radius: 10

4) Ends of a Diameter:
 $(-13, 4)$ and $(1, 4)$

9) Ends of a Diameter:
 $(-12, -19)$ and $(-12, -1)$

5) $(x - 3)^2 + (y - 13)^2 = 144$
Translated: 2 right and 5 down

10) $(x + 1)^2 + (y - 8)^2 = 100$
Translated: 2 right and 4 down



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Writing Circle Equations

Use the given information to write the standard form equation of the circle.

- 1) Center: (-10,-5)

Radius: 3

$$(x + 10)^2 + (y + 5)^2 = 9$$

- 2) Center: (1,-4)

Radius: 8

$$(x - 1)^2 + (y + 4)^2 = 64$$

- 3) Center: (-4,12)

Point on the Circle: (-4,5)

$$(x + 4)^2 + (y - 12)^2 = 49$$

- 4) Ends of a Diameter:

(-13,4) and (1,4)

$$(x + 6)^2 + (y - 4)^2 = 49$$

- 5) $(x - 3)^2 + (y - 13)^2 = 144$

Translated: 2 right and 5 down

$$(x - 5)^2 + (y - 8)^2 = 144$$

- 6) Ends of a Diameter:

(-6,-2) and (16,-2)

$$(x - 5)^2 + (y + 2)^2 = 121$$

- 7) Center: (6,-2)

Point on the Circle: (6,-3)

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

- 8) Center: (-9,-5)

Radius: 10

$$(x + 9)^2 + (y + 5)^2 = 100$$

- 9) Ends of a Diameter:

(-12,-19) and (-12,-1)

$$(x + 12)^2 + (y + 10)^2 = 81$$

- 10) $(x + 1)^2 + (y - 8)^2 = 100$

Translated: 2 right and 4 down

$$(x - 1)^2 + (y - 4)^2 = 100$$



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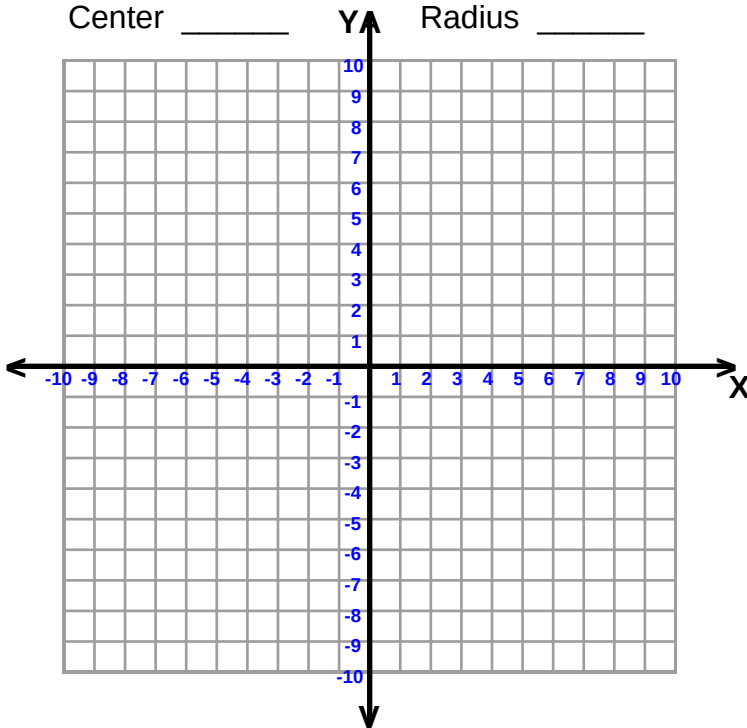
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Identify the center and radius of each circle. Then sketch the graph.

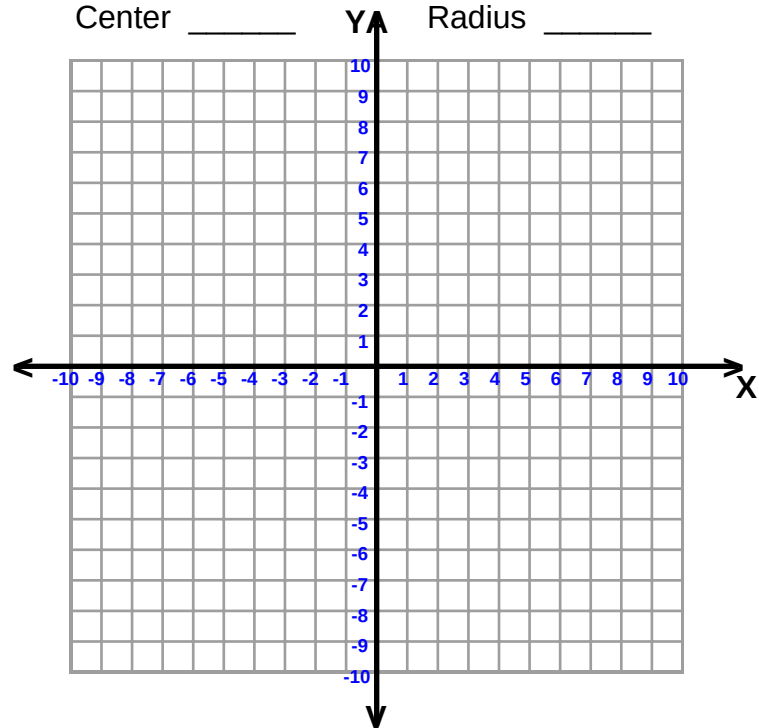
1) $(x + 3)^2 + y^2 = 25$

Center _____ Radius _____



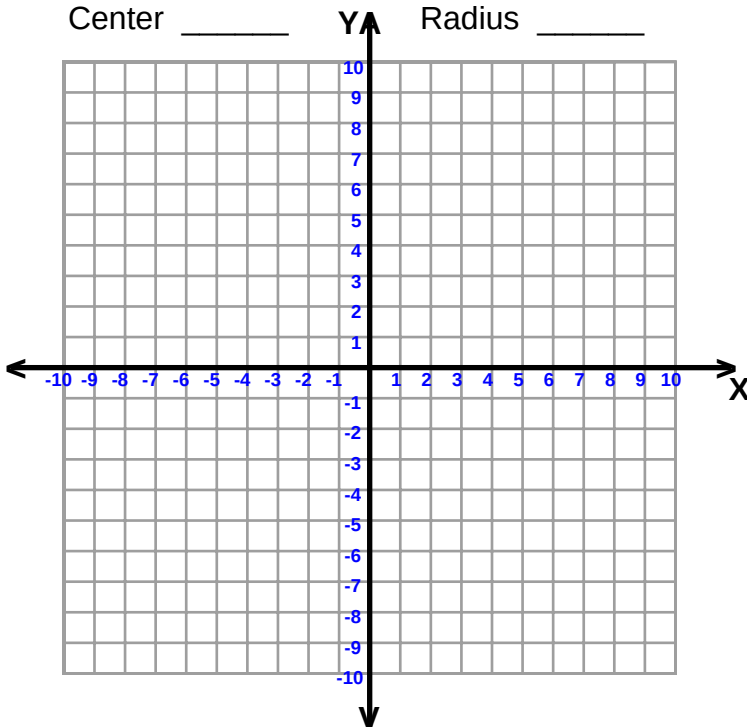
2) $(x - 3)^2 + (y + 5)^2 = 9$

Center _____ Radius _____



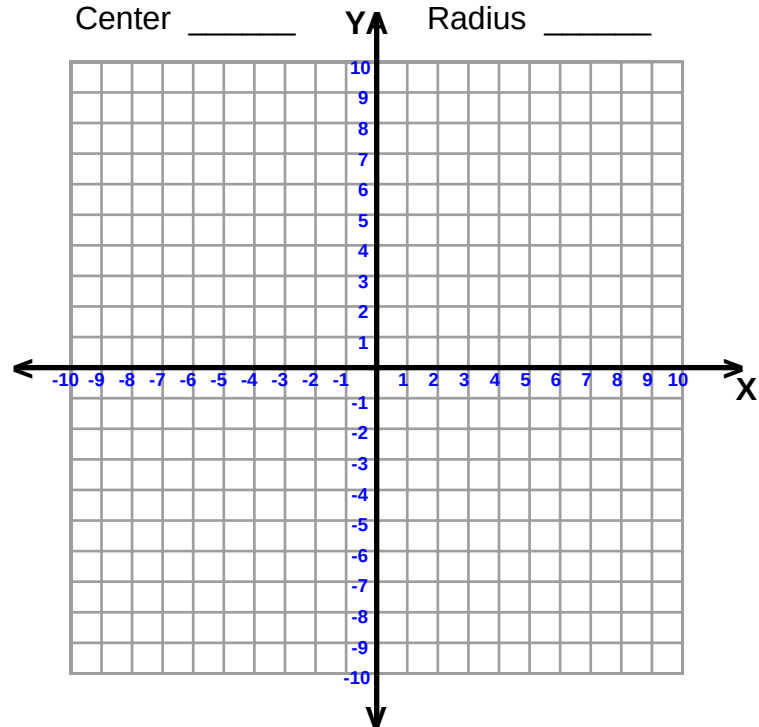
3) $(x - 1)^2 + y^2 = 36$

Center _____ Radius _____



4) $x^2 + (y - 1)^2 = 49$

Center _____ Radius _____



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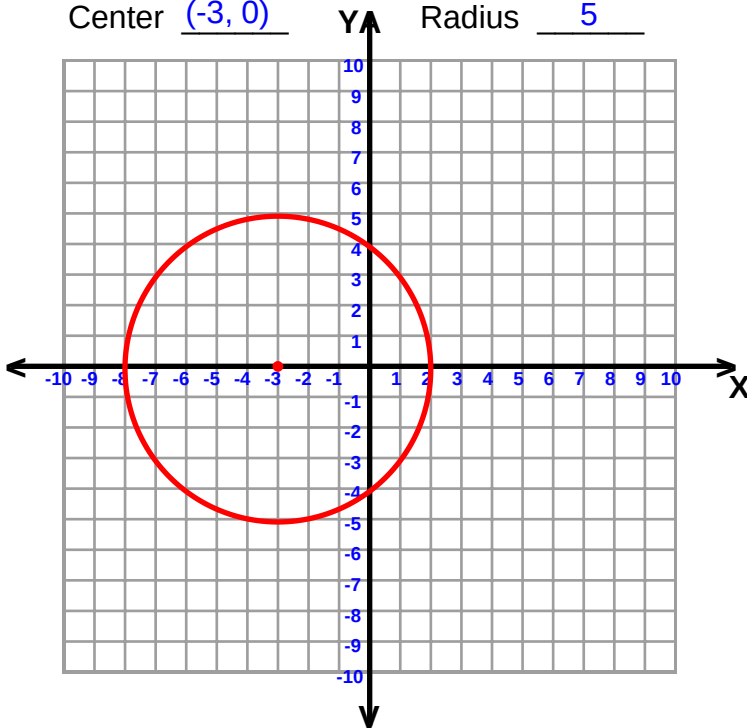
Teacher : _____

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

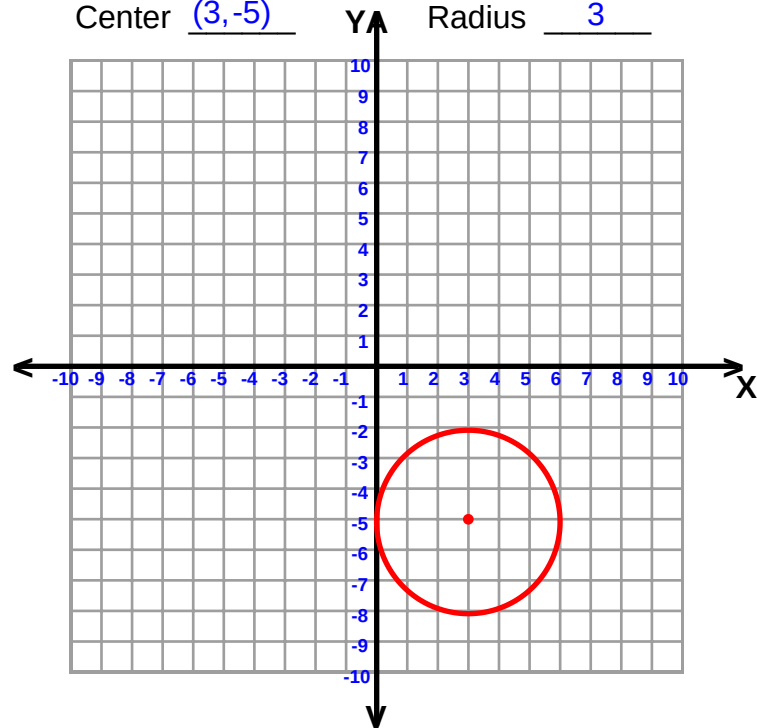
1) $(x + 3)^2 + y^2 = 25$

Center $(-3, 0)$ Radius 5



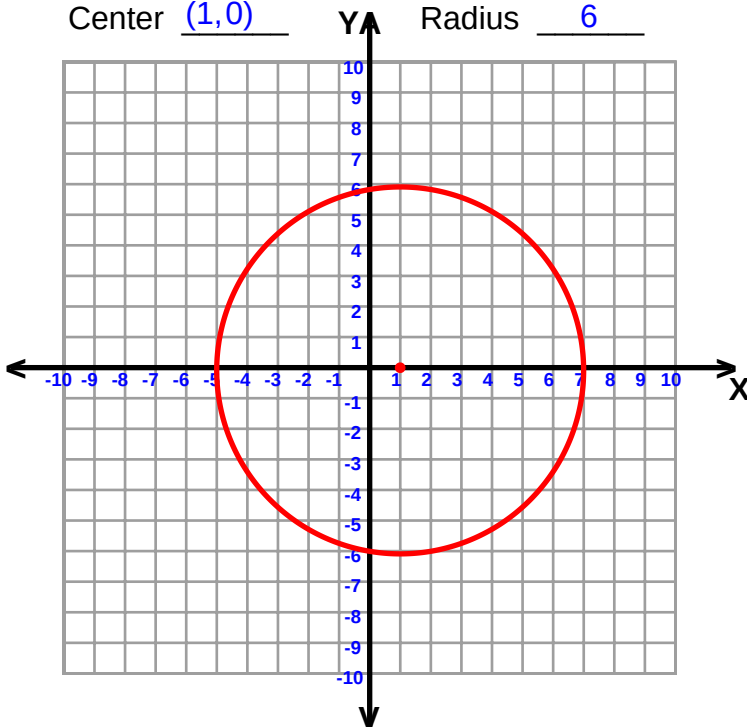
2) $(x - 3)^2 + (y + 5)^2 = 9$

Center $(3, -5)$ Radius 3



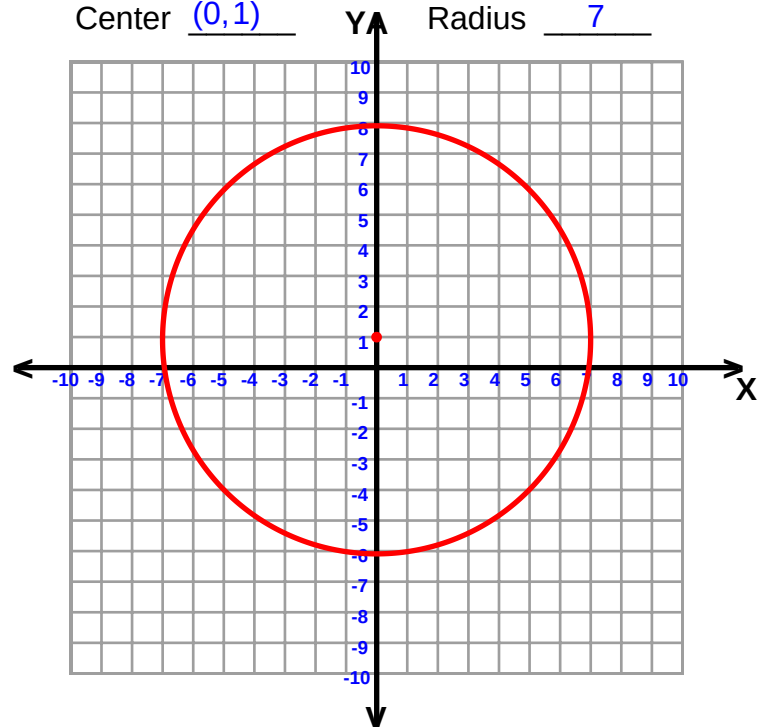
3) $(x - 1)^2 + y^2 = 36$

Center $(1, 0)$ Radius 6



4) $x^2 + (y - 1)^2 = 49$

Center $(0, 1)$ Radius 7



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Writing Ellipses Equations

Use the given information to write the standard form equation of the ellipse.

1) Center: $(0, 0)$, Vertex: $(0, 7)$

Co-vertex: $(1, 0)$

6) Vertices : $(7, -8)$, $(-9, -8)$

Co-vertices: $(-1, -5)$, $(-1, -11)$

2) Vertices : $(2, -3)$, $(-18, -3)$

Co-vertices: $(-8, 3)$, $(-8, -9)$

7) Vertices : $(4, -2)$, $(4, -12)$

Co-vertices: $(5, -7)$, $(3, -7)$

3) Center: $(-5, 3)$, Vertex: $(-5, 14)$

Co-vertex: $(2, 3)$

8) Center: $(1, 2)$, Vertex: $(1, 14)$

Co-vertex: $(5, 2)$

4) Vertices : $(4, 0)$, $(-18, 0)$

Co-vertices: $(-7, 10)$, $(-7, -10)$

9) Center: $(-4, 1)$, Vertex: $(-4, 8)$

Co-vertex: $(-3, 1)$

5) Vertices : $(11, -7)$, $(-11, -7)$

Co-vertices: $(0, 1)$, $(0, -15)$

10) Center: $(-3, 5)$, Vertex: $(8, 5)$

Co-vertex: $(-3, 11)$



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Writing Ellipses Equations

Use the given information to write the standard form equation of the ellipse.

- 1) Center: (0 , 0) , Vertex: (0 , 7)

Co-vertex: (1 , 0)

$$\frac{x^2}{1} + \frac{y^2}{49} = 1$$

- 6) Vertices : (7 , -8) , (-9 , -8)

Co-vertices: (-1 , -5) , (-1 , -11)

$$\frac{(x + 1)^2}{64} + \frac{(y + 8)^2}{9} = 1$$

- 2) Vertices : (2 , -3) , (-18 , -3)

Co-vertices: (-8 , 3) , (-8 , -9)

$$\frac{(x + 8)^2}{100} + \frac{(y + 3)^2}{36} = 1$$

- 7) Vertices : (4 , -2) , (4 , -12)

Co-vertices: (5 , -7) , (3 , -7)

$$\frac{(x - 4)^2}{1} + \frac{(y + 7)^2}{25} = 1$$

- 3) Center: (-5 , 3) , Vertex: (-5 , 14)

Co-vertex: (2 , 3)

$$\frac{(x + 5)^2}{49} + \frac{(y - 3)^2}{121} = 1$$

- 8) Center: (1 , 2) , Vertex: (1 , 14)

Co-vertex: (5 , 2)

$$\frac{(x - 1)^2}{16} + \frac{(y - 2)^2}{144} = 1$$

- 4) Vertices : (4 , 0) , (-18 , 0)

Co-vertices: (-7 , 10) , (-7 , -10)

$$\frac{(x + 7)^2}{121} + \frac{y^2}{100} = 1$$

- 9) Center: (-4 , 1) , Vertex: (-4 , 8)

Co-vertex: (-3 , 1)

$$\frac{(x + 4)^2}{1} + \frac{(y - 1)^2}{49} = 1$$

- 5) Vertices : (11 , -7) , (-11 , -7)

Co-vertices: (0 , 1) , (0 , -15)

$$\frac{x^2}{121} + \frac{(y + 7)^2}{64} = 1$$

- 10) Center: (-3 , 5) , Vertex: (8 , 5)

Co-vertex: (-3 , 11)

$$\frac{(x + 3)^2}{121} + \frac{(y - 5)^2}{36} = 1$$



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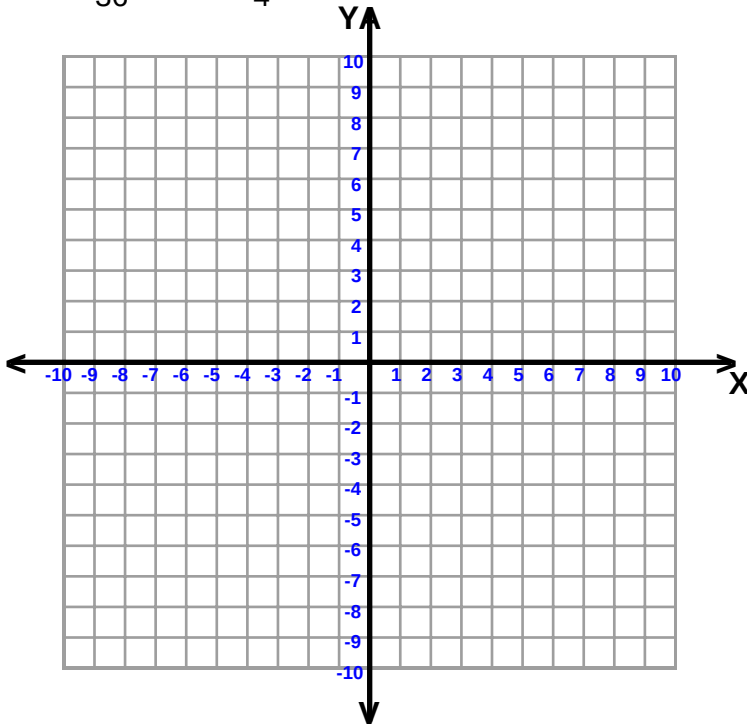
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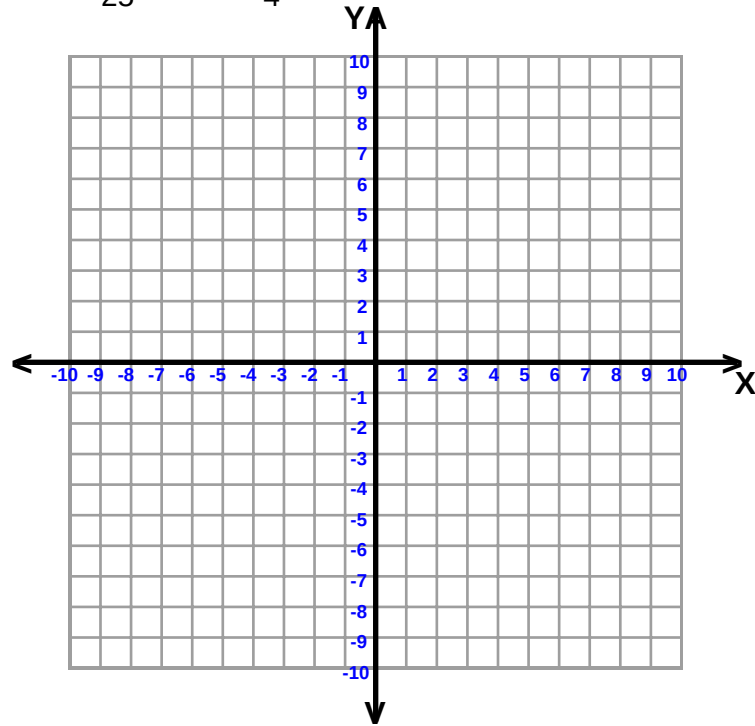
Graphing Ellipses Equations

Graph the given equation.

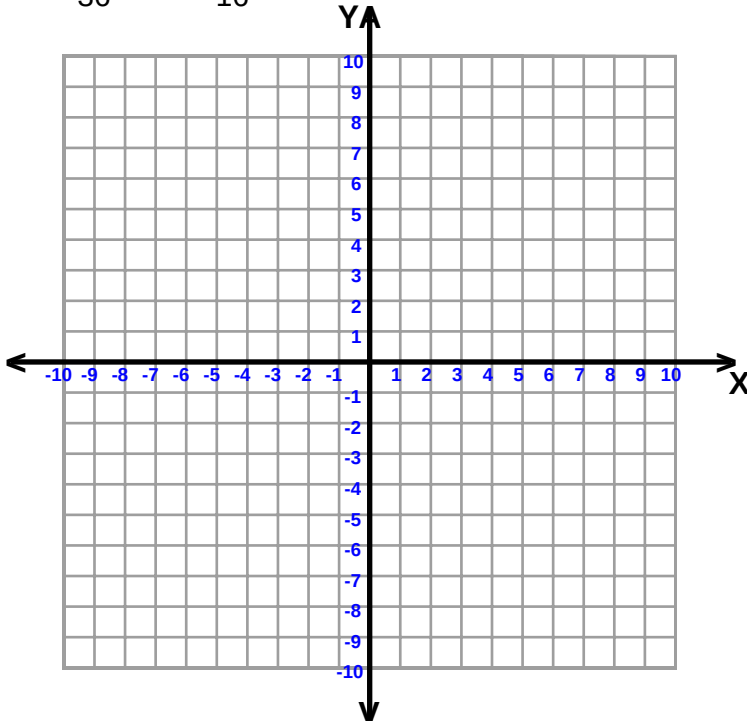
1) $\frac{(x - 3)^2}{36} + \frac{(y - 2)^2}{4} = 1$



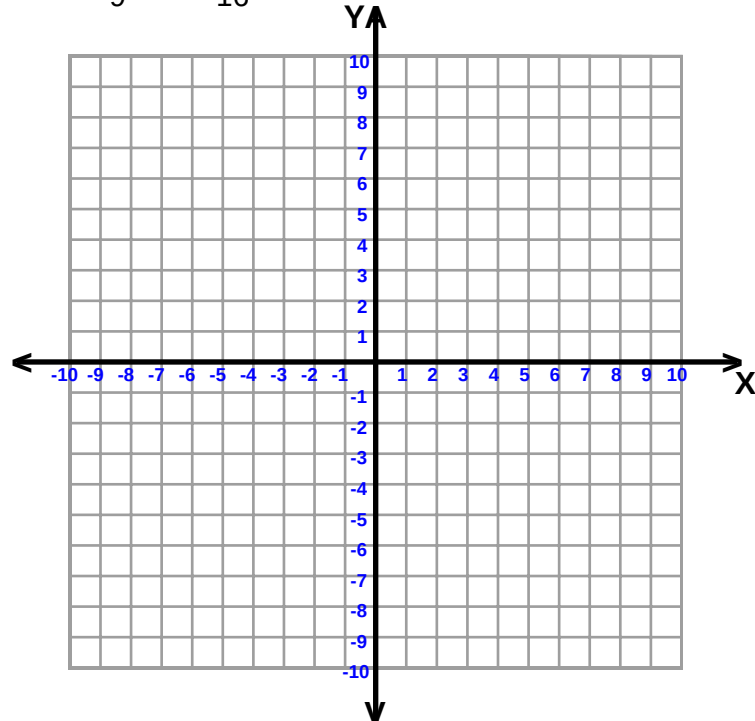
2) $\frac{(x - 1)^2}{25} + \frac{(y + 2)^2}{4} = 1$



3) $\frac{x^2}{36} + \frac{(y + 2)^2}{16} = 1$



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



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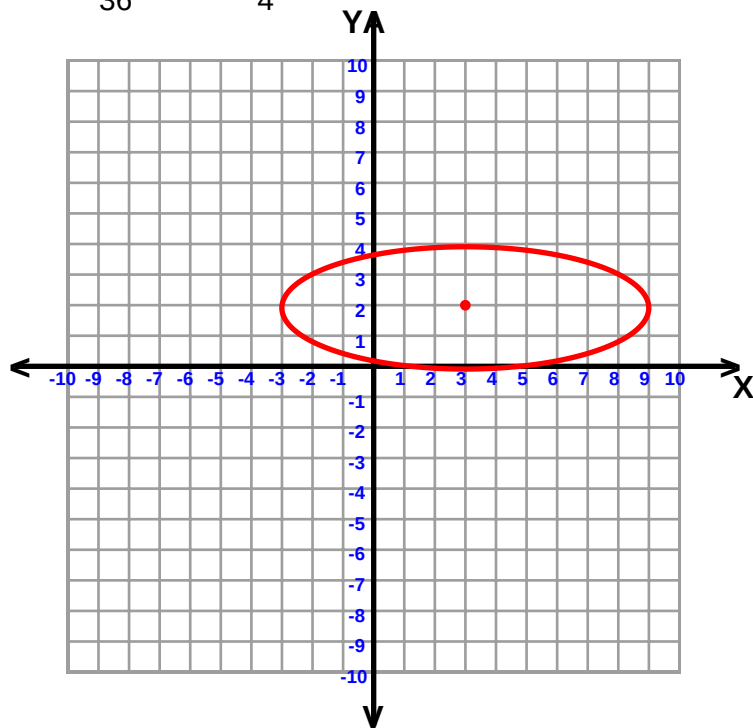
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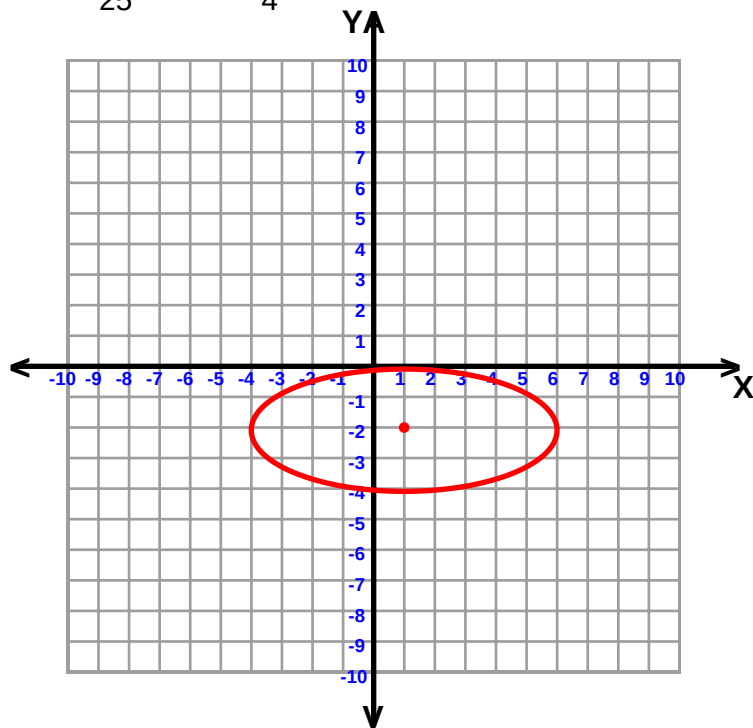
Graphing Ellipses Equations

Graph the given equation.

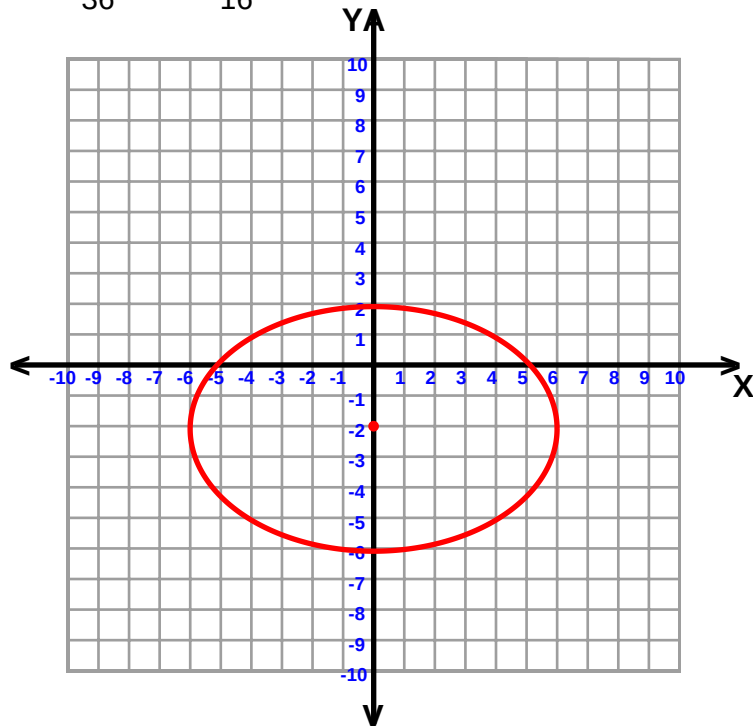
1) $\frac{(x - 3)^2}{36} + \frac{(y - 2)^2}{4} = 1$



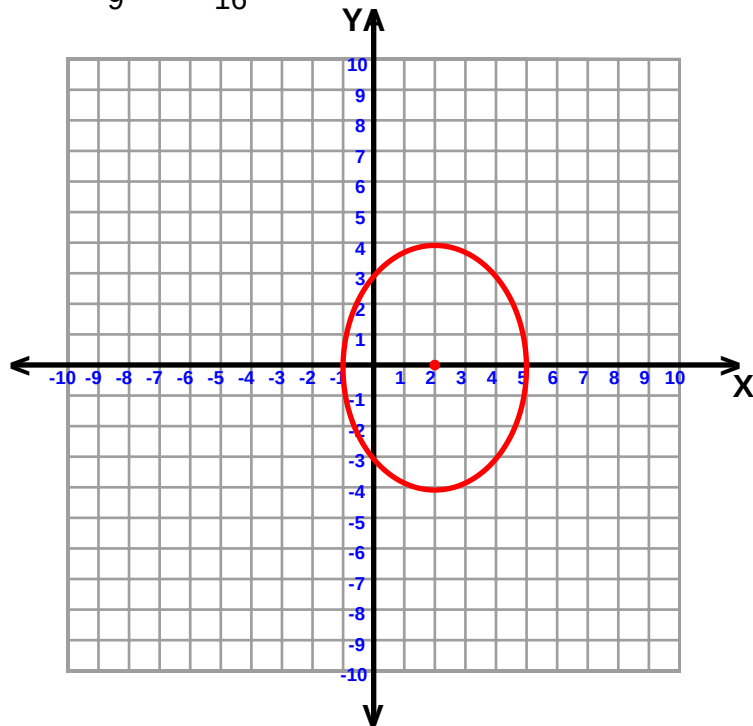
2) $\frac{(x - 1)^2}{25} + \frac{(y + 2)^2}{4} = 1$



3) $\frac{x^2}{36} + \frac{(y + 2)^2}{16} = 1$



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



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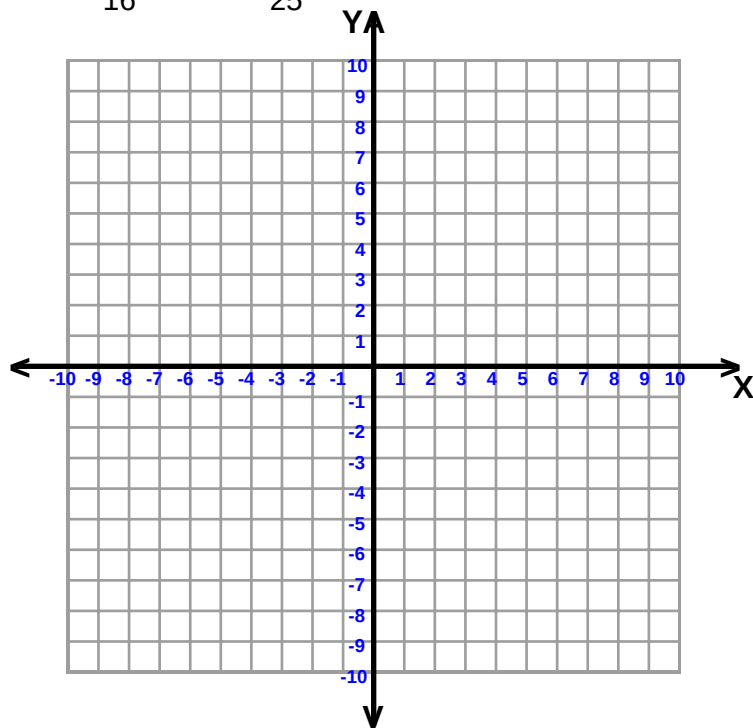
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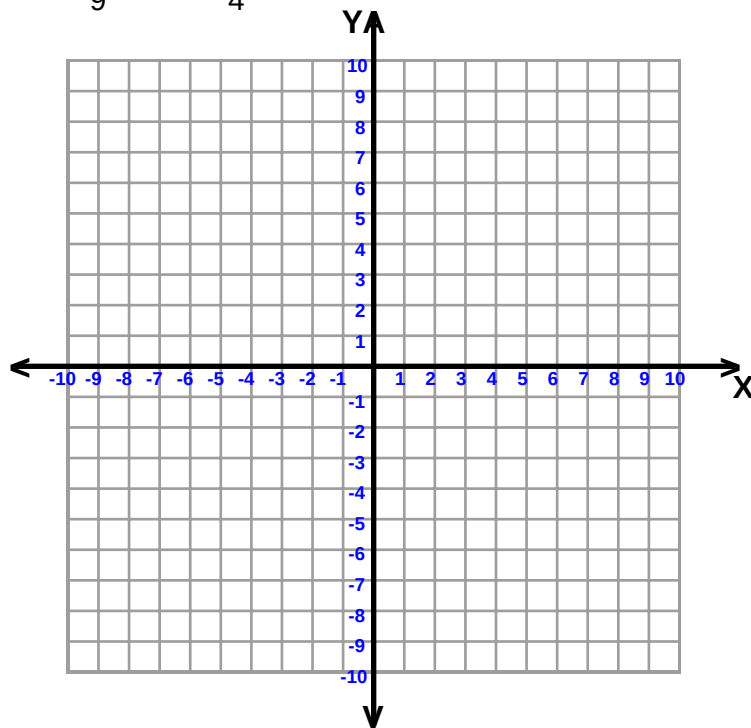
Graphing Ellipses Equations

Graph the given equation.

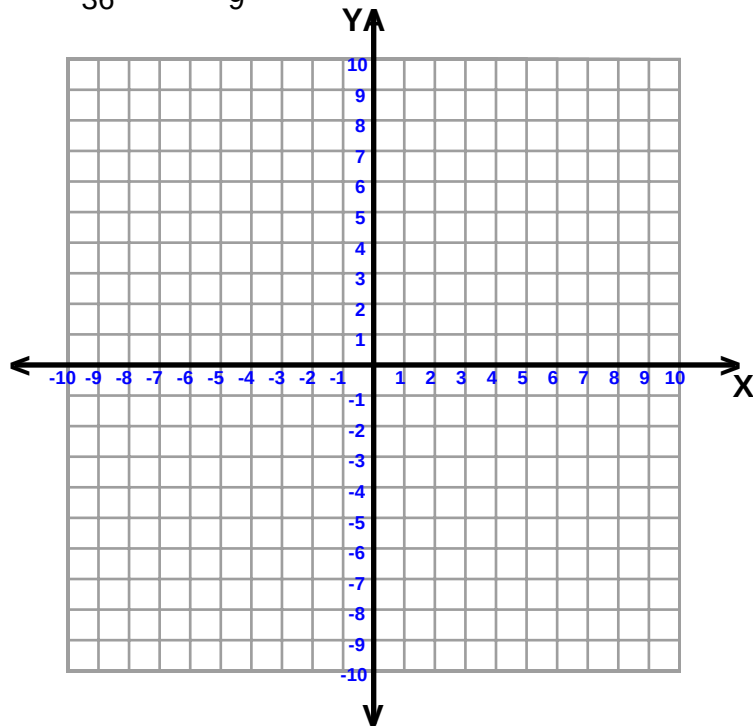
1) $\frac{(x + 2)^2}{16} + \frac{(y + 3)^2}{25} = 1$



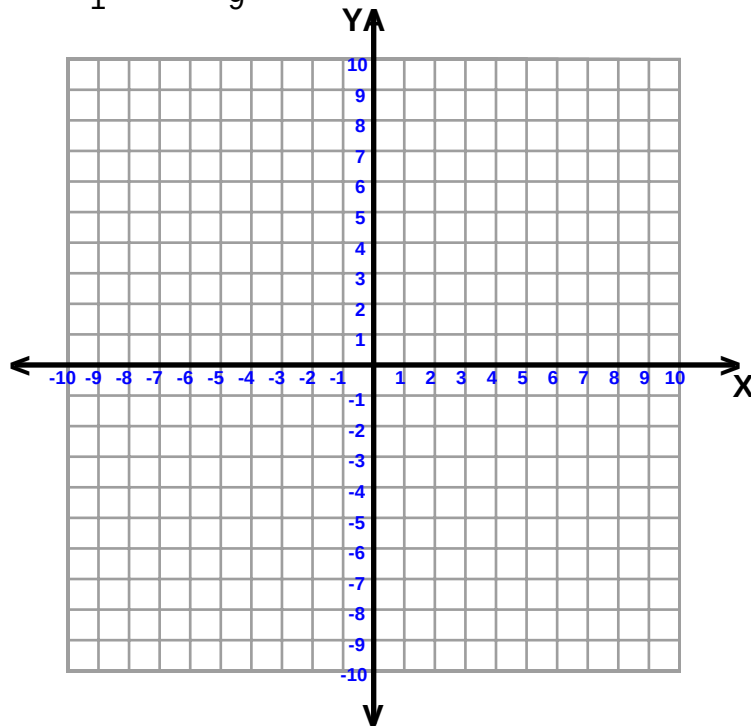
2) $\frac{x^2}{9} + \frac{(y + 2)^2}{4} = 1$



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



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



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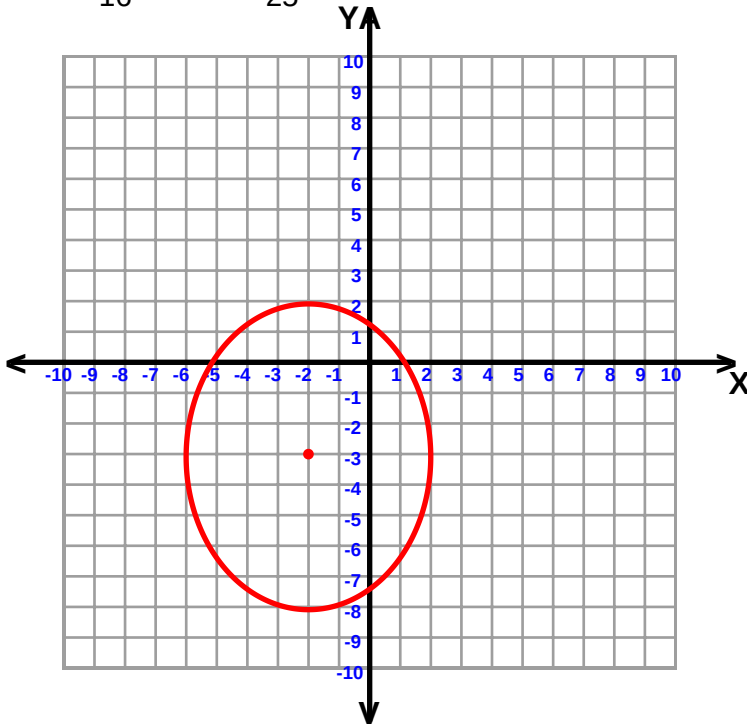
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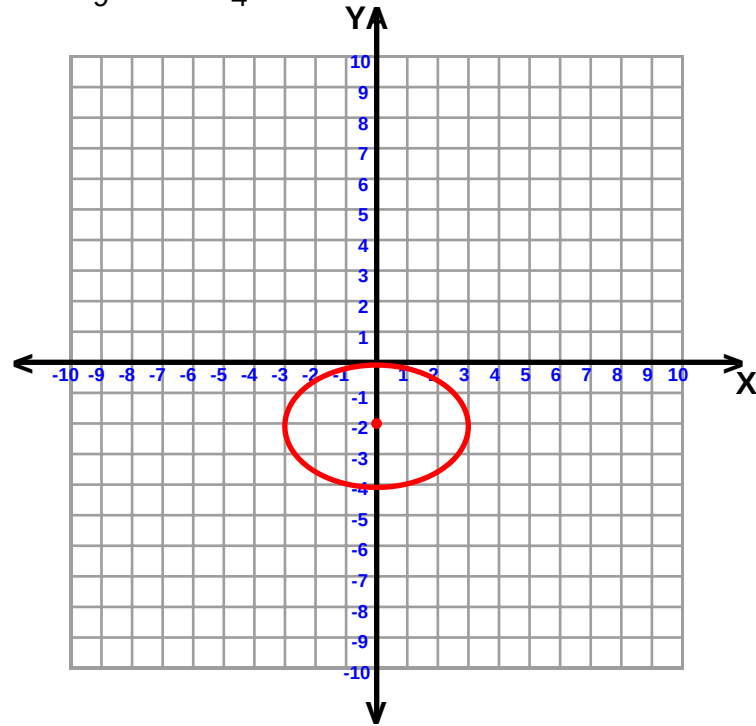
Graphing Ellipses Equations

Graph the given equation.

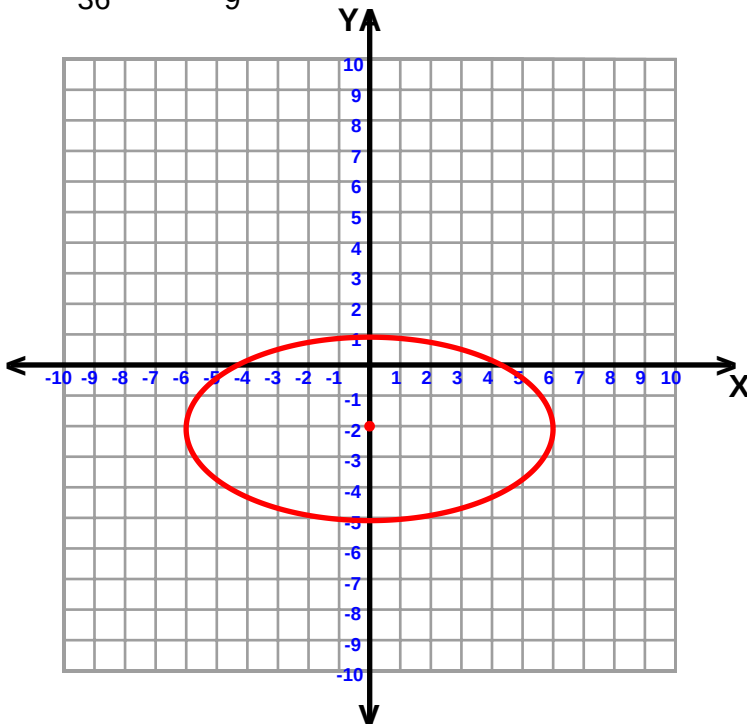
1) $\frac{(x + 2)^2}{16} + \frac{(y + 3)^2}{25} = 1$



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



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



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

