

Pre-Calculus Lessons & Assignments for Day 11-15

Day 11

- Note: Ignore any focus (or foci) or eccentricity problems, if mentioned.
- Watch and take notes on paper with the video:
<https://www.khanacademy.org/math/precalculus/x9e81a4f98389efdf:conics/x9e81a4f98389efdf:ellipse-center-radii/v/conic-sections-intro-to-ellipses>
- Do the 4 practice problems at:
<https://www.khanacademy.org/math/precalculus/x9e81a4f98389efdf:conics/x9e81a4f98389efdf:ellipse-center-radii/e/center-and-radii-of-an-ellipse-and-its-graph>
- Do the 4 practice problems at:
https://www.khanacademy.org/math/precalculus/x9e81a4f98389efdf:conics/x9e81a4f98389efdf:ellipse-center-radii/e/equation_of_an_ellipse
- Screenshot your results for each and save.

Day 12

- Watch and take notes with the videos:
<https://www.khanacademy.org/math/precalculus/x9e81a4f98389efdf:conics/x9e81a4f98389efdf:ellipse-center-radii/v/ellipse-standard-equation-from-graph> and
<https://www.khanacademy.org/math/precalculus/x9e81a4f98389efdf:conics/x9e81a4f98389efdf:ellipse-center-radii/v/ellipse-graph-from-standard-equation>
- Do the 4 practice problems at:
<https://www.khanacademy.org/math/precalculus/x9e81a4f98389efdf:conics/x9e81a4f98389efdf:ellipse-center-radii/e/equation-of-an-ellipse-from-its-graph>
- Screenshot your results and save.

Day 13

- Complete the worksheets titled Day 13 Assignment (2 pages).

Day 14

- Complete the worksheets titled Day 14 Assignment (2 pages).

Day 15

- Complete the worksheets titled Day 15 Assignment (2 pages).

Name : _____ Score : _____

Teacher : _____ Date : _____

Properties of Ellipses

Identify the Center, Vertices, Co-Vertices, Major Axis Length, and Minor Axis Length.

1) $\frac{(x + 6)^2}{100} + \frac{y^2}{36} = 1$

Center =
Vertices =
Co-vertices =
Major Axis Length =
Minor Axis Length =

3) $\frac{(x + 6)^2}{100} + \frac{(y + 2)^2}{25} = 1$

Center =
Vertices =
Co-vertices =
Major Axis Length =
Minor Axis Length =

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

Center =
Vertices =
Co-vertices =
Major Axis Length =
Minor Axis Length =

4) $\frac{(x - 7)^2}{25} + \frac{(y + 1)^2}{9} = 1$

Center =
Vertices =
Co-vertices =
Major Axis Length =
Minor Axis Length =

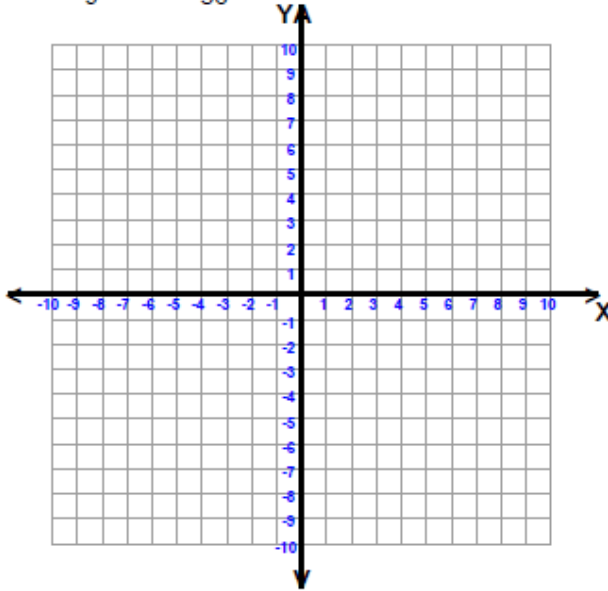
Name : _____ Score : _____

Teacher : _____ Date : _____

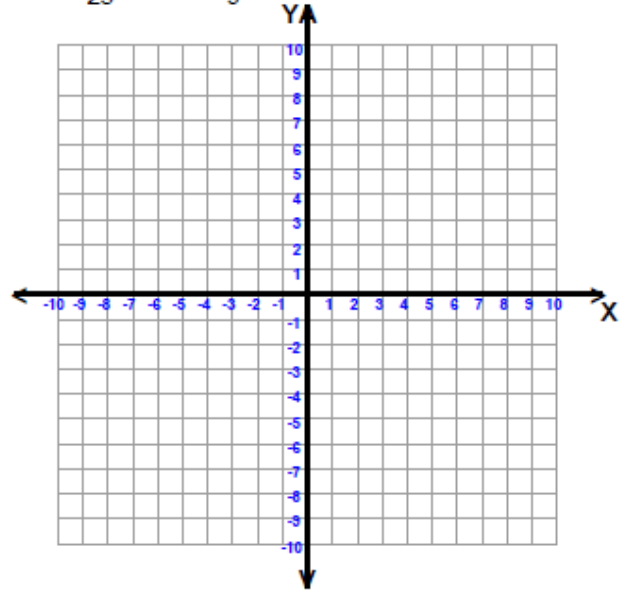
Graphing Ellipses Equations

Graph the given equation.

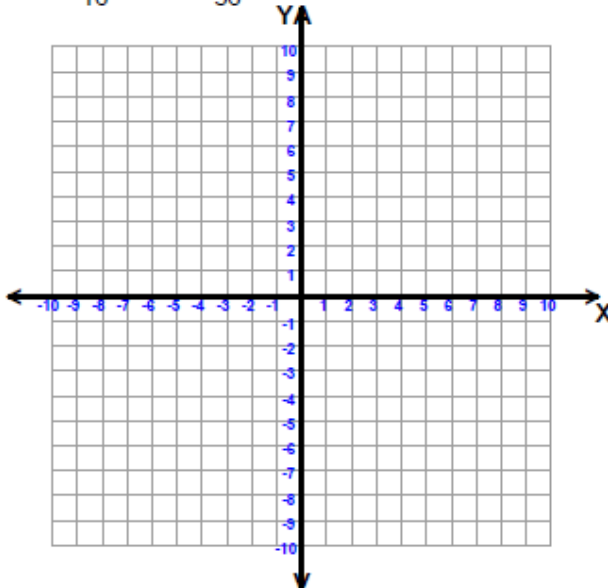
1) $\frac{(x - 1)^2}{9} + \frac{(y - 3)^2}{36} = 1$



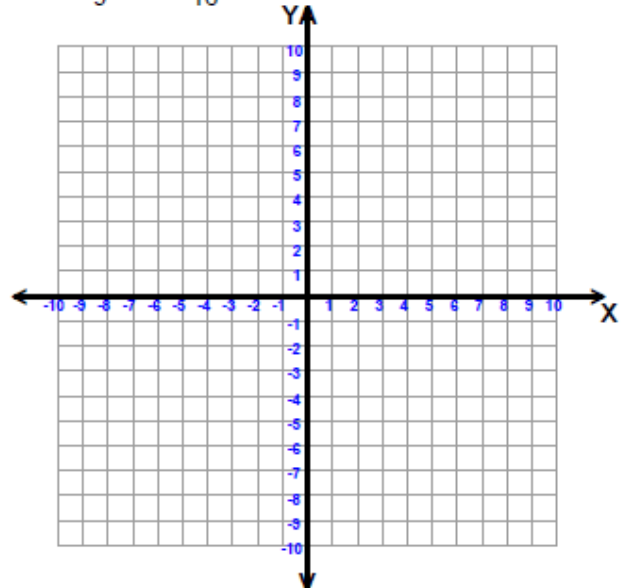
2) $\frac{(x + 2)^2}{25} + \frac{(y - 3)^2}{9} = 1$



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



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



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Properties of Ellipses

Identify the Center, Vertices, Co-Vertices, Major Axis Length, and Minor Axis Length.

1) $\frac{(x + 8)^2}{81} + \frac{(y - 5)^2}{49} = 1$

Center =

Vertices =

Co-vertices =

Major Axis Length =

Minor Axis Length =

3) $\frac{(x - 8)^2}{144} + \frac{(y + 3)^2}{100} = 1$

Center =

Vertices =

Co-vertices =

Major Axis Length =

Minor Axis Length =

2) $\frac{(x + 6)^2}{64} + \frac{(y - 3)^2}{49} = 1$

Center =

Vertices =

Co-vertices =

Major Axis Length =

Minor Axis Length =

4) $\frac{(x - 7)^2}{64} + \frac{(y + 3)^2}{25} = 1$

Center =

Vertices =

Co-vertices =

Major Axis Length =

Minor Axis Length =

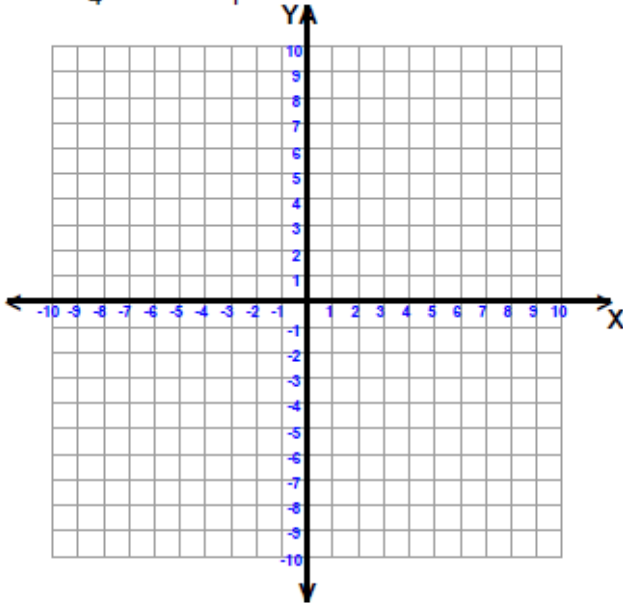
Name : _____ Score : _____

Teacher : _____ Date : _____

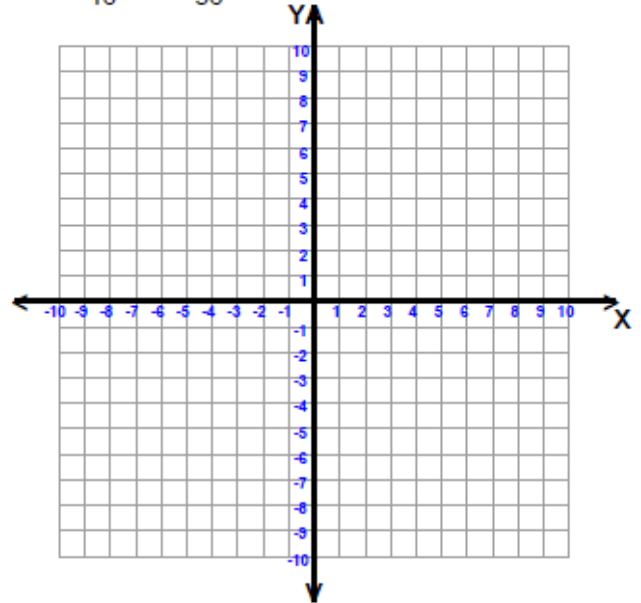
Graphing Ellipses Equations

Graph the given equation.

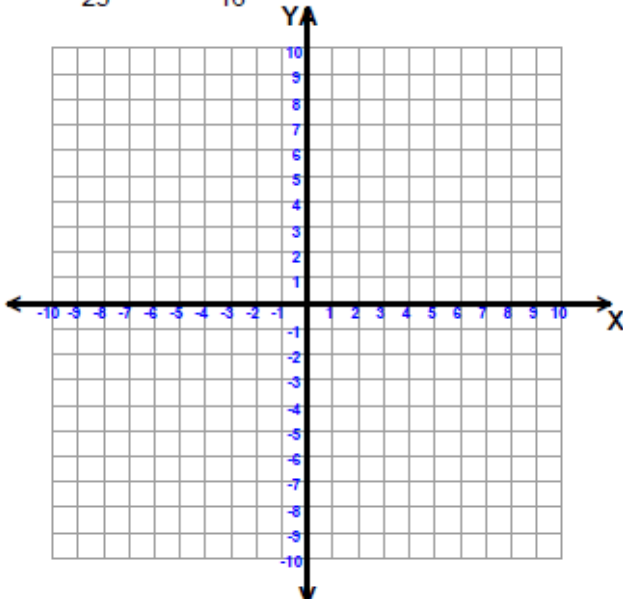
1) $\frac{(x + 2)^2}{4} + \frac{(y + 1)^2}{1} = 1$



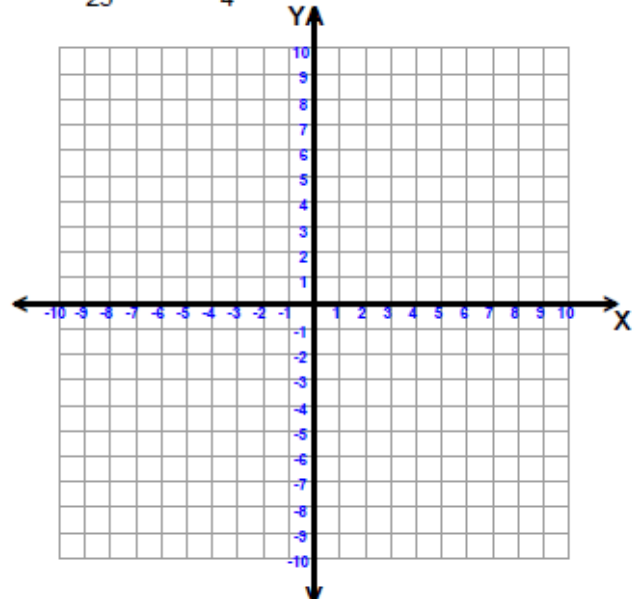
2) $\frac{(x + 2)^2}{16} + \frac{y^2}{36} = 1$



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



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



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Properties of Ellipses

Identify the Center, Vertices, Co-Vertices, Major Axis Length, and Minor Axis Length.

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

Center =
Vertices =
Co-vertices =
Major Axis Length =
Minor Axis Length =

3) $\frac{(x + 1)^2}{64} + \frac{y^2}{144} = 1$

Center =
Vertices =
Co-vertices =
Major Axis Length =
Minor Axis Length =

2) $\frac{(x - 6)^2}{49} + \frac{(y + 6)^2}{81} = 1$

Center =
Vertices =
Co-vertices =
Major Axis Length =
Minor Axis Length =

4) $\frac{(x + 7)^2}{9} + \frac{(y + 5)^2}{16} = 1$

Center =
Vertices =
Co-vertices =
Major Axis Length =
Minor Axis Length =

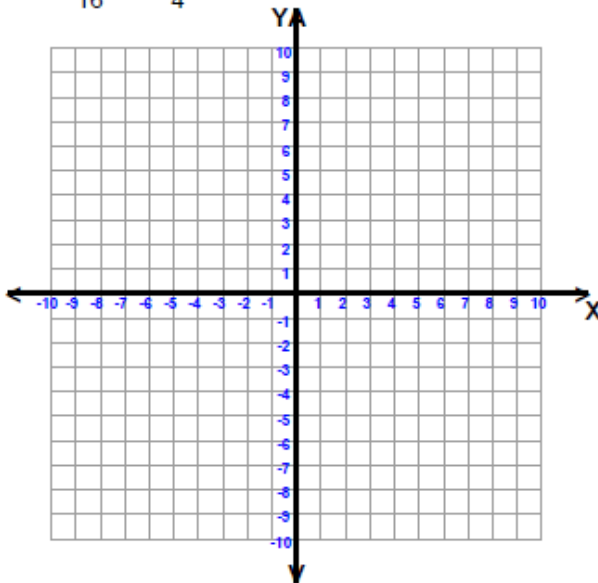
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Teacher : _____ Date : _____

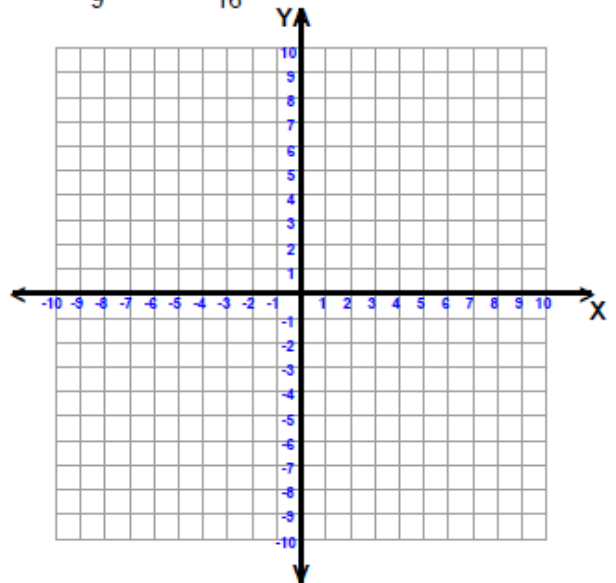
Graphing Ellipses Equations

Graph the given equation.

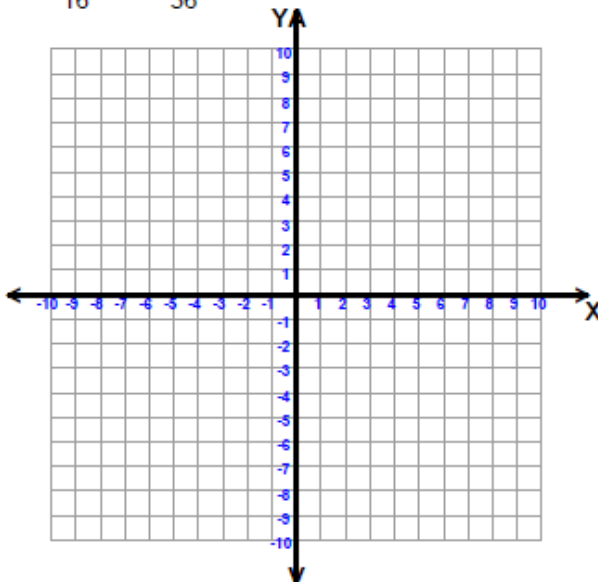
1) $\frac{(x - 1)^2}{16} + \frac{y^2}{4} = 1$



2) $\frac{(x + 3)^2}{9} + \frac{(y - 2)^2}{16} = 1$



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



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

