



Math Virtual Learning

College Algebra

May 7, 2020



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Lesson: May 7, 2020

Objective/Learning Target: Students will be able to identify the conic from an equation or graph.



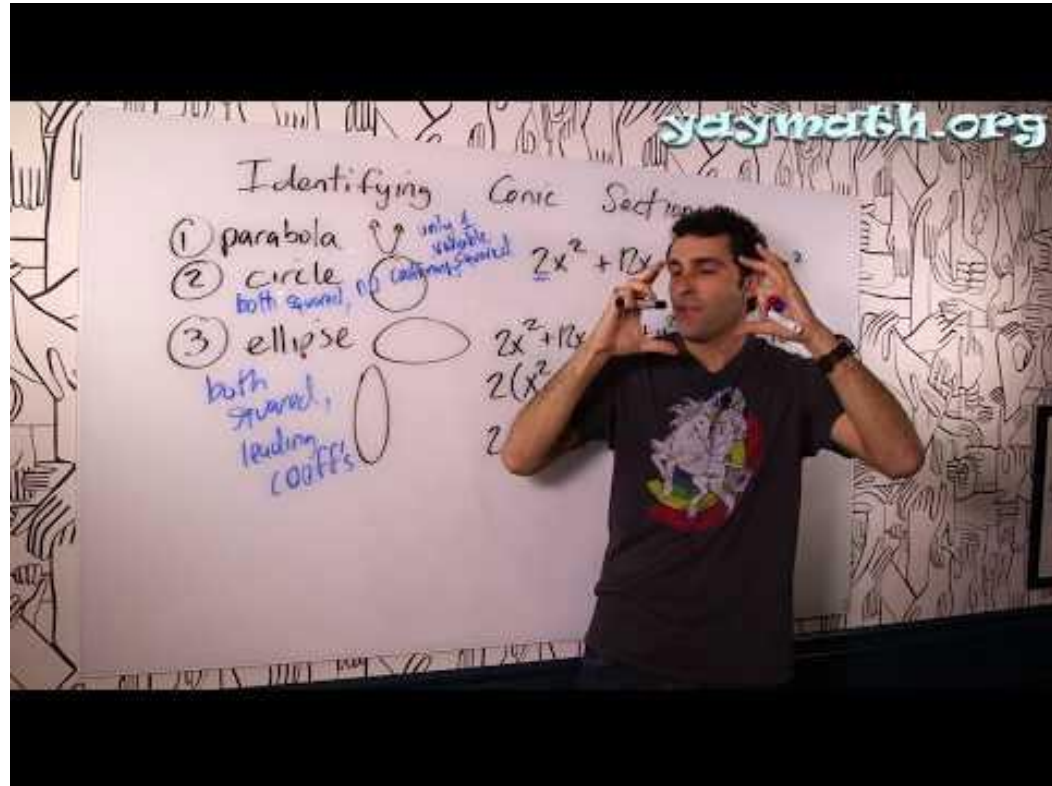
Warm Up Activity:

Click the link below and practice facts
on conic sections

[Conic Facts](#)

Lesson:

Watch the video over identifying conics. We encourage you to have your own sheet of paper out and work along with the video.





Practice:

Work through the practice problems at the links

[Conics Quiz](#)

[Identify from Equation](#)

Additional Practice:

- 1) Identify the conic by writing the equation in standard form.

$$4x^2 + 4y^2 + 40x + 16y + 40 = 0$$

A) $(x + 5)^2 + (y + 2)^2 = 19$; circle

B) $(x + 5)^2 + (y + 2)^2 = 39$; circle

C) $\frac{(x + 5)^2}{\frac{11}{4}} + \frac{(y + 2)^2}{\frac{11}{4}} = 1$; ellipse

Additional Practice:

2) Identify the conic by writing the equation in standard form.

$$10y^2 - 20x^2 + 60y + 160x - 255 = 0$$

A) $\frac{(y-3)^2}{\frac{5}{2}} - \frac{(x-4)^2}{\frac{5}{4}} = 1$; ellipse

B) $\frac{(y+3)^2}{\frac{5}{2}} - \frac{(x-4)^2}{\frac{5}{4}} = 1$; hyperbola

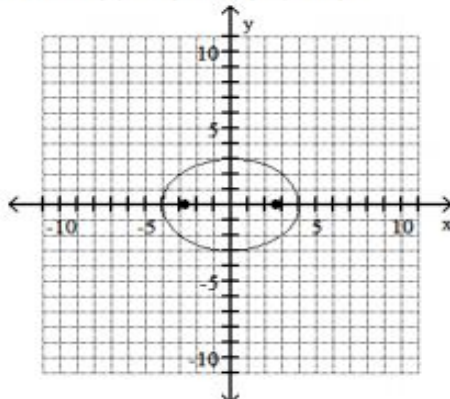
C) $\frac{(y+3)^2}{\frac{97}{2}} - \frac{(x-4)^2}{\frac{97}{4}} = 1$; hyperbola

Additional Practice:

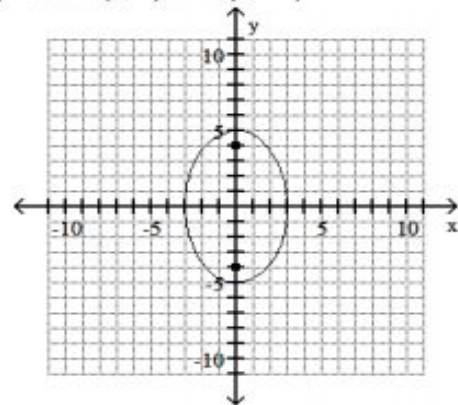
3) Match the equation to the graph.

$$4x^2 - 9y^2 = 36$$

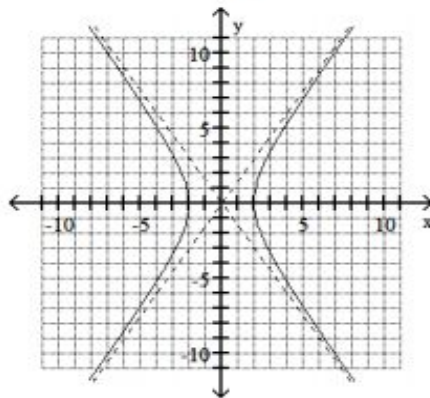
A) foci at $(\sqrt{7}, 0)$ and $(-\sqrt{7}, 0)$



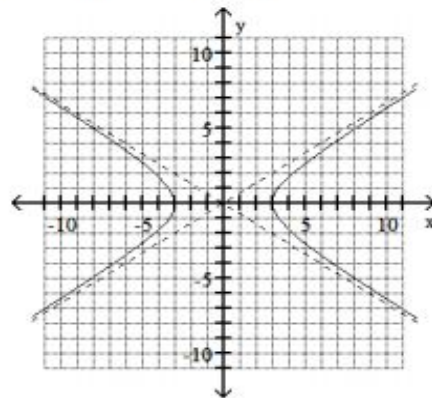
B) foci at $(0, 4)$ and $(0, -4)$



C) Asymptotes: $y = \pm \frac{3}{2}x$



D) Asymptotes: $y = \pm \frac{2}{3}x$





Additional Practice Answers:

1) A

2) B

3) D