



# Math Virtual Learning

# College Algebra

May 5, 2020



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## Lesson: May 5, 2020

**Objective/Learning Target:** Students will be able to identify and graph the conic parabolas.



## Warm Up Activity:

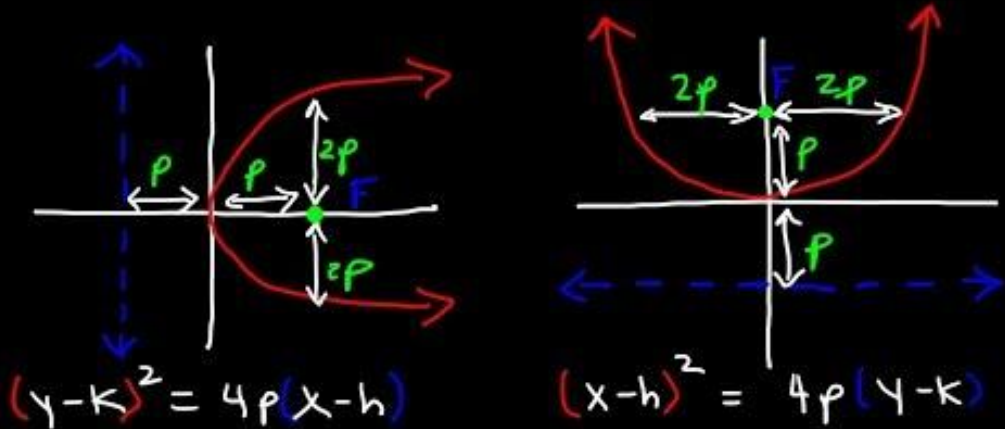
Click the link below and practice some completing the square problems

[Complete the Square](#)

## Lesson:

Watch the video over parabolas. You can stop at 7:30 or continue for more examples. We encourage you to have your own sheet of paper out and work along with the video.

## Parabolas





## Practice:

Work through the practice problems at the link

[Practice Problems](#)

## Additional Practice:

- 1) Find the standard form of the equation of the parabola with the given characteristic and vertex at the origin.

focus:  $(0, 7)$

A)  $x^2 = 28y$

B)  $x^2 = 7y$

C)  $x^2 = -7y$

D)  $y^2 = 28x$

E)  $y^2 = 7x$

## Additional Practice:

2) Find the equation of the parabola with vertex at (5, 4) and focus at (-3, 4).

A)  $(y - 4)^2 = -32(x - 5)$

B)  $(y - 4)^2 = 32(x - 5)$

C)  $(y + 4)^2 = 32(x + 5)$

D)  $(y + 4)^2 = -32(x - 5)$

E)  $(y - 4)^2 = 8(x - 5)$

## Additional Practice:

- 3) Find the vertex and focus of the parabola.

$$y^2 = -\frac{9}{8}x$$

A) vertex:  $\left(0, -\frac{5}{4}\right)$  focus:  $\left(-\frac{9}{8}, -\frac{9}{8}\right)$

B) vertex:  $(0, 0)$  focus:  $\left(0, -\frac{9}{8}\right)$

C) vertex:  $(0, 0)$  focus:  $\left(-\frac{9}{8}, 0\right)$

D) vertex:  $(0, 0)$  focus:  $\left(-\frac{9}{32}, 0\right)$





## Additional Practice Answers:

1) A

2) A

3) D