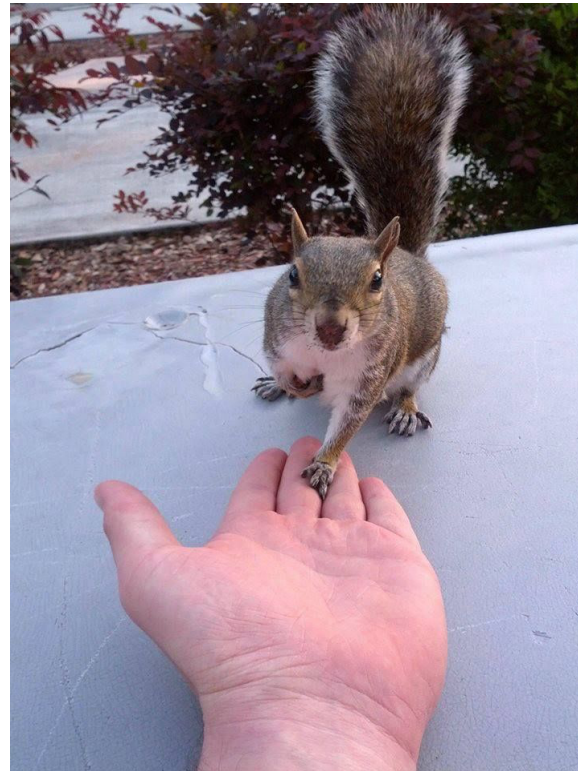


The Factoring-Parabola Connection



By the end of this lesson, I will be able to answer the following questions...

1. How are factoring quadratics and graphing parabolas connected?
2. How do I apply the Zero Product Property?

Vocabulary

Zero Product Property

If you have TWO unknown values that multiply to ZERO, then one OR BOTH of the values MUST be ZERO.

$$A \cdot B = 0$$

“A” could be 0...

AND/OR “B” could be 0.

Prerequisite Skills with Practice

Finding a y-intercept - Let the x value(s) equal to zero

$$y = x^2 - 5x + 4$$

$$y = (0)^2 - 3(0) + 4$$

$$y = 4$$

Finding an x-intercept(s)- Let the y values equal to zero

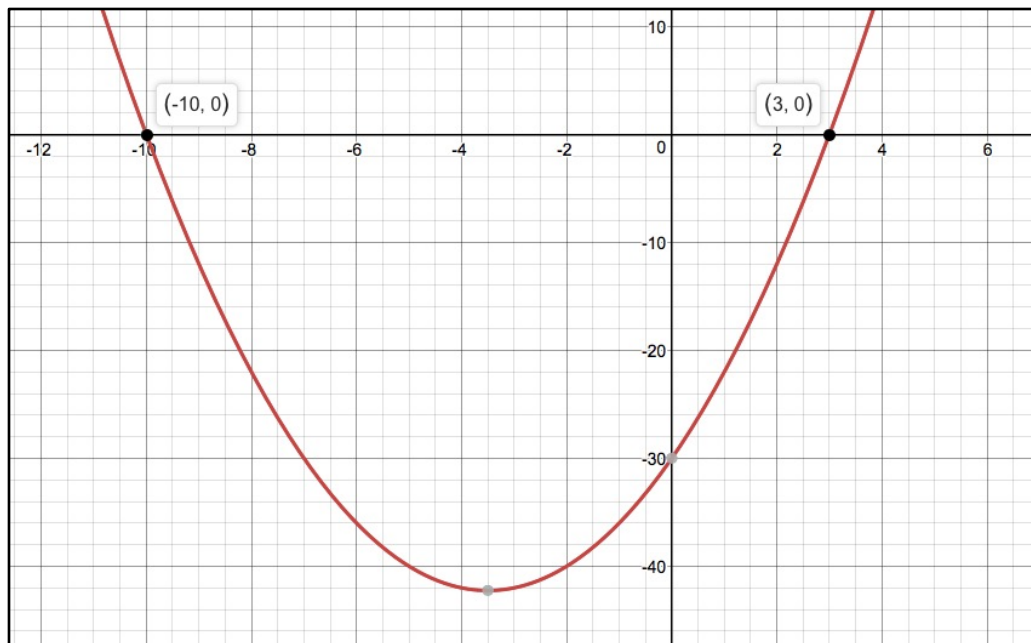
$$0 = x^2 - 5x + 4$$

?

Find the x-intercepts of the parabola

$$y = x^2 + 7x - 30$$

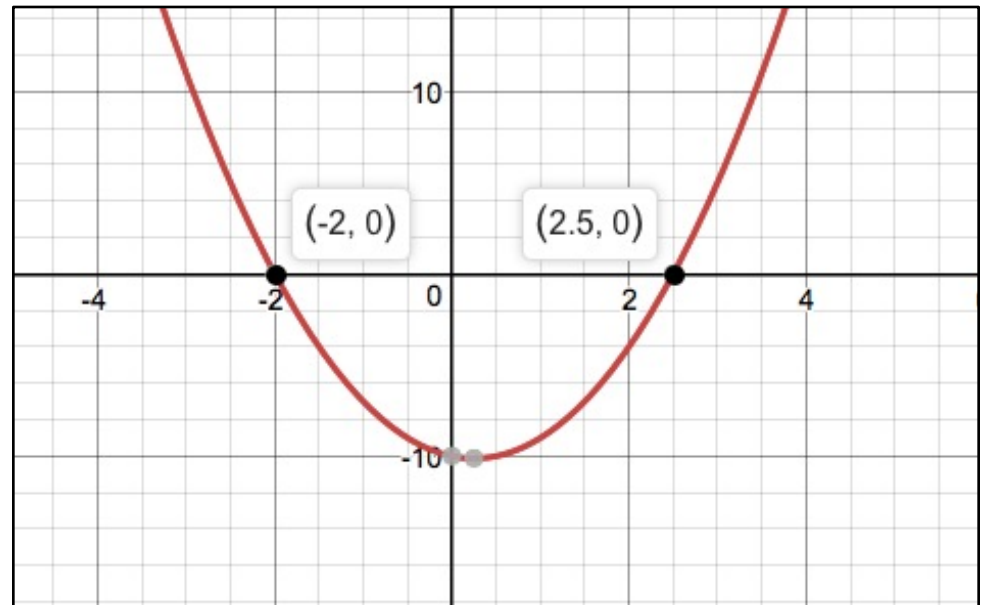
using the zero product property.



Find the x-intercepts of the parabola

$$y = 2x^2 - x - 10$$

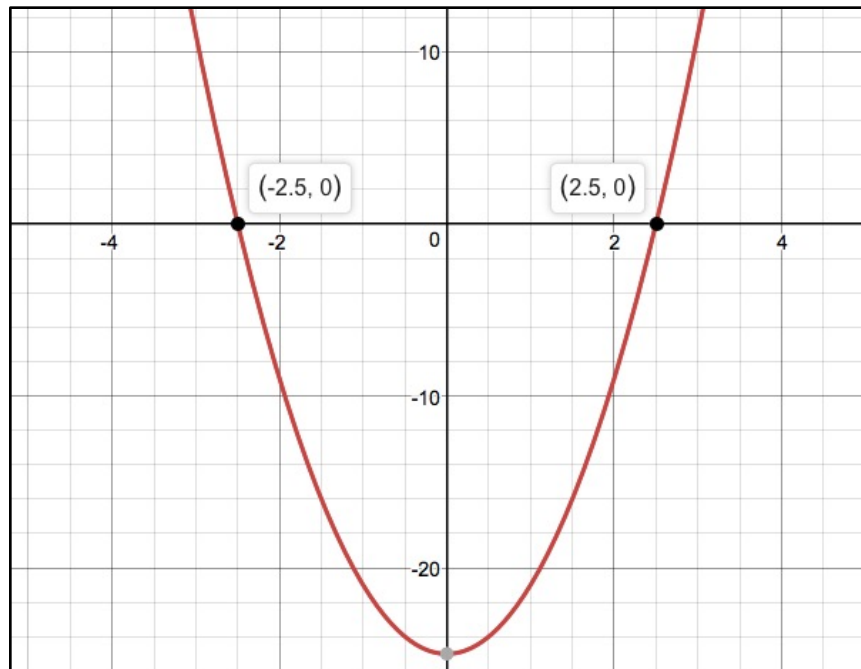
using the zero product property.



Find the x-intercepts of the parabola

$$y = 4x^2 - 25$$

using the zero product property.



THE END



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