Inspiring Greatness

ISD

INDEPENDENCE SCHOOL DISTRICT

Math Virtual Learning

Algebra 1 - Semester 2

April 20, 2020

Algebra 1 - Semester 2
Lesson: April 20, 2020

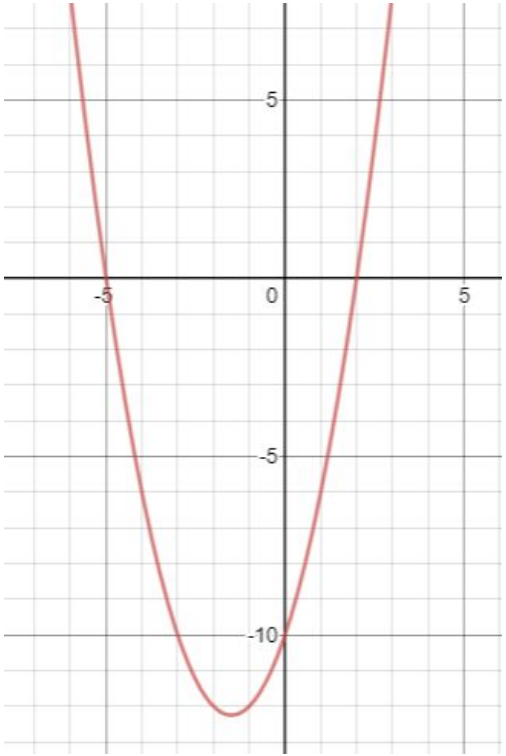
Objective/Learning Target:

Students will be able to use technology to find non-integer solutions to quadratic functions.

Let's Get Started

What are the solutions to the function graphed on the right?

How did you know that even though you weren't given the equation for the function?



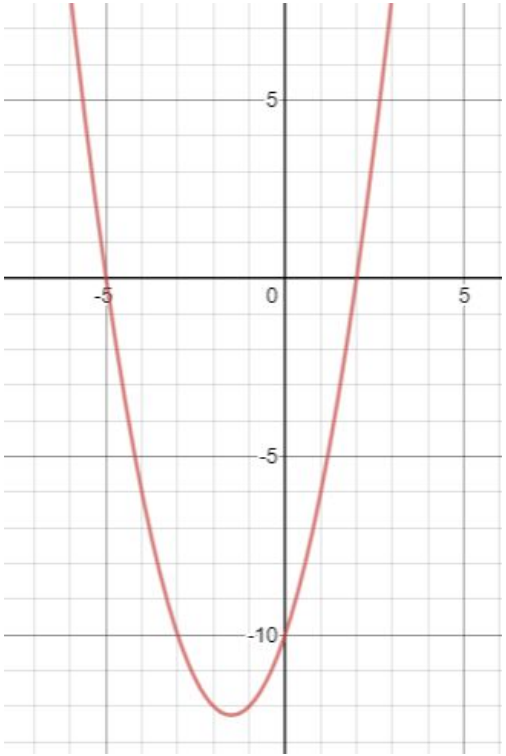
Let's Get Started ANSWER

What are the solutions to the function graphed on the right?

x = -5 and x = 2

How did you know that even though you weren't given the equation for the function?

The solutions to a quadratic are the same as the x-intercept



Lesson Activity

Today we are going to explore how to use technology to solve quadratic functions that have decimal solutions.

If you need a reminder on how to use Desmos.com, Watch this video on the Desmos.com graphing tool

Lesson Activity

Review on how to solve a quadratic from a graph using Desmos.com

Fill in the blanks for each step

1. Make sure the equation says = _____
2. _____ the equation into Desmos.com (without the =0)
3. Click on the _____ where the graph intersect the x-axis
4. Use the _____ coordinates as your solutions

Lesson Activity ANSWERS

Fill in the blanks for how to solve a quadratic from a graph

1. Make sure the equation says = 0
2. Type the equation into Desmos.com (without the =0)
3. Click on the Points where the graph intersect the x-axis
4. Use the x coordinates as your solutions

Lesson Practice #1

Use Desmos.com to solve each quadratic equation

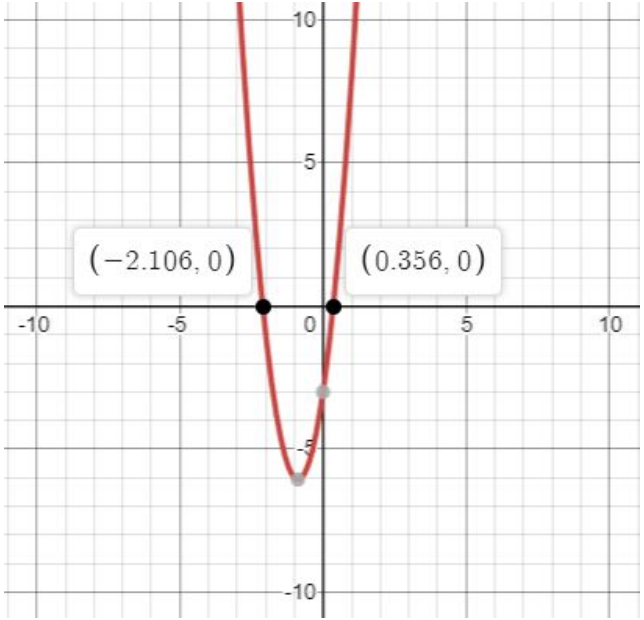
$$4x^2 + 7x - 2 = 0$$

Lesson Practice #1 ANSWER

Use Desmos.com to solve each quadratic equation

$4x^2 + 7x - 2 = 0$

- ✓ It is equal to 0
- ✓ The graph is what is graphed in Desmos.com
- ✓ Click on the x-intercepts
- ✓ Solutions are x = -2.106 and x = 0.356



Lesson Practice #2

Use Desmos.com to solve each quadratic equation

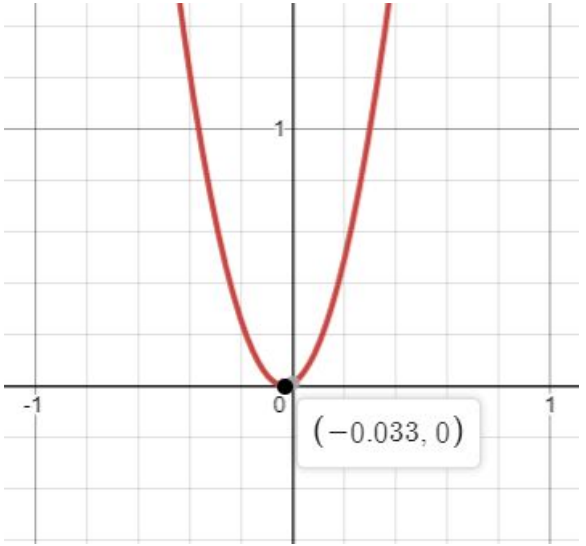
$$9x^2 + 0.6x + 0.01 = 0$$

Lesson Practice #2 ANSWER

Use Desmos.com to solve each quadratic equation

$9x^2 + 0.6x + 0.01 = 0$

- ✓ It is equal to 0
- ✓ The graph is what is graphed in Desmos.com
- ✓ Click on the x-intercepts (there is only one)
- ✓ Solution is $x = -0.033$



Lesson Practice #3

Use Desmos.com to solve each quadratic equation

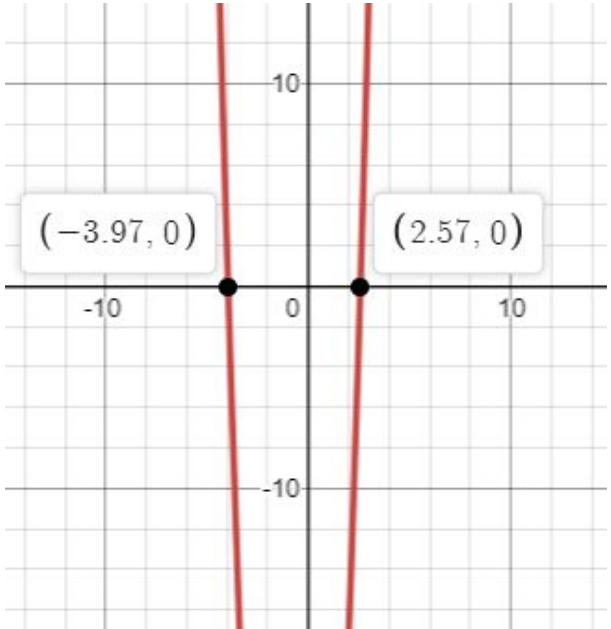
$$5x^2 - 7x = -51$$

Lesson Practice #3 ANSWER

Use Desmos.com to solve each quadratic equation

$5x^2 + 7x = 51$

- ✓ It is NOT equal to 0 → $5x^2 + 7x - 51 = 0$
- ✓ The graph is what is graphed in Desmos.com
- ✓ Click on the x-intercepts
- ✓ Solutions are $x = -3.97$ and $x = 2.57$



Lesson Pre-think

Why do you think using a graph to solve quadratic equations that have decimal answers may NOT be the best method? (HINT: There is not ONE right answer...just something to get you thinking ahead)