Math Virtual Learning

Algebra 1 - Semester 2

April 15, 2020

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Lesson: April 15, 2020

Objective/Learning Target:

Students will be able to use technology to graph equations
and identify their key points

Let's Get Started

Create a table with domain values 5, 6, 8, 9, 12 for the function y = 10x - 20

Let's Get Started ANSWER

Create a table with domain values 5, 6, 8, 9, 12 for the function y = 10x - 20

x	y
5	30
6	40
8	60
9	70
12	100

y = 10(5) - 20 = 30
y = 10(6) - 20 = 40
y = 10(8) - 20 = 60
y = 10(9) - 20 = 40
y = 10(12) - 20 = 100

Lesson Activity

Today we are going to explore how to use technology to help graph and create tables of linear functions.

Watch this video on the Desmos.com graphing tool

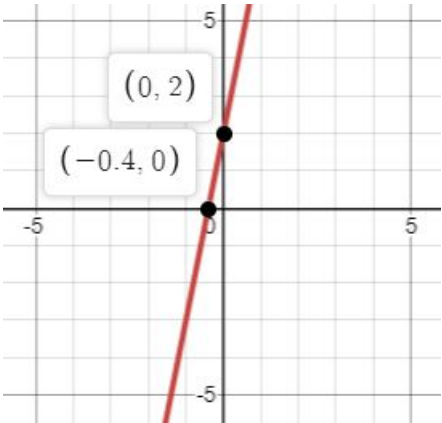# Lesson Practice Problem #1
Use the Desmos.com graphing tool to complete the table

Equation	Sketch of Graph	y-intercept	x-intercept(s)	Complete the table
y = 5x + 2				<table><tr><td>x</td><td>y</td></tr><tr><td>2</td><td></td></tr><tr><td>3</td><td></td></tr><tr><td>4</td><td></td></tr></table>

Lesson Practice Problem #1 ANSWER
Use the Desmos.com graphing tool complete the table

Equation	Sketch of Graph	y-intercept	x-intercept(s)	Complete the table
y = 5x + 2		(0, 2)	(-0.4, 0)	<table><tr><td>x</td><td>y</td></tr><tr><td>2</td><td>12</td></tr><tr><td>3</td><td>17</td></tr><tr><td>4</td><td>22</td></tr></table>
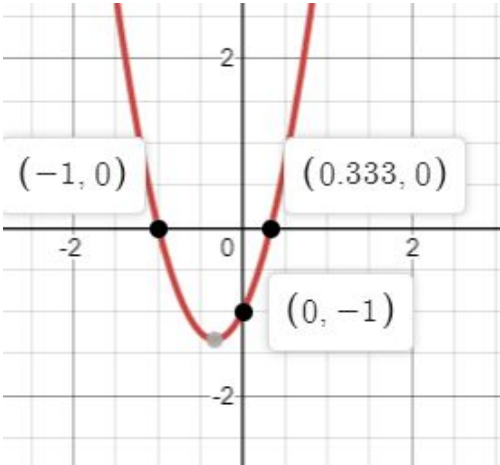
Lesson Practice Problem #2
Use the Desmos.com graphing tool complete the table

Equation	Sketch of Graph	y-intercept	x-intercept(s)	Complete the table
$y = 3x^2 + 2x - 1$				<table><tr><td>x</td><td>y</td></tr><tr><td>-5</td><td></td></tr><tr><td>0</td><td></td></tr><tr><td>2</td><td></td></tr></table>

Lesson Practice Problem #2 ANSWER
Use the Desmos.com graphing tool complete the table

Equation	Sketch of Graph	y-intercept	x-intercept(s)	Complete the table
$y = 3x^2 + 2x - 1$		(0, -1)	(-1, 0) and (⅓, 0) 0.333 = ⅓	<table><tr><td>x</td><td>y</td></tr><tr><td>-5</td><td>64</td></tr><tr><td>0</td><td>-1</td></tr><tr><td>2</td><td>15</td></tr></table>

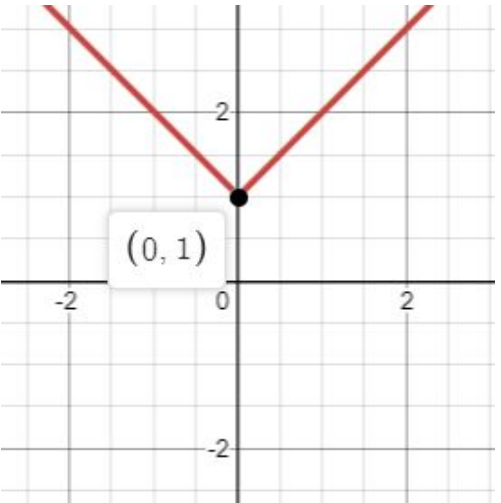# Lesson Practice Problem #3
Use the Desmos.com graphing tool complete the table

Equation	Sketch of Graph	y-intercept	x-intercept(s)	Complete the table
y = |x| + 1				

x	y
-6	
-4	
3	

Lesson Practice Problem #3 ANSWER
Use the Desmos.com graphing tool complete the table

Equation	Sketch of Graph	y-intercept	x-intercept(s)	Complete the table
y = |x| + 1	(0, 1)	(0, 1)	NONE	

For the "Complete the table" column:

x	y
-6	7
-4	5
3	4

Lesson Practice Problem #4

Use the Desmos.com graphing tool to find two points where the functions intersect.
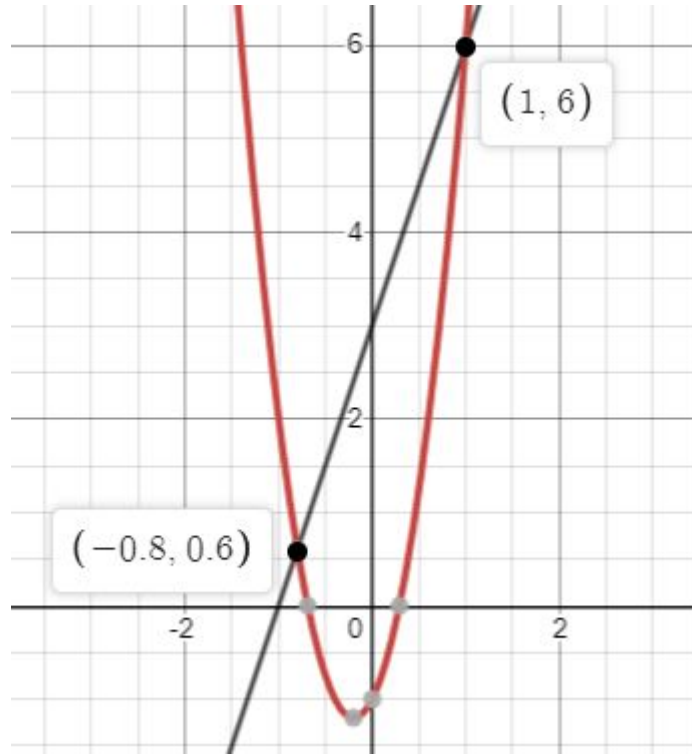
$$y = 5x^2 + 2x - 1$$
$$y = 3x + 3$$

Use the Desmos.com to find two points where the functions intersect each other

$y = 5x^2 + 2x - 1$
$y = 3x + 3$

(1, 6)
AND
(-0.8, 0.6)