

## Algebra 1: Abstract to Visual Code Project Sample

### Creating Code to help students that struggle with key concepts

Welcome to "One Step, Two Step, Red Step, Blue Step."

This program will solve two-step algebraic equations of the form  $ax + b = c$ .

Please input your integer values for a, b, and c.

Please enter the coefficient of x (the value of a):

The equation you asked us to solve is:

$$3x - 5 = 7$$

The **Red Step** is the step where we reverse addition or subtraction.

$$3x - 5 = 7$$

$$3x - 5 + 5 = 7 + 5$$

$$3x = 12$$

The **Blue Step** is the step where we reverse multiplication or division.

$$3x = 12$$

$$3x/3 = 12/3$$

$$x = 4$$

The **Green Step** is the step where we check our work. Plug in 4 for x and evaluate the left side of the equation to see if both sides match.

This is how we check our work

$$3(4) + 5 = 7$$

$$12 - 5 = 7$$

$$7 = 7\checkmark$$