

5.2

What is an Algorithm?

An algorithm is simply a set of step by step directions to achieve a goal

Examples of algorithms include:

- cooking recipes
- directions to a place
- instructions to build a LEGO set

Try creating an algorithm for going around the block

For Loop

A For Loop allows you to repeat some code a set number of times. This allows you repeat a set of instructions for a set amount of times

Variables

Variables store values to be used later

Mathematical Operators

You can add, subtract, multiply, and divide values in variables using the operators +, -, *, and /

Conditionals

Conditionals are used to do certain steps only if a certain condition is met

Exercises 5-2 create the following in Scratch:

- Create an algorithm for going around a block with only walk and turn commands
- Rewrite the previous algorithm so that it uses a for loop, and only one turn and walk command
- Create an algorithm that has the variables x and y with both are equal to 2 to compute $x+y$, $x-y$, $x*y$, and x/y
- Create an algorithm that saves a number in the variable x and uses conditionals to check if x is positive, negative, or zero