## Turtle Art - Playing with Arithmetic

## Problem 1

Create the following program:


Can you predict what it will do before you run it?
What does it do?
What happens if you change the number 1 to another number?
What happens if you change the $\mathbf{X}$ to +, - or / ?

## Problem 2

Create the following program:


Can you predict what it will do before you run this program?
How does it work?
What happens if you replace the 1 with a larger number, say 10 ?
When you increase the pen color by 1 , does the color get lighter or darker?
What happens if you place a repeat block at the top of the program?

## Problem 3

Here's a crazy idea!
What do you predict will happen if you combine program 1 and program 2? Snap them together and fine out!

## Making Polygons

Super Dooper Really Really Really Hard Challenge

| Name | \# of sides | amount of turn |
| :--- | :--- | :--- |
| Triangle | 3 |  |
| Square | 4 | 90 |
| Pentagon | 5 |  |
|  | 6 |  |
|  | 7 |  |
| Octagon | 8 |  |
|  | 9 |  |
|  | 10 |  |
|  | 11 |  |
|  |  |  |

Change the number of sides and and amount of the turn to create the polygons.


