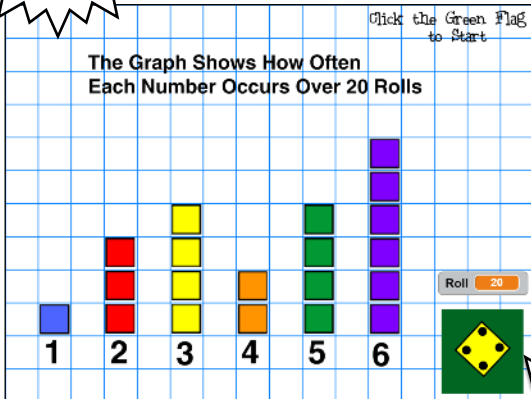


Graphs, Charts, Algebra and Problem-solving Logic supported by Scratch Code



Draw a Block Graph



Take this study to a higher level.

Create code to graph the *totals* of 2 dice rolled simultaneously.

What might you expect to find out?

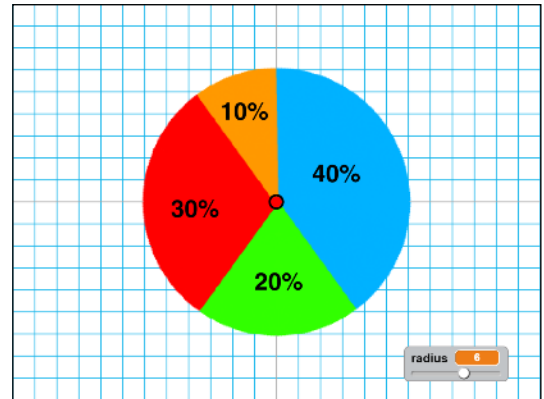


e.g. What is the lowest possible number?

shared: scratch.mit.edu/projects/89762459

It's necessary to draw a Dice sprite consisting of six costumes (faces) as there is no such sprite in Scratch.

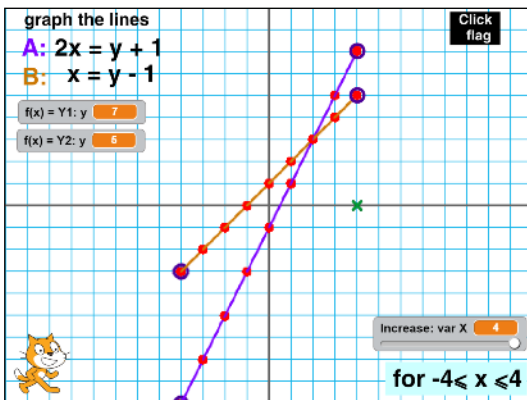
Draw a Pie Chart



shared: scratch.mit.edu/projects/171638213

```
repeat 360 / 10 * 4 the algorithm that sets the number of radius lines (at 1° apart) to draw the blue segment
```

Graph Straight Lines



Explore the examples online.

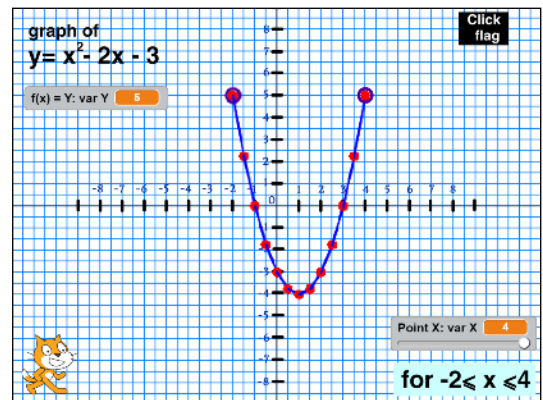
CLICK see inside and make sense for yourself of the logic of the code.

shared: scratch.mit.edu/projects/195706136

The green X follows the *increase* in x.

```
set x to x position of Increase / 20
```

Graph a Trinomial

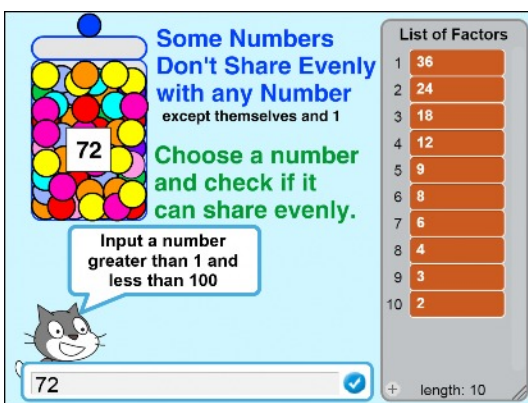


shared: scratch.mit.edu/projects/104133413

This is the code for $f(x)$ in the example above.

```
set y to x * x - 2 * x - 3
```

Code for Prime Numbers < 100



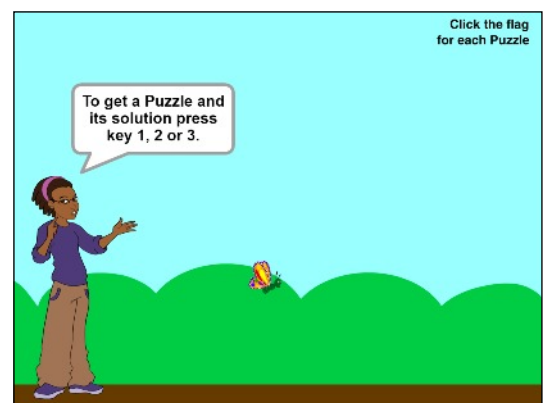
Explore the examples online.

CLICK see inside and make sense for yourself of the logic of the code.

shared: scratch.mit.edu/projects/183983550

Learn how to code an *input answer*, `answer` and list the factors using the `mod` operator.

Problem Solving Strategies



shared: scratch.mit.edu/projects/171597011

```
join The average of the 3 numbers is (216 + 304 + 317) / 3
```

example: Scratch algorithm for the mean of three numbers