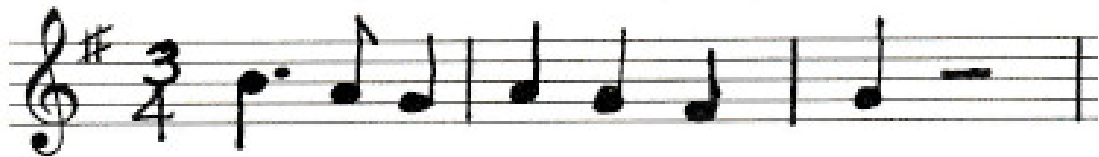


Idea 64: Algebra: the beginnings

Musical notes



Scientific and mathematical formulas

$$E = mc^2$$

$$s = \frac{d}{t}$$

$$A = \pi r^2$$

$$A = \frac{1}{2} bh$$

$$a^2 + b^2 = c^2$$

$$C = 2\pi$$

Coding

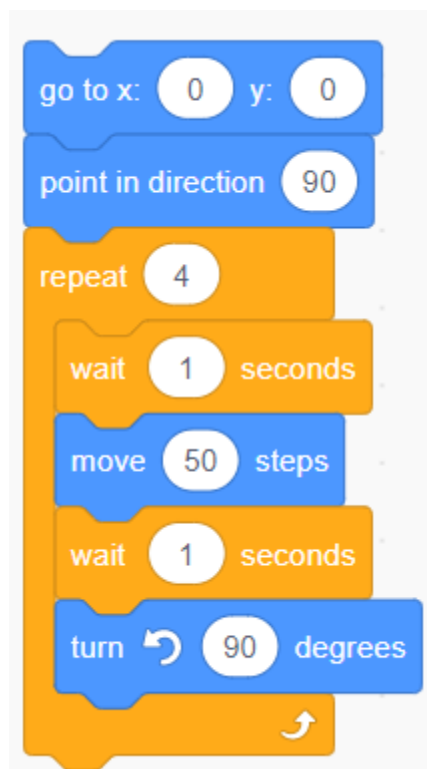
Repeat the following procedure 4 times. What shape do you get?

- Forward 50mm
 - RT90°
-

Cat antics at

<https://scratch.mit.edu/projects/305129590/editor>

Use following the code to make the cat move on the Scratch website



Scratch is a coding language and online community where you can create your own interactive stories, games, and animations. Scratch is a project of the Scratch Foundation in collaboration with the Lifelong Kindergarten group at the MIT Media Lab. It is available for free at <https://scratch.mit.edu>

Recipe

Cheese scones

1. Heat the oven to 220C/200C Fan/Gas 7. Lightly grease a **baking** sheet.
2. Mix together the flour and salt and rub in the butter.
3. Stir in the **cheese** and then the milk to get a soft dough.
4. Turn onto a floured work surface and knead very lightly. Shape into small rounds
5. Brush the tops of the **scones** with a little milk.
6. Bake for 20 minutes at 180 F.

Points for discussion

Musical notes are a visual representation that tell you how to create musical sounds. Can pupils hum to work out which well-known piece of music is shown?

Scientific and mathematical formulas involve algebra and instruct us how to find information.

What do the formulas mean, and what are they used for?

$A = \frac{1}{2} bh$	The formula for the area of a triangle.
$s = \frac{d}{t}$	The formula to find the speed of an object given the distance travelled and the time taken.
$E = mc^2$	Einstein's formula for energy is one of the most important formulas in the modern world. The energy of a body or object is equal to its mass multiplied by the speed of light squared.
$A = \pi r^2$	The formula for the area of a circle
$a^2 + b^2 = c^2$	Pythagoras's theorem used to find the length of sides of a right-angled triangle.
$C = 2\pi$	The formula for the circumference of a circle.

Coding is a language that instructs a computer to produce information.

A recipe is a set of instructions that tell you how to carry out a task.