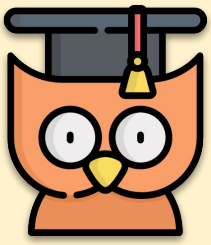
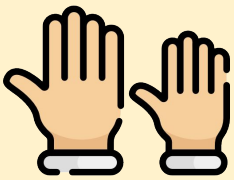
Lesson 3 - Block Turtle II



Learning Outcomes:

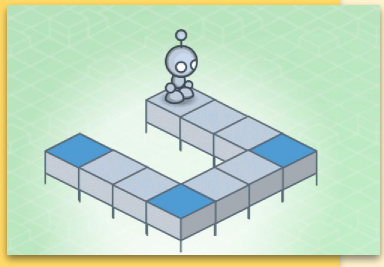
- Making Tina draw some simple shapes at different locations on the map - Olympics Rings
- Make other shapes with Tina - a square, triangle, pentagon, hexagon etc.



REMEMBER: Have you washed your hands today?

Game Time

Today we're going to look at how to draw different shapes apart from just circles. Before we look at how to draw these shapes we're going to play Lightbot which can be accessed at www.lightbot.com/flash.html. The concepts we will learn in Lightbot will link in nicely with drawing some of these shapes.



Refresher Task - Multiple Circles

Lets see if you can remember some of the things we learned about last week (it's ok to look back!). As a test, make **multiple circles** in various colours and positions. If you are stuck, open last weeks work. You will need:

- Shape 

- Speed 

- Colour 

- Pen Up 

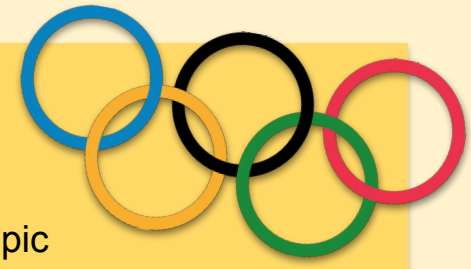
- Go to 

- Pen Down 

- Circle 

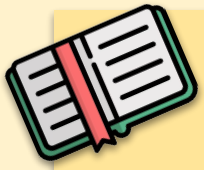
http://www.taoc.ie/turtle2

Must-Do Challenge



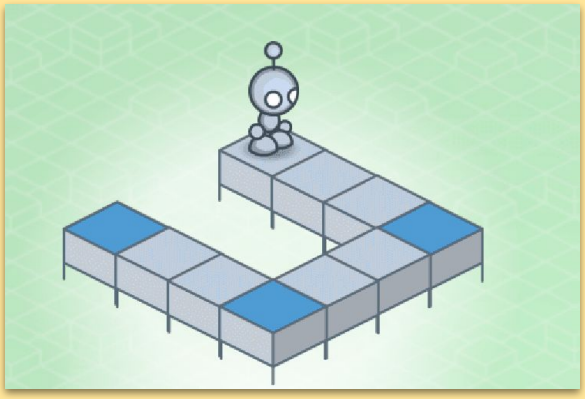
This challenge should be a tricky one. Imagine *The Olympic Council of Ireland* have asked you to draw the Olympic flag with Python so they can use it on their new website.

Use what you have learned in this lesson to write code to make Tina the Turtle draw the Olympic flag. https://taoc.ie/olympicstarter



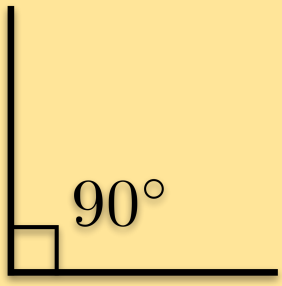
Drawing Squares

We can draw shapes other than circles. Although drawing other shapes isn't just as easy. Think about how you would make *Lightbot* move to make a square.



How would we do this?

Drawing a square with Tina must be done in a similar way. Drawing 4 separate straight lines and with four 90 degree angles.

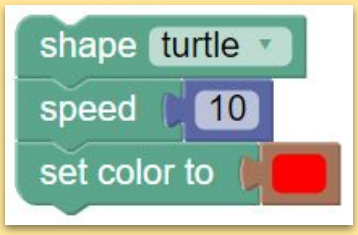


Let's get coding!

www.bit.ly/blankblocktrinket

We are now going to make Tina draw a square.

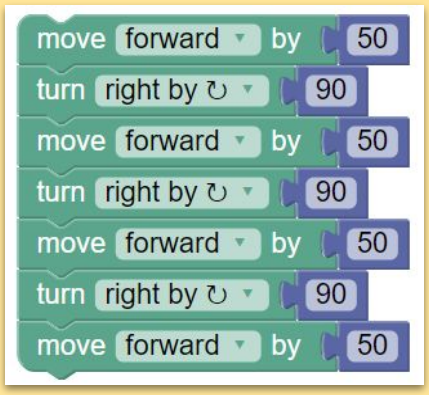
1. Set up Tina like we did in the last lesson (set color, set speed etc.).

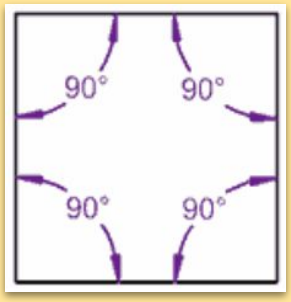


Expert Tip

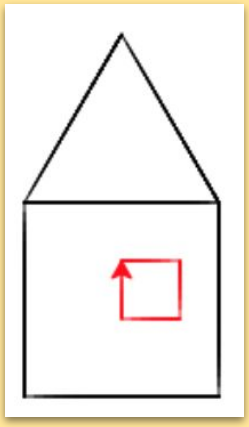
Be careful where you put the **fill** or **color** commands. You will get different results depending on where you put them.

2 Now Tell Tina to do the following code





3 Try drawing a triangle for a roof and another square for the window to make a house



4 Using the **begin fill** and **end fill** commands, colour the shapes

Other Shapes

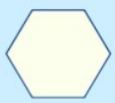
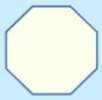
Have a try and see if you can finish some other shapes based on what you've learned about drawing a square.

Expert Tip

The angle which Tina turns isn't the degrees of each angle. The **Turn Angle** or **Outside Angle** is calculated by taking the inside angle away from 180°.

eg Pentagon is 180° - 108° = **60°**

Hexagon is 180° - 60° = **120°**

Sides	Shape	Each Angle	Turn Angle 180°- Angle
3		60°	120°
4		90°	90°
5		108°	72°
6		120°	60°
8		135°	45°
9		140°	40°