

FIRST LEGO LEAGUE - Ontario

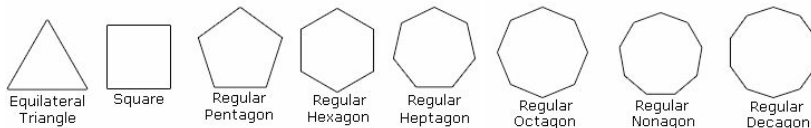
Activity Sheet	
Gr 8 - Lesson #5	Stop At Angle – Formula for Polygons
Date:	Name(s):

Check That I'm Done

Commented on my code
 Modify it task
 Coding Challenge

Learn

A regular shape means all angles are the same, and all sides are of equal length.

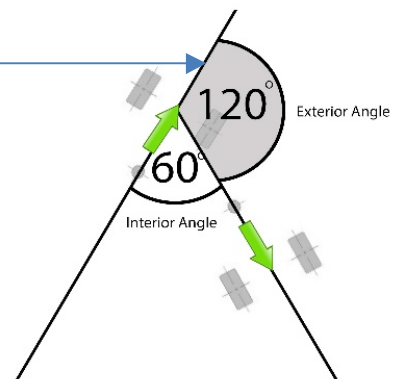
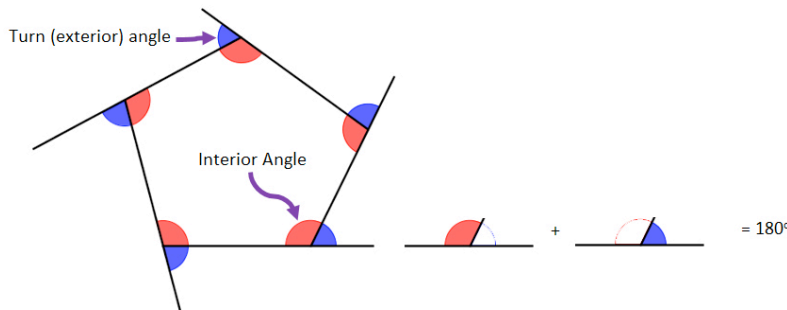


There is a pattern to the interior angles of these shape such that you could create a general formula for any regular pentagon, regardless of the number of sides.

When controlling a robot to trace out a shape, you actually turn the **EXTERIOR** angle, not the interior one.

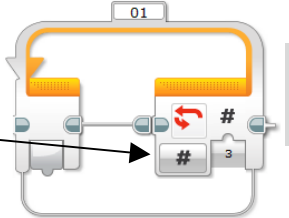
The relationship being :

Exterior angle = 180 – Interior Angle.



FIRST LEGO LEAGUE - Ontario

Predict and Plan	
If a regular shape has 3 sides, estimate the size of its interior angles	
If a regular shape has 4 sides, estimate the size of its interior angles	
If a regular shape has 5 sides, estimate the size of its interior angles	
If a regular shape has 6 sides, estimate the size of its interior angles	

Demonstrate/Design/Discover
<ul style="list-style-type: none"> ✓ Using trial and error, create a program that, drives in an equilateral triangle, a square, a regular pentagon, and a regular hexagon. ✓ Your robot should start an end in the exact same position. ✓ Figure out what turn angles you need to use for in each shape and record it in the record section.
<p>Tip: Make sure to use a loop block to make your programming work easier.</p> <p>You can control the number of loops your program makes by clicking on the button at the end of the block.</p>


Record				
Number of Sides	Shape	Size of Turn Angle	Interior Angle	Sum of all Interior Angles
3	Equilateral Triangle			
4	Square			
5	Regular Pentagon			
6	Regular Hexagon			