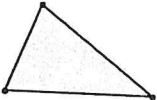
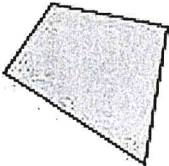
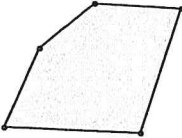
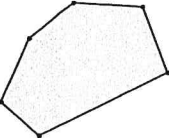


Interior Angles of Polygons | MFM1P

1. Complete the chart.

Diagram	Number of sides	# of Triangles	Sum of interior angles
	3	1	180°
	4		
	5		
	6		
any polygon	n		

2. a) Determine the sum of the interior angles in a polygon with 15 sides. Show your work.

b) Determine the number of sides in a polygon if the sum of the interior angles is 5400°. Show your work.

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3. A Canadian \$1 coin, known as a loonie, is a regular polygon with 11 sides, called an *undecagon*.

a) Define a regular polygon with 11 sides.

b) Determine the sum of the interior angles of the loonie.



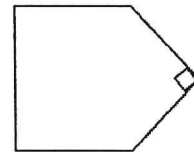
c) What is the size of one of the interior angles?

4. On a baseball diamond, home plate has the shape of a pentagon.

The pentagon has 3 right angles. The other 2 angles are equal.

a) What is the sum of the angles of a pentagon?

b) What is the measure of each equal angle?



Practice: Interior Angles of Polygons | MFM1P

1. a) What is a "regular" polygon?

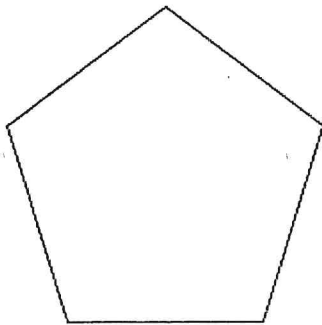
b) Draw a 4 sided "non-regular" polygon and a 4 sided "regular" polygon.

2. What is the formula that you use to find the sum of all the interior angles of any polygon?

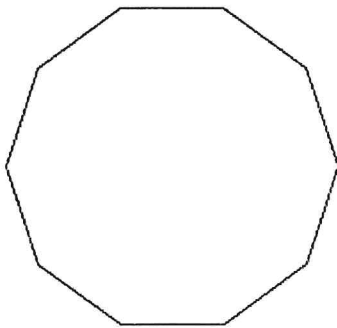
Sum of Interior Angles of a Polygon =

3. Find the sum of **all the interior angles** of the regular polygons below.

a)



b)

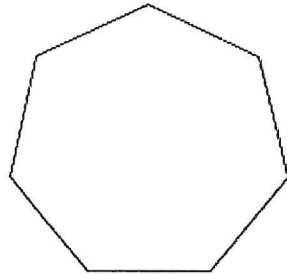


Practice: Interior Angles of Polygons | MFM1P

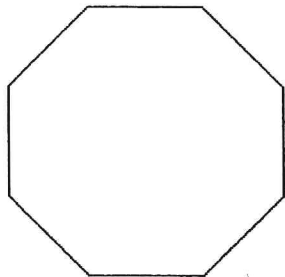
c) regular 23 sided polygon

4. Find the measure of **1 angle** in each of the regular polygons below.

a)



b)



c) regular 18 sided polygon

5. Is there a regular polygon with an interior angle sum of 1170° ? If so, what is it? If not, show why?

Hint: Calculate the number of sides!