

Math Circles - Geometrical Objects on The Plane

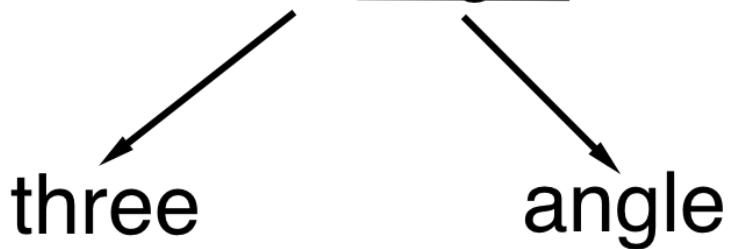
What can you make with 0 stick?

What can you make with 1 stick?

What can you make with 2 sticks?

What can you make with 3 sticks?

Tri angle = three angles



Quadri lateral = four sides

four

sides

Can you make a quadrilateral?

Penta gon = five angles

five

angle

Can you make a pentagon?

Hexa = six

Can you make a hexagon?

Hepta = seven

Can you make a heptagon?

Octa = eight

Can you make an octagon?

Equi lateral = same sides

same side

Let's make an equilateral triangle.

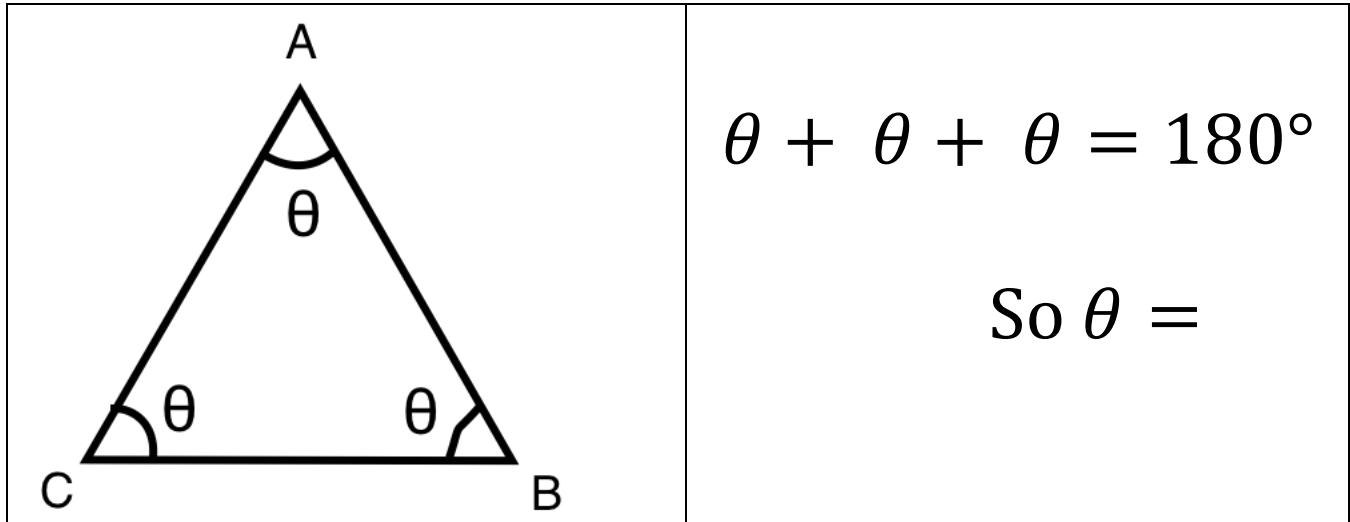
Equi angular = same angles

same angle

Let's make an equiangular triangle.

The sum of all the angles in a triangle is 180°

Find θ

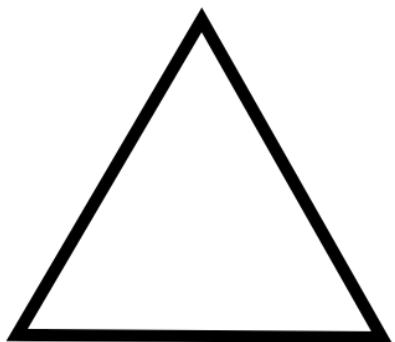


$$\angle BAC =$$

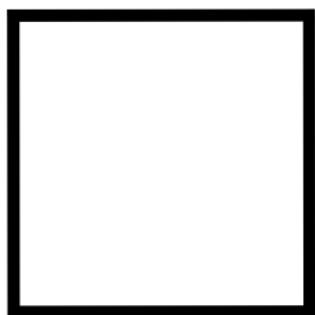
$$\angle ABC =$$

$$\angle ACB =$$

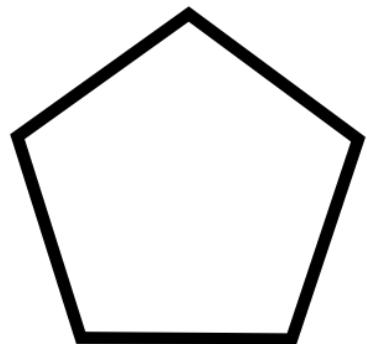
Example of Simple Polygons



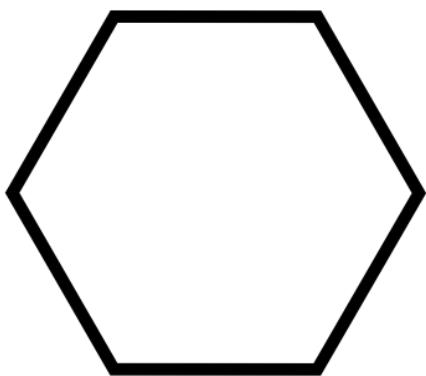
$n = 3$ (simplest)
triangle



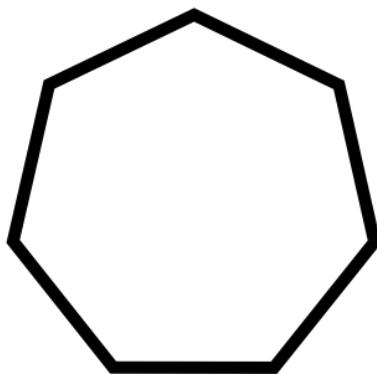
$n = 4$
quadrilateral



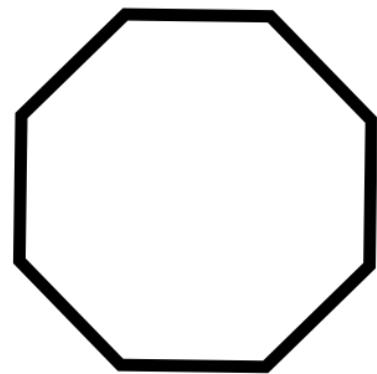
$n = 5$
pentagon



$n = 6$
hexagon



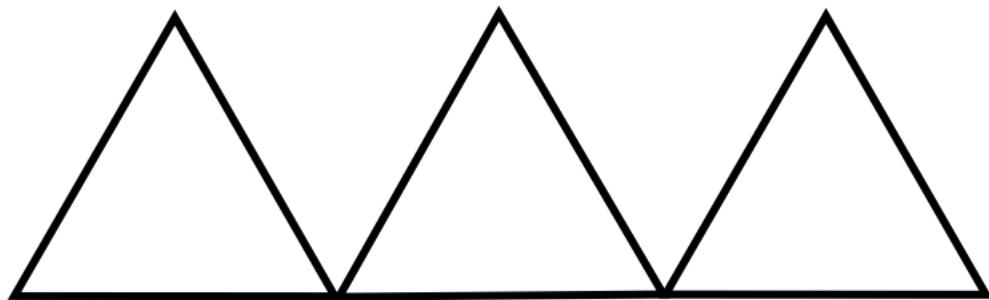
$n = 7$
heptagon



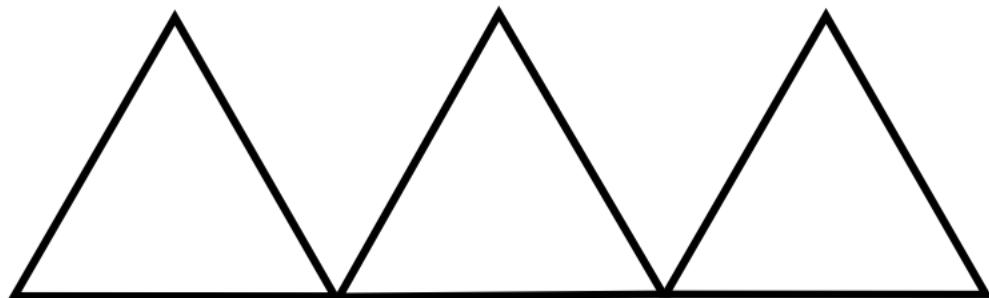
$n = 8$
octagon

Homework

1. Move 2 sticks to make 4 triangles.



2. Move 3 sticks to make 4 triangles



3. What is θ ?

