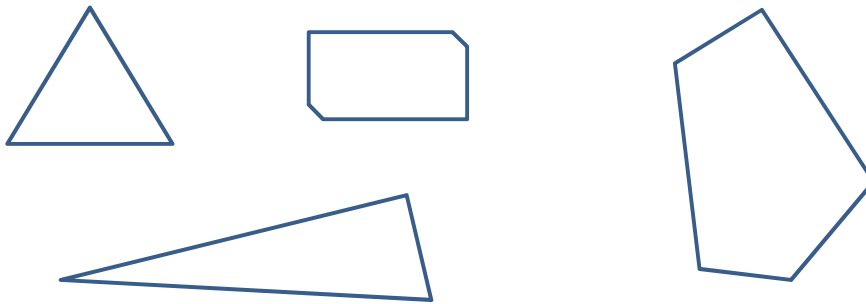


## 2D Shapes: Grade 6

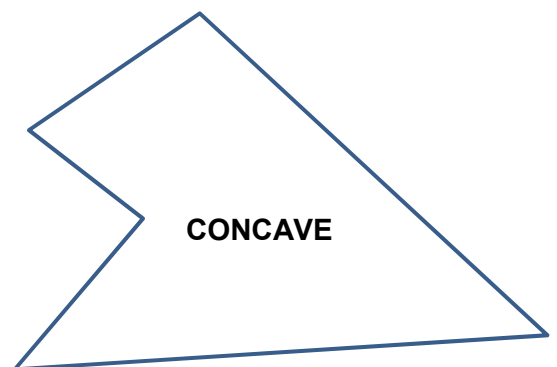
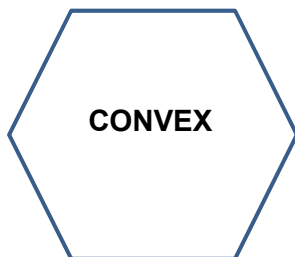
### 1 Polygon

A polygon is a two-dimensional ( 2 – D ) shape with **straight sides**. Examples : triangles, rectangles, all quadrilaterals, etc. The shape is closed – all the sides connect up.



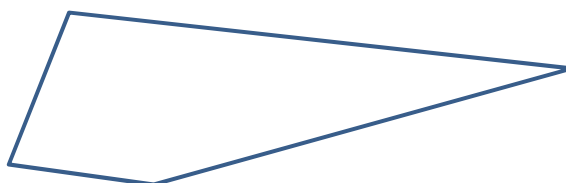
### 2 A regular polygon

**All the sides and interior angles are the same.** All regular polygons are **convex** ( basically it means that all interior angles are less than  $180^\circ$  ).



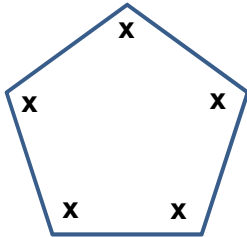
### 3 Irregular polygons

Sides may have different lengths and interior angles may differ in size



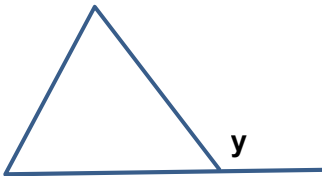


4 Interior angles

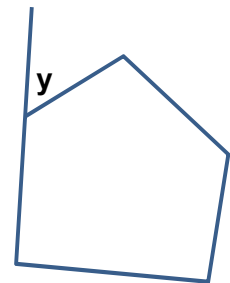


All the angles marked with **x** are interior angles.

5 Exterior angles



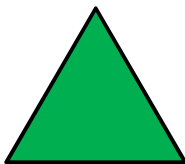
The angle on the outside of a polygon **between** a side and the **extended adjacent** side



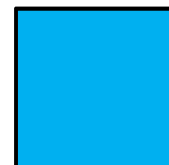
The angles marked with **y** are exterior angles

6 Types of **regular** polygons you will learn about in grade 5 and 6

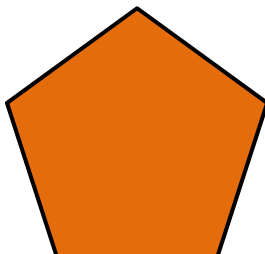
(a) Triangle : a polygon with 3 sides



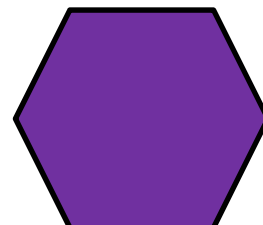
(b) Square : a polygon with 4 sides



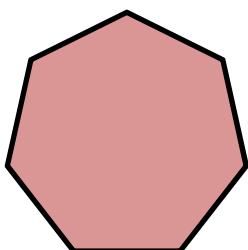
(c) Pentagon : a polygon with 5 sides



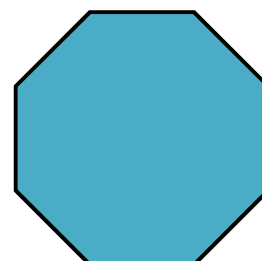
(d) Hexagon : a polygon with 6 sides



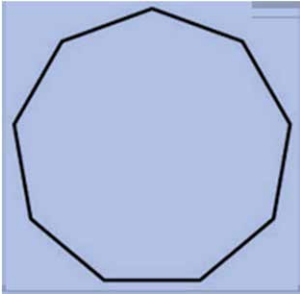
(e) Heptagon : a polygon with 7 sides



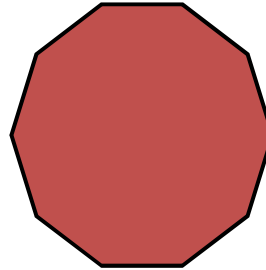
(f) Octagon : a polygon with 8 sides



(g) **Nonagon** : a polygon with 9 sides

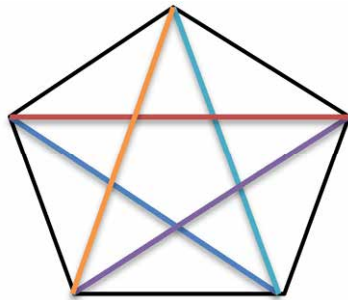


(h) **Decagon** : a polygon with 10 sides



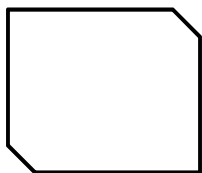
7 Diagonals

The diagonals of a polygon are lines linking any two **non-adjacent** vertices.

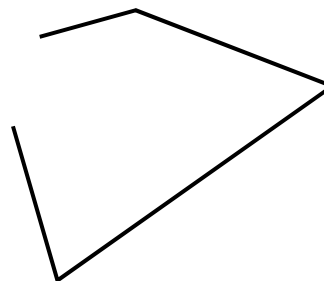


8 Polygon and not a polygon :

Not a polygon, is not closed



Polygon



Not a polygon, has a curved side

