

Regular and irregular polygons

Watch the BBC bitesize clip, read the information and complete the quiz, using the link below:

<https://www.bbc.co.uk/bitesize/topics/zvmxsbk/articles/z98n4qt>

Here is some more information from maths is fun website (always a good website to look at if you require more information! <https://www.mathsisfun.com>)



A polygon is a plane shape with straight sides.

Is it a Polygon?

Polygons are 2-dimensional shapes. They are made of straight lines, and the shape is "closed" (all the lines connect up).

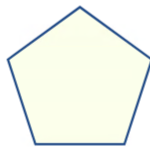


Polygon comes from Greek. **Poly-** means "many" and **-gon** means "angle".

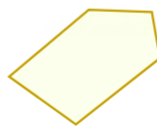
Types of Polygons

Regular or Irregular

A **regular** polygon has all angles equal and all sides equal, otherwise it is **irregular**



Regular

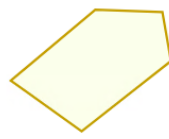


Irregular

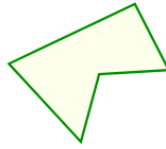
Concave or Convex

A **convex** polygon has no angles pointing inwards. More precisely, no internal angle can be more than 180° .

If any internal angle is greater than 180° then the polygon is **concave**. (*Think: concave has a "cave" in it*)



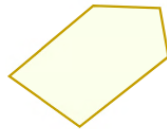
Convex



Concave

Simple or Complex

A **simple** polygon has only one boundary, and it doesn't cross over itself. A **complex** polygon intersects itself! Many rules about polygons don't work when it is complex.

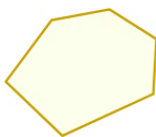


Simple Polygon
(this one's a Pentagon)



Complex Polygon
(also a Pentagon)

More Examples



Irregular Hexagon



Concave Octagon



Complex Polygon
(a "star polygon",
in this case a [pentagram](#))