

For Creative Minds

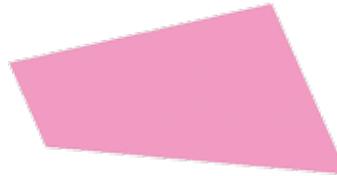
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Shape Parts

All of the shapes in this book are polygons. Polygons are two-dimensional shapes. They have length and width, but no height. Polygons are made of straight **lines** and **angles**. Polygons are closed shapes—each line ends where another begins.



When all of the angles are equal and all of the sides are the same length, it is called a **regular** shape.



If the angles are different and the sides are uneven, the shape is **irregular**.

There are three basic kinds of angles. If the angle measures exactly 90° , it is a **right** angle. If the angle is less than 90° , it is an **acute** angle. If it is more than 90° , it is an **obtuse** angle.

Angles are measured with a tool called a **protractor**.



acute angle

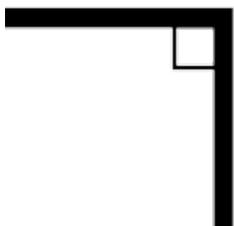


obtuse angle

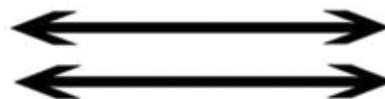


right angle

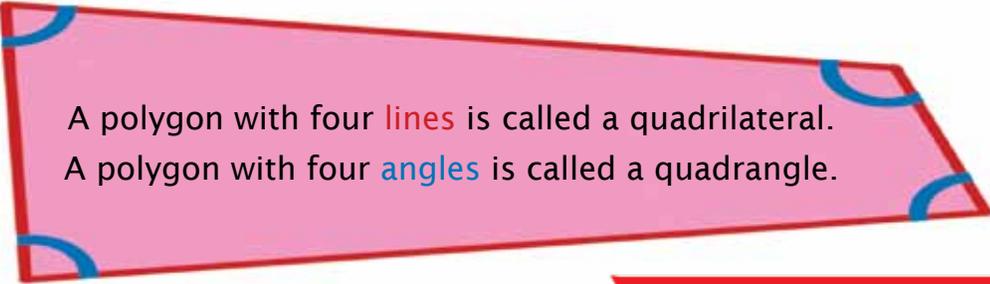
When two lines meet at a right angle, the lines are called **perpendicular**.



Sometimes lines in a shape are **parallel**. Parallel lines are always the same distance apart. They never touch and they never get closer to or farther away from each other.



Quadrilaterals



A polygon with four **lines** is called a quadrilateral.
A polygon with four **angles** is called a quadrangle.

A quadrangle with exactly one pair of parallel sides is called a trapezoid. A trapezoid is a kind of polygon, a quadrilateral, and a quadrangle.

A quadrilateral that has two pairs of parallel sides is a parallelogram. A parallelogram is a type of polygon, a quadrilateral, and a quadrangle.

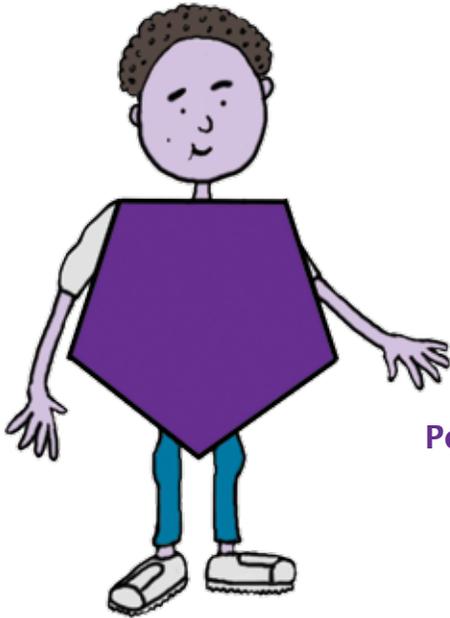
A parallelogram with all equal sides is a rhombus. A rhombus is a type of polygon, a quadrilateral, a quadrangle, and a parallelogram.

A parallelogram with all right angles is called a rectangle. A rectangle is a kind of polygon, a quadrilateral, a quadrangle, and a parallelogram.

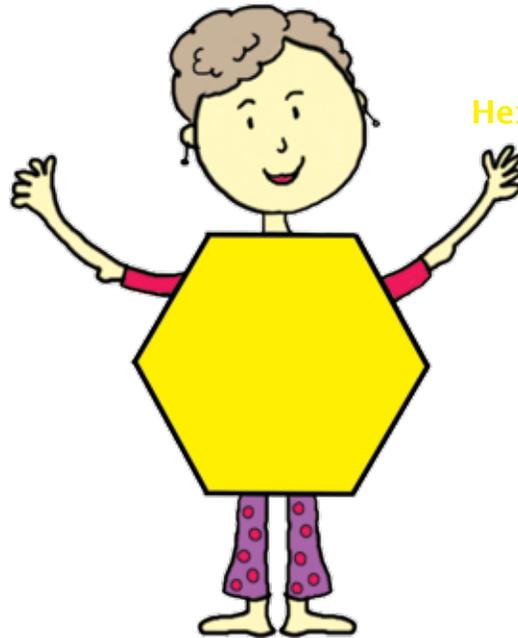
A quadrilateral with all equal sides and all right angles is a square. A square is a certain type of polygon, a quadrilateral, a quadrangle, a parallelogram, a rhombus and a rectangle.

Name that Shape!

Match the description to the shape.



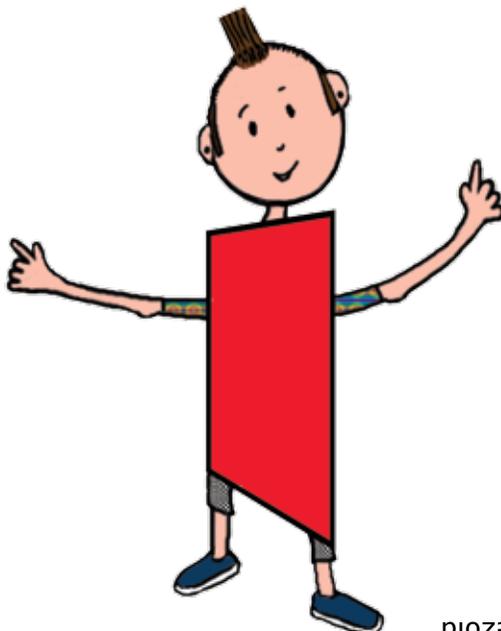
Pentagon



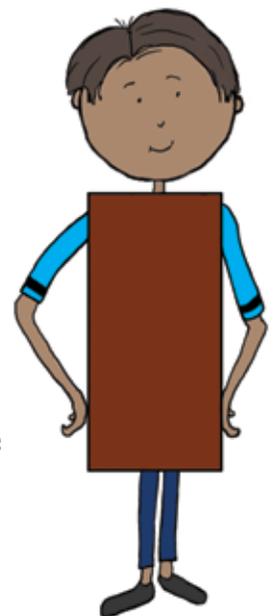
Hexagon

1. This shape is made of six lines that meet to create six angles.
2. Four right angles and four straight lines make this shape. The four sides can be all equal length or it can have two pairs of lines that are different lengths.
3. This shape has five sides.
4. This shape has four sides. It has one pair of parallel sides, but its other two sides are not parallel.

Trapezoid

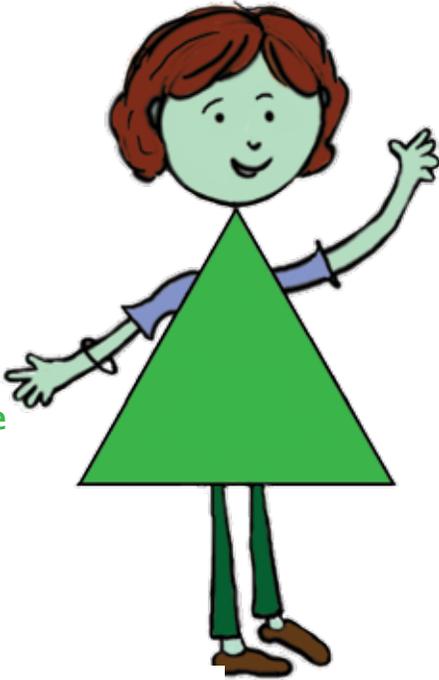


Rectangle

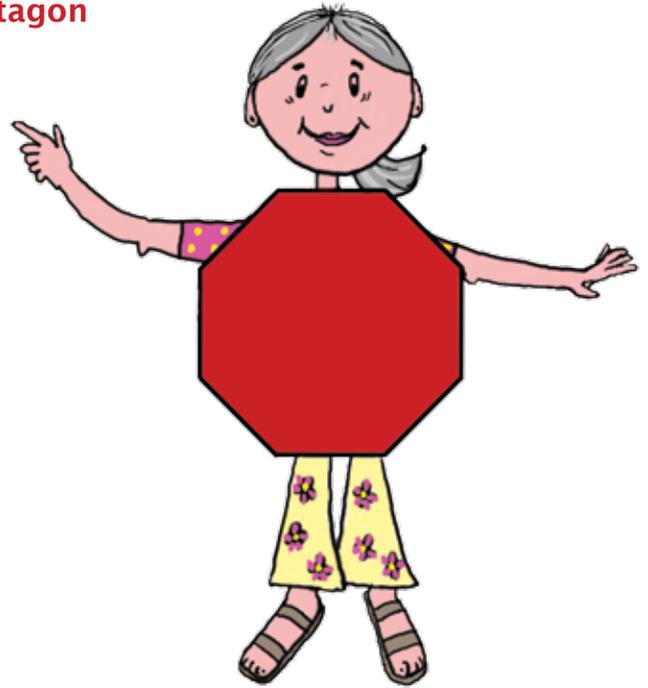


5. This four-sided shape is a parallelogram made of two pairs of parallel lines. All sides are the same length. The angles can be all right angles, but they don't have to be.
6. Eight sides join together to create this shape.
7. This shape is a kind of rectangle. It has four equal sides and four right angles. It is also a kind of rhombus. Each of the sides is parallel to another side.
8. This shape is made of three angles and three lines.

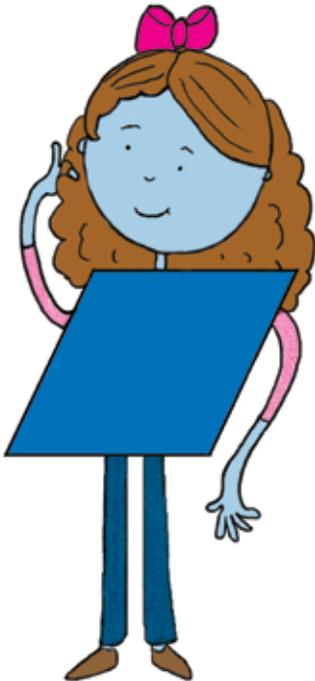
Triangle



Octagon



Rhombus



Square

