




MATHS MIND

ANGLES

PARTS OF AN ANGLE

- ▶ **THE VERTEX:** the common point at which the two lines or rays are joined
- ▶ **THE ARMS:** the two straight sides or lines
- ▶ **THE INTERIOR:** the space or area between the two arms
- ▶ **THE EXTERIOR:** the space or angle formed outside when the sides are extended on the plane

Labelling angles AEB

In mathematics an angle is labelled using the vertex and the points of the arms. It is written using the angle symbol followed by three letters that define the angle. The middle letter indicates the vertex and the other two the sides.

Measuring angles

The amount of turn from one arm of an angle to the other is the size of the angle and this can be measured in degrees using an instrument called a protractor. Usually the protractor has the shape of a semi-circle with two scales marked from 0° to 180°.

The two scales make it easy to measure angles facing different ways. To measure the size of an angle, the protractor is placed over the angle so that the centre of the protractor is directly over the angle's vertex and the base line of the protractor is along one arm of the angle. Either the inner or outer scale is used to measure the angle as one arm passes through the zero on the protractor. Following the scale around the protractor, the other arm of the angle will indicate the size of it.

Classifying angles

Angles can be classified according to their size and therefore can be identified and named.

- ▶ **THE ACUTE** angle measures less than 90°.
- ▶ **THE RIGHT** angle measures exactly 90°.
- ▶ **THE OBTUSE** angle measures more than 90° but less than 180°.
- ▶ **THE STRAIGHT** angle measures exactly 180°.
- ▶ **THE REFLEX** angle measures more than 180° but less than 360°.
- ▶ **THE PERIGON** or **REVOLUTION** measures exactly 360°

Angles in action

Angles are used in many other areas and disciplines other than mathematics. Their geometrical principles are used regularly in design work, architecture, building construction and art.

WHAT'S IN AN ANGLE?

WHEN two lines intersect each other, an interval or space is formed between the two lines. This is an angle. Have a look around you. They are everywhere. Within the strand of mathematics called geometry, angles are named, labelled, measured, dissected and studied.

DID YOU KNOW?

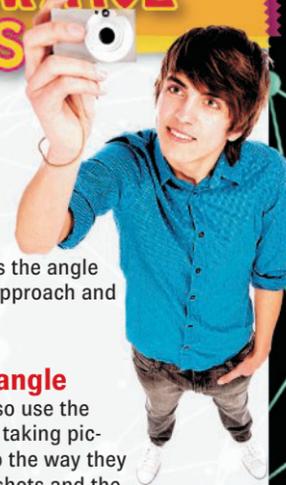
- ▶ The word angle comes from the Latin word 'angulus' meaning a corner.
- ▶ The sum of the three angles inside any triangle always adds up to 180 degrees.
- ▶ The angle at which light strikes the surface of the earth is known as the 'angle of incidence'.
- ▶ The maximum angle is 360° – the angle all the way round a point.



ALTERNATIVE ANGLES

The story angle

The word angle is not just used in mathematics. In journalism, a reporter considers the angle they will take to approach and write a story.



The camera angle

Photographers also use the word angle when taking pictures. It refers to the way they compose their shots and the angle between the camera and the subject. A subject can be photographed from different angles giving viewers a different perspective. For example, a high angle shot can make the subject look small or weak while a low-angle shot can make the subject look powerful and strong.

WEEKLY CHALLENGE

IN THE newspaper, find and cut examples of photographs that use these different camera angles.

- Eye-Level – It shows the subject as we would expect to see them in real life.
- High-Angle – It shows the subject from above.
- Low-Angle – It shows the subject from below.
- Bird's Eye – It shows the subject from directly above.

NEXT WEEK: SCIENCE SCENE – Marine Biology