

Topic Page: [Angle](#)

Definition: **angle** from *Philip's Encyclopedia*

Measure of the inclination of two straight lines or planes to each other. One complete revolution is divided into 360 degrees or 2π radians. One degree may be subdivided into 60 minutes, and one minute into 60 seconds.

Summary Article: **angle**

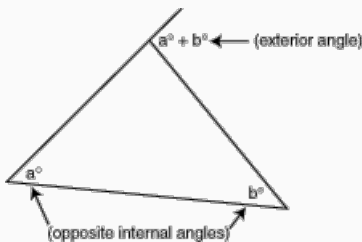
From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

In mathematics, the amount of turn or rotation; it may be defined by a pair of rays (half-lines) that share a common endpoint (vertex) but do not lie on the same line. Angles are measured in degrees ($^{\circ}$) or radians (rads or $^{\circ}$) – a complete turn or circle being 360° or 2π rads.

All angles around a point on a straight line add up to 180° . All angles around a point add up to 360° .

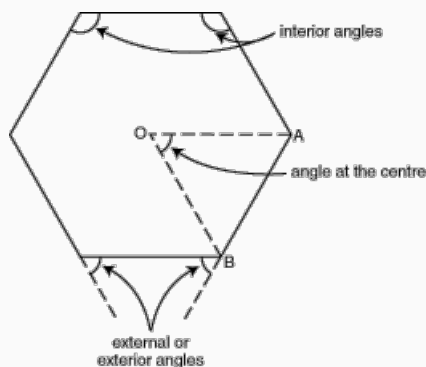
Angles are classified generally by their degree measures: **acute angles** are less than 90° ; **right angles** are exactly 90° (a quarter turn) and are created by two perpendicular lines crossing; **obtuse angles** are greater than 90° but less than 180° (a straight line); **reflex angles** are greater than 180° but less than 360° ; **supplementary angles** add up to 180° .

Angles in triangles A triangle has three interior angles that together add up to 180° . In an equilateral triangle these angles are equal (60°). The exterior angles of a triangle (those produced if one side is extended beyond the triangle) are equal to the sum of the opposite internal angles.



Unknown angles in a right-angled triangle can be worked out using trigonometry.

Angles in polygons Regular polygons have three types of angle:



The angle at the centre is equal to the exterior angle and it is found by dividing 360° by the number of sides in the polygon.

For example, the angle at the centre of a hexagon is 60° :

$$360 \div 6 = 60^\circ$$

Angles at parallel lines Angles created by a line crossing two parallel lines are known as opposite angles, corresponding angles, or alternate angles.

Angles in circles Angles within a circle can be calculated using circle theorems.

essays

Working out angles

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angle. (2018). In Helicon (Ed.), *The Hutchinson unabridged encyclopedia with atlas and weather guide*. Abington, UK: Helicon. Retrieved from <https://search.credoreference.com/content/topic/angle>



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