Types of angles: the chart

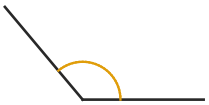
An angle is the turn between two lines meeting at a point (the vertex), in degrees; 360 in a full turn. Six types, decided by size alone. Name an angle with three letters, vertex in the middle: angle ABC is at B.



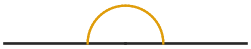
Acute: less than 90°



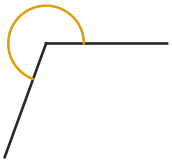
Right: exactly 90°



Obtuse: 90° to 180°



Straight: exactly 180°



Reflex: 180° to 360°



Full turn: 360°

Type	Size	Examples
Acute	less than 90°	15°, 45°, 60°, 89°
Right	exactly 90° (marked with a small square)	the corner of a page
Obtuse	more than 90°, less than 180°	100°, 120°, 150°, 179°
Straight	exactly 180°	a straight line
Reflex	more than 180°, less than 360°	200°, 270°, 300°, 359°
Full turn	exactly 360°	a complete rotation

Measuring with a protractor

[ ] Decide first: acute or obtuse? Write it down.
[ ] Centre of the protractor on the vertex; the 0 line along one arm (extend the arms with a ruler if short).
[ ] Read the scale that starts at 0 on the arm you lined up; the number must agree with step 1 (an acute angle reads 50, not 130).
[ ] Reflex: measure the smaller angle on the other side and subtract from 360.

From sciencewithshobha.com/blog/types-of-angles-acute-right-obtuse-straight-reflex-and-full-turn-with-the-degree-ranges-how-to-name-and-measure-an-angle-with-a-protractor-complementary-supplementary-and-the-angle-facts-with-a-printable-chart/ · 1-on-1 online maths and science, Grade 3 to AP and A level, free 30-minute first class.

Angle facts, pairs and practice

Fact	Use
Angles on a straight line add to 180°	115° and x on a line: x = 65°
Angles at a point add to 360°	120°, 150° and x: x = 90°
Angles in a triangle add to 180°	40° and 75°: the third is 65°
Vertically opposite angles are equal	where two lines cross, the X pairs match
Angles in a quadrilateral add to 360°	two triangles
Complementary angles add to 90°	35° and 55°
Supplementary angles add to 180°	110° and 70°

Practice

[ ] 1. Classify: 137°, 90°, 270°, 180°, 12°, 359°.

[ ] 2. Two angles on a straight line are x and 2x. Find x.

[ ] 3. The complement of 28°; the supplement of 28°.

[ ] 4. A triangle has angles 90° and 35°. Find the third.

[ ] 5. The protractor shows 50 and 130 at the second arm; the angle is obtuse. What is it?

[ ] 6. Three angles round a point are 100°, 135° and y. Find y.

[ ] 7. Name the angle at Q made by arms QP and QR, two ways.

[ ] 8. Can a triangle have two obtuse angles? Why?

Answers

1) obtuse, right, reflex, straight, acute, reflex. 2) 3x = 180, x = 60°. 3) 62°; 152°. 4) 55°. 5) 130°. 6) 125°. 7) angle PQR or angle RQP. 8) No: two angles over 90° already pass 180°.

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