JRA Tutors
Private tuition and small online Study Pods

Angles

Grade 2 topic · Foundation and Higher · Edexcel and AQA

How to use this pack
20 questions that get harder as you go. Foundation students: aim for Questions 1–15 (32 marks) and have a go at the rest. Higher students: complete all 20. Show your working on the lines and write your final answer on the answer line, then mark yourself with the answers at the back. Diagrams are not drawn accurately. Total: 52 marks.

Warm-up

1 Work out the size of angle x. **[1 mark]**



Answer _____

2 Angles around a point are 102°, 71°, 53° and x. Work out x. **[2 marks]**

Answer _____

3 Two straight lines cross. One angle is 107°. Work out the angle directly opposite it. **[1 mark]**

Answer _____

4 Angles x and 35° together make a right angle. Work out x. **[1 mark]**

Answer _____

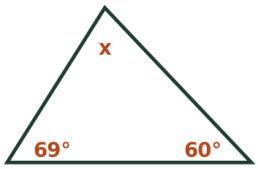
5 Work out the size of angle x. **[1 mark]**



Answer _____

Core

6 Work out the size of angle x. **[2 marks]**



Answer _____

7 An isosceles triangle has an apex angle of 64°. Work out the size of each base angle. **[2 marks]**

Answer _____

8 An isosceles triangle has a base angle of 58°. Work out the apex angle. **[2 marks]**

Answer _____

9 Three angles of a quadrilateral are 104°, 87° and 97°. Work out the fourth angle. **[2 marks]**

Answer _____

10 A triangle has two interior angles of 38° and 59°. Work out the exterior angle at the third vertex. **[3 marks]**

Answer _____

Stretch

11 The angles of a triangle are (x + 20)°, (3x − 10)° and (x + 15)°. Work out the value of x. **[3 marks]**

Answer _____

12 Angles on a straight line are (4x + 10)° and (2x − 4)°. Work out the value of x. **[3 marks]**

Answer _____

13 The angles of a quadrilateral are (2x + 15)°, (2x − 5)°, (3x + 10)° and (2x + 25)°. Work out the value of x. **[3 marks]**

Answer _____

14 Work out the sum of the interior angles of a polygon with 6 sides. **[3 marks]**

Answer _____

15 Work out the size of one interior angle of a regular polygon with 5 sides. **[3 marks]**

Answer _____

Challenge

16 The three angles of a triangle are $(2x - 10)°$, $(2x + 20)°$ and $(x + 15)°$. **[4 marks]**
Work out (a) the value of x and (b) the size of the largest angle.

Answer _____

17 The three angles of a triangle are $(3x - 5)°$, $(x - 5)°$ and $(3x - 20)°$. Work out (a) the value of x and (b) the size of the largest angle. **[4 marks]**

Answer _____

18 The three angles of a triangle are $(x - 5)°$, $x°$ and $(3x - 15)°$. Work out (a) the value of x and (b) the size of the largest angle. **[4 marks]**

Answer _____

19 One exterior angle of a regular polygon is 24°. How many sides does the polygon have? **[4 marks]**

Answer _____

20 The interior angles of a pentagon are (3x + 20)°, (3x + 15)°, (x + 5)°, (3x + 10)°, (2x + 10)°. Work out the value of x. **[4 marks]**

Answer _____