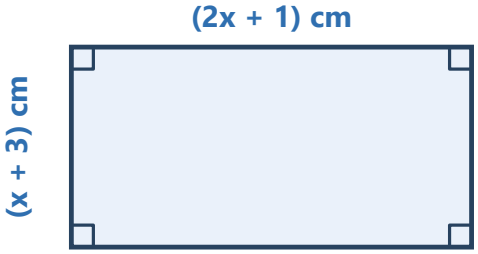
GCSE Maths: Equations from geometry: perimeters and angles (Foundation): answers

GCSE Maths - Linear Equations - Foundation - Lesson 9.8

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at **websink.site/gcse/maths/ch09-linear-equations/foundation/equations-from-geometry-perimeters-and-angles/**

Exercise 9H Equations from perimeters and angles Non-calculator

1 The perimeter of the rectangle is 32 cm. Work out the value of x.

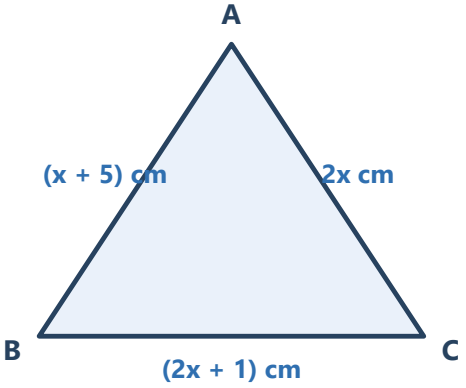


Answer: $x = 4$

2 A square has sides of length $(4x - 3)$ cm. The perimeter of the square is 52 cm. Work out the value of x, and the length of one side.

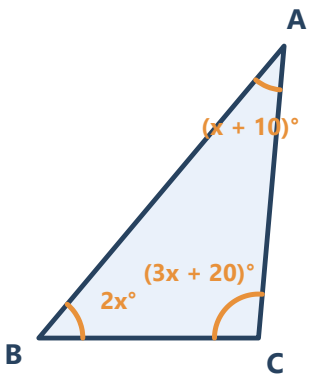
Answer: $x = 4$, side 13 cm

3 The perimeter of the triangle is 31 cm. Find the length of the longest side.



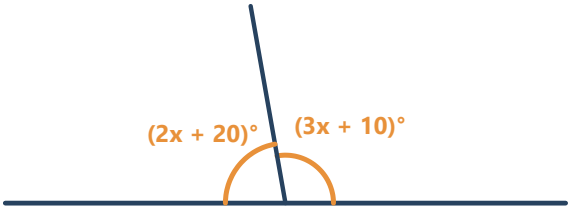
Answer: 11 cm

4 Work out the value of x, and the size of the largest angle in the triangle.



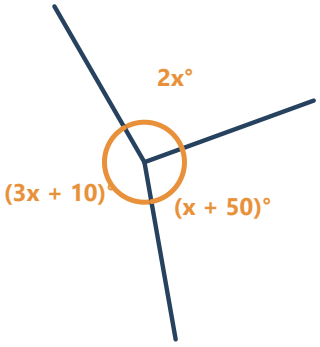
Answer: x = 25, largest angle 95°

5 The angles are on a straight line. Work out the value of x.



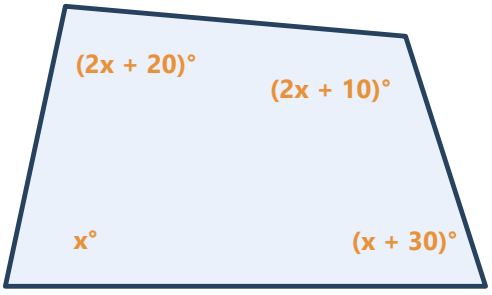
Answer: x = 30

6 Three angles meet at a point. Work out the value of x, and the size of the smallest angle.



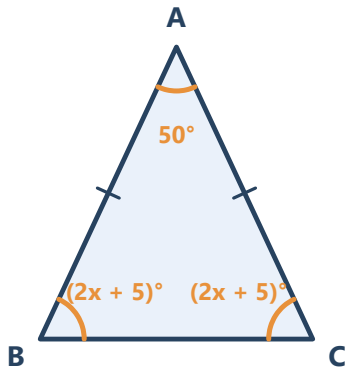
Answer: x = 50, smallest angle 100°

7 The four angles of the quadrilateral add up to 360°. Work out the value of x.



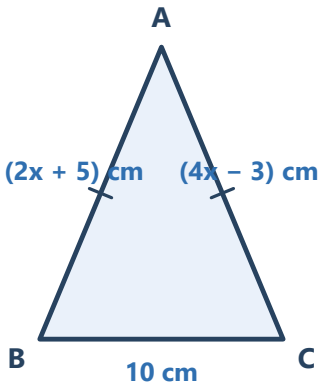
Answer: $x = 50$

8 Triangle *ABC* is isosceles. Work out the value of *x*, and the size of each base angle.



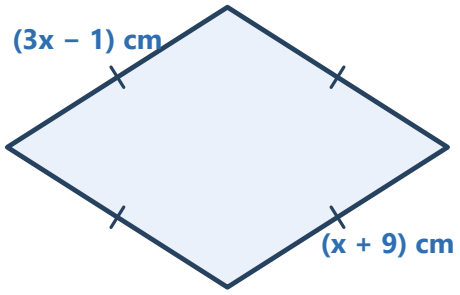
Answer: $x = 30$, base angles 65°

9 Triangle *ABC* is isosceles with *AB* = *AC*. Work out the perimeter of the triangle.



Answer: 36 cm

10 The shape is a rhombus. Work out the perimeter of the rhombus.



Answer: 56 cm

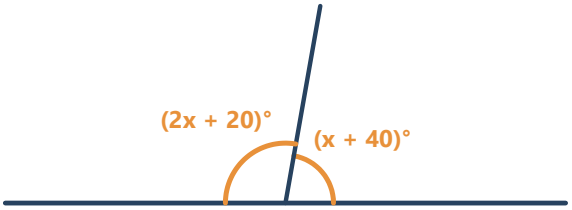
11 Zane says that the triangle with angles $x°$, $2x°$ and $3x°$ must have a right angle. Is he correct? You must show your working.

Answer: Yes: $x = 30$, so the angles are 30°, 60° and 90°.

12 The angles of a triangle are $(2x - 10)°$, $(x + 30)°$ and $(3x - 20)°$. Find the size of the largest angle.

Answer: 70°

13 Work out the value of x.



Answer: $x = 40$

14 A rectangle has width 4 cm and length x cm. The perimeter is 20 cm. Work out the length.

Answer: 6 cm

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