

Forming and Solving Equations

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **32**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

- 1** Lena thinks of a number, n .
She multiplies it by 3 and then adds 5
Her answer is 26

(a) Write an equation in n .

[1 mark]

Answer _____

(b) Solve your equation to find the number.

[2 marks]

$n =$ _____

- 2** I multiply a number x by 5 and then add 3
The answer is 17

Circle the equation that shows this.

[1 mark]

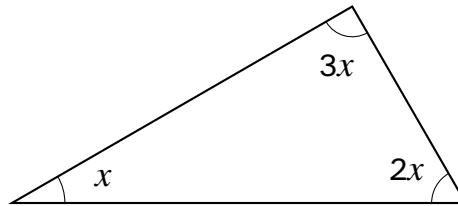
$5x + 3 = 17$

$3x + 5 = 17$

$5(x + 3) = 17$

$5x - 3 = 17$

- 3 The angles in this triangle are x , $2x$ and $3x$.



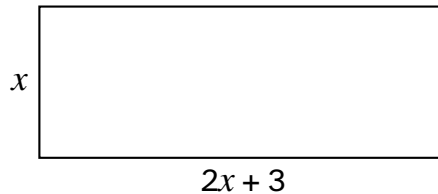
Not drawn accurately

Work out the size of the largest angle.

[3 marks]

Answer _____ degrees

- 4 Here is a rectangle.
All lengths are in centimetres.



Not drawn accurately

The perimeter of the rectangle is 36 cm.
Work out the value of x .

[3 marks]

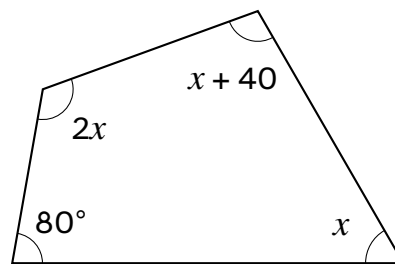
$x =$ _____

- 5 Sam and Kim share 40 sweets.
Kim has 6 more sweets than Sam.
How many sweets does Kim have?

[3 marks]

Answer _____

- 6 Here is a quadrilateral.



Not drawn accurately

Work out the value of x .

[3 marks]

$x =$ _____

- 7** Jay buys 3 pens and 1 ruler for 95p.
The ruler costs 15p more than a pen.
How much does one pen cost?

[3 marks]

Answer _____ p

- 8** A car park has only red, blue and silver cars in it.
There are twice as many silver cars as blue cars.
There are 5 fewer red cars than blue cars.
There are 43 cars in the car park altogether.
How many silver cars are in the car park?

[3 marks]

Answer _____

- 9 Here is the rule for a sequence.

Multiply the previous term by 2, then subtract 3

The 1st term is x

The 3rd term is 27

Work out the value of x .

[3 marks]

$x =$ _____

- 10 A square has side length x cm.
An equilateral triangle has side length $(x + 2)$ cm.
The square and the triangle have the same perimeter.
Work out the length of one side of the square.

[4 marks]

Answer _____ cm

11 The sum of three consecutive whole numbers is 78

Work out the three numbers.

[3 marks]

Answer _____