

## Topic test 1 (20 minutes)

### Equations - Foundation

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1 (a) Solve  $\frac{x}{10} = 5$

[1 mark]

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$x =$  \_\_\_\_\_

1 (b) Solve  $2y - 9 = 18$

[2 marks]

\_\_\_\_\_

\_\_\_\_\_

$y =$  \_\_\_\_\_

1 (c) Solve  $4w + 3 = 20 - 6w$

[3 marks]

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

$w =$  \_\_\_\_\_

- 2** A shop gives reward points based on the money in £ spent by a customer. It uses this formula.

$$\text{reward points} = 2 \times \text{money spent} + \text{bonus}$$

The bonus is worked out using this table.

Money spent (to the nearest £)	1 to 20	21 to 50	50 to 100	More than 100
Bonus	5	10	20	25

- 2 (a)** Amy spent £34

Work out her reward points.

**[2 marks]**

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Answer \_\_\_\_\_

- 2 (b)** Bob was given 220 reward points.

How much, to the nearest £, did he spend?

**[2 marks]**

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Answer £ \_\_\_\_\_

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3 An expression for the  $n$ th term of a sequence is  $n^2 + 2$

Write down the first three terms of the sequence.

[3 marks]

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Answer \_\_\_\_\_ , \_\_\_\_\_ , \_\_\_\_\_

4 Liam and Kyle share their energy bills equally.

Their electricity bill is  $\pounds x$

Their gas bill is  $\pounds 24$  more than their electricity bill.

They each pay  $\pounds 59$

Work out the cost of the electricity bill and the cost of the gas bill.

[4 marks]

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Electricity  $\pounds$  \_\_\_\_\_

Gas  $\pounds$  \_\_\_\_\_

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5 Solve  $\frac{6x+7}{5} = 2x - 4$

[3 marks]

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$x =$  \_\_\_\_\_