AQA

Topic Test 1 (20 minutes)
Algebra recap and review - Higher

1 Circle the line that is parallel to $y = 2x + 8$

[1 mark]

$$y = \frac{1}{2}x + 8 \qquad y = 8 - 2x \qquad y - 2x = 0 \qquad y = \frac{8 - x}{2}$$

2 Circle the line that is perpendicular to $y = 2x + 8$

[1 mark]

$$y = \frac{1}{2}x + 8 \qquad y = 8 - 2x \qquad y - 2x = 0 \qquad y = \frac{8 - x}{2}$$

3 Circle the line that passes through the origin.

[1 mark]

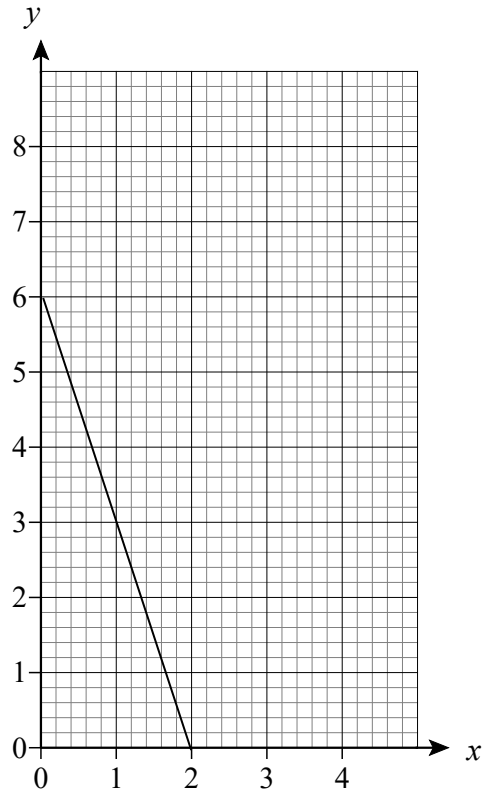$$y = \frac{1}{2}x + 8 \qquad y = 8 - 2x \qquad y - 2x = 0 \qquad y = \frac{8 - x}{2}$$

4 Work out where the line $2y - 3x - 8 = 0$ crosses the y-axis.

[2 marks]

_____

Answer (_____),(_____)

5 Here is the graph of a straight line.

Work out the equation of the line.

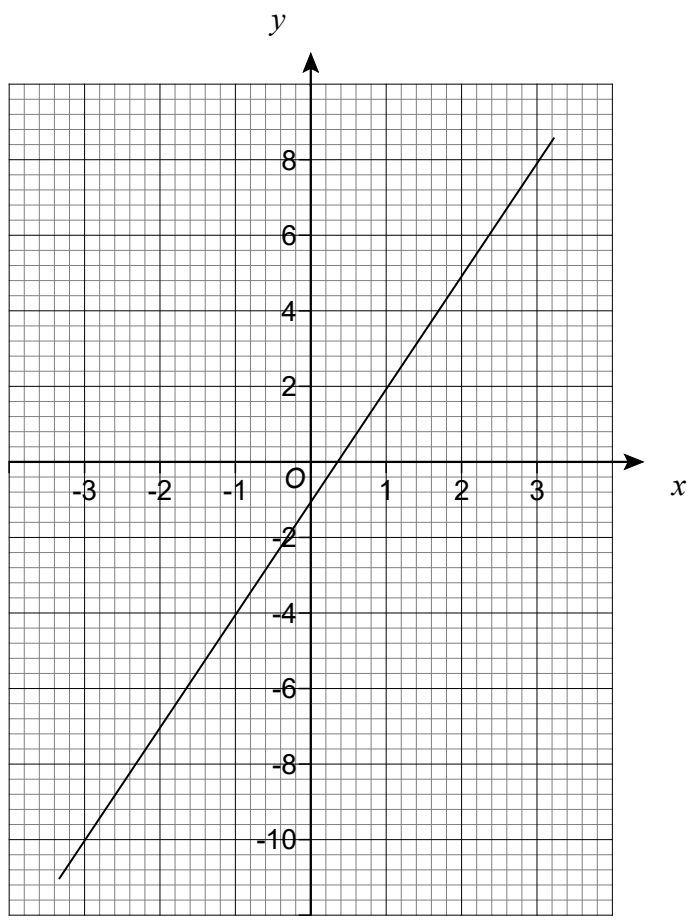**[3 marks]**

_____

_____

_____

_____

Answer _____

6 Solve the equation $3x + 14 = 2$

[2 marks]

$x =$ _____

7 Here is the graph of $y = 3x - 1$

Use the graph to find the solution to $3x - 1 = 0$

[1 mark]

Answer _____

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8 Solve the equation $\quad 5x + 1 = 2(x + 4)$

[3 marks]

Answer _____

9 Amy cycles from home to a park and back home.
The graph shows her journey.
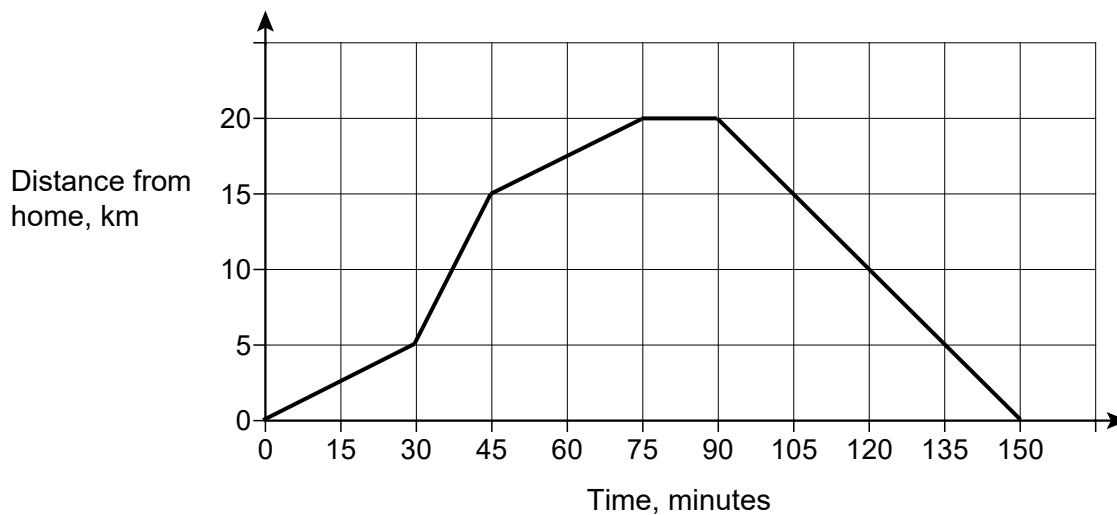
Amy stopped at the park for 15 minutes.

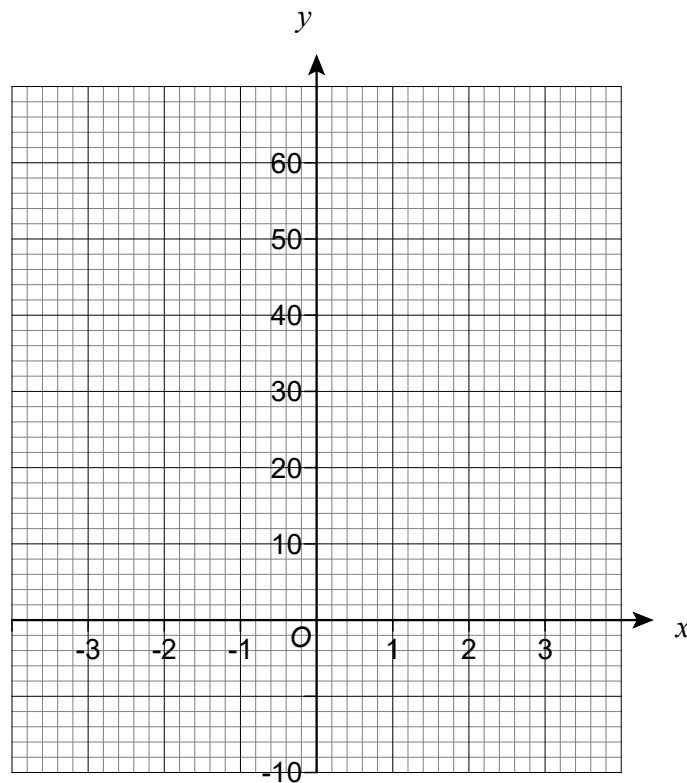Work out her average speed from home to the park in kilometres per hour.

[2 mark]

Answer _____ km/h

10 (a) Plot the graph of $y = 8 \times 2^x$ for values of x from -3 to 3.
Use this table to help you.

[3 marks]

x	-3	-2	-1	0	1	2	3
y	1			8			64

10 (b) Explain what happens to the value of y when x is a very large negative number.

[1 mark]