Topic Test 1 (20 minutes)
Equations - Higher

1   This formula is used to work out the cost, $£C$, of tiling a floor with n tiles.

$$C = 25 + \frac{9n}{2}$$

56 tiles are needed to tile a floor.

Can the floor be tiled for less than £275?

You **must** show your working.

[2 marks]

2   Check if –2 and 2 are solutions of the equation $x^3 = \sqrt{12x + 40}$
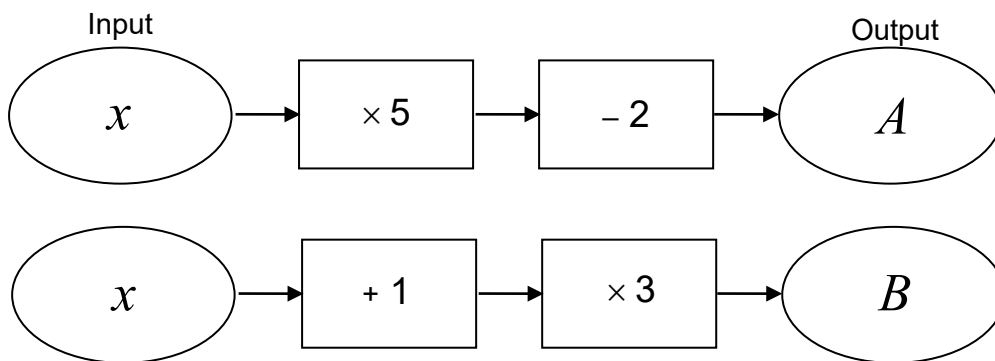
You **must** show your working.

[3 marks]

3 Solve $\dfrac{x}{3} + 2 = \dfrac{x+1}{2}$

[3 marks]

$x =$ _____

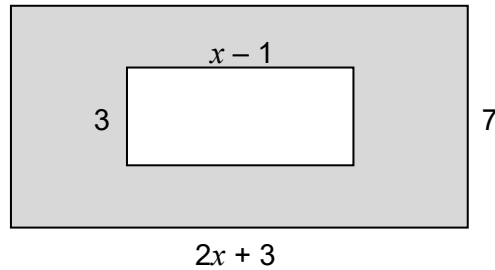**4** Here are two number machines.
Both machines have the same input, x.

Work out the value of x when $A = B$

[4 marks]

$x =$ _____

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5 The diagram shows two rectangles.
All dimensions are in cm

Not drawn accurately

$x - 1$

3

7

$2x + 3$

The shaded area is 84.5 cm^2

Work out the perimeter of the white rectangle.

[5 marks]

Answer _____ cm

6 Solve $\dfrac{3w-5}{2} = w + 2$

[3 marks]

_____

_____

_____

_____

$w =$ _____