GCSE HIGHER · REVISION MAT 1

Proportion and equivalent ratios

1 Is 3 : 5 equivalent to 9 : 15?

2 Find x.

$$4 : 7 = 12 : x$$

3 Explain why 2 : 3 and 3 : 4 are not equivalent.

4 A recipe uses 3 eggs for 250 g of flour.

How many eggs are needed for 750 g of flour?

5 Show that $\frac{x}{8} = \frac{15}{24}$ gives $x = 5$.

6 A 1.8 m person casts a 2.4 m shadow.

At the same time, a tree casts a 16 m shadow.

How tall is the tree?

7 Show that if $a : b = c : d$ then $ad = bc$.

8 Find x.

$$(x + 2) : (x - 1) = 5 : 2$$

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Proportion and equivalent ratios

1 Yes: multiply both parts by 3.

2 × 3

$x = 21$

3 $\frac{2}{3} \neq \frac{3}{4}$ (0.667 and 0.75)

4 × 3

9 eggs

5 $x = \frac{15 \times 8}{24}$

$x = 5$

6 Height : shadow = 3 : 4

12 m

7 $\frac{a}{b} = \frac{c}{d}$

Multiply both sides by bd: $ad = bc$

8 $2(x + 2) = 5(x - 1)$

$2x + 4 = 5x - 5$

$x = 3$

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