GCSE HIGHER · REVISION MAT 5

Simplifying ratios

1 Simplify

$48 : 72$

2 Simplify

$1.2 : 0.4$

3 Ben says $8 : 12 = 4 : 8$.

Explain why he is wrong.

4 Three children are 12, 16 and 20 years old.

Write their ages as a ratio in its simplest form.

Find the ratio in 4 years' time.

5 Write $9 : 4$ in the form $n : 1$.

6 A cube of side 2 cm and a cube of side 3 cm.

Find the ratio of their surface areas and of their volumes.

7 Simplify

$$\frac{3}{8} : \frac{1}{2} : \frac{3}{4}$$

8 Simplify

$$(x^2 - x - 6) : (x^2 - 9)$$

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Simplifying ratios

1 **2 : 3**

2 **3 : 1**

3 **8 : 12 = 2 : 3, but 4 : 8 = 1 : 2.**

4 **3 : 4 : 5**

16 : 20 : 24

4 : 5 : 6

5 **2.25 : 1**

6 **Surface areas 4 : 9**

Volumes 8 : 27

7 Multiply by 8

3 : 4 : 6

8 $(x - 3)(x + 2) : (x - 3)(x + 3)$

$\mathbf{(x + 2) : (x + 3)}$

Mr&Mrs MATHS