GCSE FOUNDATION · REVISION MAT 3

Multiplicative relationships

1 Dev has 8 stickers. Eve has 40 stickers.

(a) How many times as many stickers does Eve have?

(b) Write the ratio Dev : Eve in its simplest form.

2 A is $\frac{5}{8}$ of B.

$B = 72$

Work out the value of A.

3 Que earns £180 a week.
Raj earns £270 a week.

Show that Que earns $\frac{2}{3}$ of what Raj earns.

4 A drink is made from sand and cement in the ratio 3 : 1.

Is this the same as saying the amount of cement is $\frac{1}{3}$ of the amount of sand?

Explain your answer.

5 The length of a rectangle is 1.5 times its width.

The perimeter of the rectangle is 50 cm.

Work out the area of the rectangle.

6 Ann has 4 times as many marbles as Bob.

Cal has $\frac{1}{2}$ as many marbles as Ann.

They have 77 marbles altogether.

How many marbles does each person have?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Multiplicative relationships

1 (a) **5** times

(b) **1 : 5**

2 $72 \div 8 \times 5 = \mathbf{45}$

3 $\frac{180}{270} = \mathbf{\frac{2}{3}}$ ✓

4 **Yes**. For every 3 parts of sand there is 1 part of cement, so cement = $\frac{1}{3}$ × sand.

5 Width w, length $1.5w$: $2(w + 1.5w) = 5w = 50$

$w = 10$ cm, length = 15 cm

Area = **150 cm^2**

6 Bob x, Ann $4x$, Cal $2x$

$7x = 77$, so $x = 11$

Bob **11**, Ann **44**, Cal **22**

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