



Name: \_\_\_\_\_



1) Find the ratio  $a : c$  if:

a) The ratio of  $a : b$  is  $5 : 1$   
and the ratio of  $b : c$  is  $2 : 5$

$$10:5 = 2:1$$

b) The ratio of  $a : b$  is  $4 : 5$   
and the ratio of  $b : c$  is  $3 : 4$

$$12:20 = 3:5$$

c) The ratio of  $a : b$  is  $5 : 2$   
and the ratio of  $b : c$  is  $3 : 7$

$$15:14$$

d) The ratio of  $a : b$  is  $8 : 3$   
and the ratio of  $b : c$  is  $5 : 4$

$$40:12 = 10:3$$

e) The ratio of  $a : b$  is  $7 : 2$   
and the ratio of  $b : c$  is  $9 : 4$

$$63:8$$

2) In each case, there are 6000 buttons in the colours blue, red and green:

a) The ratio of red : blue is  $4 : 1$   
and the ratio of blue : green is  $2 : 5$   
How many blue buttons are there?

800

b) The ratio of blue : red is  $5 : 3$   
and the ratio of red : green is  $1 : 4$   
How many red buttons are there?

1500

c) The ratio of red : green is  $3 : 2$   
and the ratio of green : blue is  $1 : 5$   
How many blue buttons are there?

4000

3) Calculate the total number of buttons if:

a) the ratio of red : blue is  $5 : 1$ ,  
the ratio of blue : green is  $2 : 3$   
and there are 49 more reds than green?

105

b) the ratio of red : blue is  $3 : 5$ ,  
the ratio of blue : green is  $3 : 4$   
and there are 88 more greens than reds?

352

**Exam question:**

The ratio of mice to cats is  $8:3$   
The ratio of cats to dogs is  $2:5$   
There are 75 dogs.  
How many animals are there in total?

185

