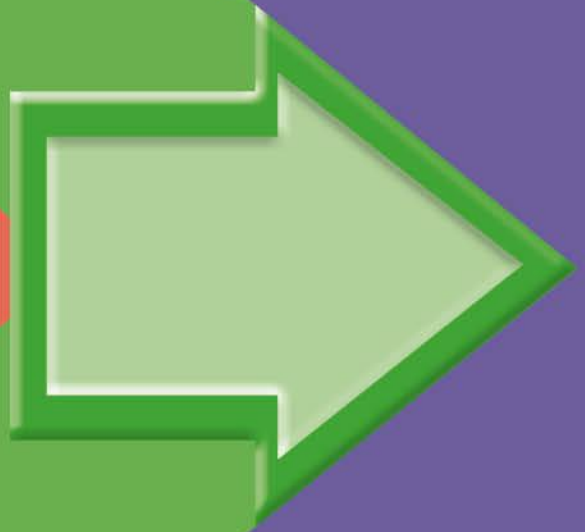
MIXED RATIO PROBLEMS



White Rose Maths

GET READY

White Rose Maths

1) Find 40% of 320

2) Share 1.2 kg in the ratio 1 : 5

3) Solve $5x = 17$

4) An isosceles triangle has angles a, b and c.
$a = 20°$, $b = 20°$ and $c = 140°$
Write the ratio of $a : b : c$ in its simplest form.

1) Find 40% of 320 $0.4 \times 320 = 128$

2) Share 1.2 kg in the ratio 1 : 5 200 g and 1000 g

3) Solve $5x = 17$ $x = 3.2$ or $x = \frac{17}{5}$

4) An isosceles triangle has angles a, b and c.
$a = 20°$, $b = 20°$ and $c = 140°$
Write the ratio of $a : b : c$ in its simplest form.

20 : 20 : 140

1 : 1 : 7

LET'S LEARN

White Rose Maths

The ratio of the angles in a triangle is 2 : 3 : 4

Find the size of each angle.

$180° \div 9 = 20°$

$2 \times 20° = 40°$

$3 \times 20° = 60°$

$4 \times 20° = 80°$

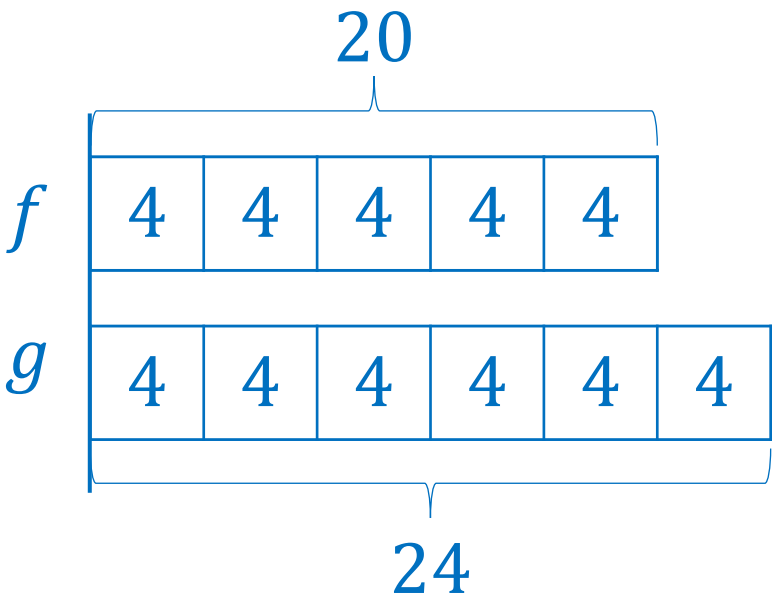
Have a think

The angles in a triangle are f, g and h

$f = 20°$

$f : g = 5 : 6$

Find the size of angle h.



$20 \div 5 = 4$

$20° + 24° + h = 180°$

$44° + h = 180°$

Have a think

$h = 136°$

There are 70 students in a class.

The ratio of boys to girls is 2 : 5

30% of the students play football.

The rest play rugby.

32 girls play rugby.

$70 \div 7 = 10$

$2 \times 10 = 20$

$5 \times 10 = 50$

$70 \times 0.3 = 21$

$70 - 21 = 49$

	Football	Rugby	Total
Boys	3	17	20
Girls	18	32	50
Total	21	49	70

Have a think

A boy is chosen at random.

What is the probability that he plays football? $\frac{3}{20}$

YOUR TURN

Have a go at questions 1 to 5 on the worksheet

White Rose Maths

The ratio of red to blue is 5 : 7
The ratio of blue to yellow is 28 : 1

Write the ratio of red to blue to yellow.

20 : 28 : 1

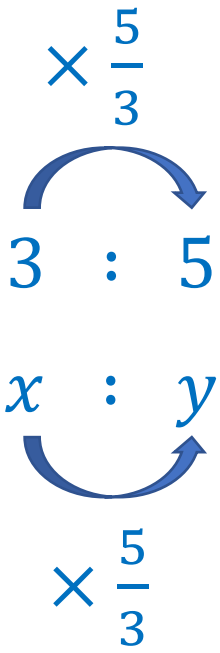
Red		Blue		Yellow
20	:	28		
		28	:	1

$5 : 7 = 20 : 28$

Have a think

$x : y = 3 : 5$

Show that $5x = 3y$



$\frac{5}{3} \times x = y$

$\frac{5}{3}x = y$

$5x = 3y$

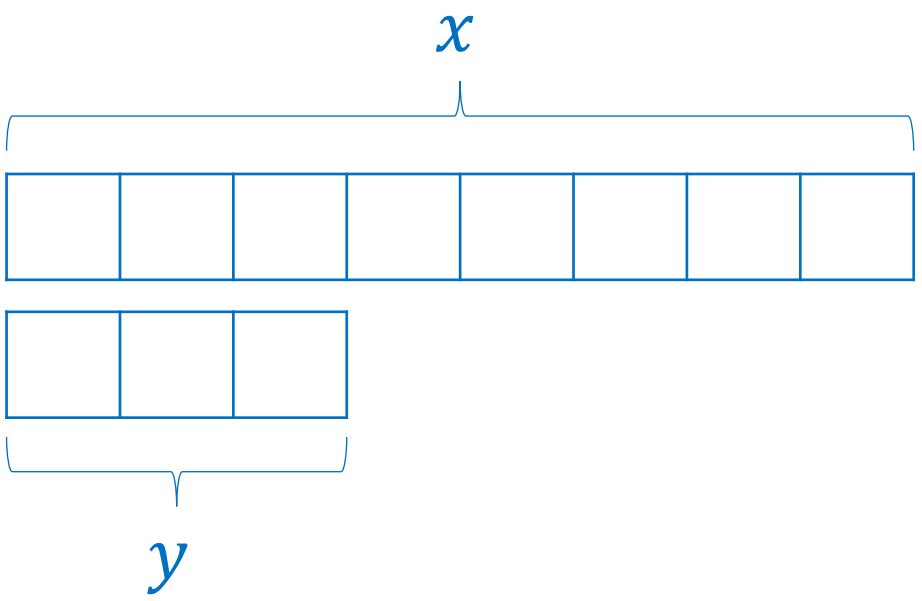
Have a think

$3x = 8y$

Write the ratio $x : y$

$3x = 8y$

$\frac{3}{8}x = y$



$x : y = 8 : 3$

Have a think

YOUR TURN

Have a go at the rest of the questions on the worksheet

White Rose Maths