

11+ MIXED NUMERICAL REASONING

PERCENTAGES
RATIO
DISTANCE, TIME & SPEED
PROPORTIONS
INGREDIENT SCALING



PERCENTAGES

%

RATIO

$a : b$

DISTANCE,
TIME & SPEED



PROPORTIONS



INGREDIENT
SCALING



Distance



Speed

Time



$$60\% = \frac{3}{5}$$

Ratio $2 : 3$

Speed = Distance $\div$ Time

Scale up by $\times 4$



$2 : 3$



Speed = Distance $\div$ Time



$3 : 5$

Scale up
by $\times 3 \rightarrow$



Joanne gave **16** of her stickers to a friend.
After giving them away, she had **64** stickers left.

What percentage of her stickers did Joanne give away to her friend?



A

16%

B

20%

C

25%

D

33%

Working out...

Mrs Smith is making her delicious lemon cake for a tea party. Her recipe uses **780 g** of ingredients and serves **3** people. She needs to make a larger cake so that it will serve **5** people.

How many grams of ingredients will she need for 5 people?



A 1,000 g

B 1,200 g

C 1,250 g

D 1,300 g

Working out...



A family sets off in their car, travelling at an average speed of **40 mph**.
They leave at **09:30 am** and arrive at their destination at **10:45 am**.

How far away was their destination?

BEACH

TOWN

CASTLE

NATIONAL PARK

↑
Holiday
Destination

Departure time

09:30
am

Arrival time

10:45
am

A 30 miles

B 40 miles

C 50 miles

D 60 miles

Working out...



Kai is collecting data about the cars that pass his house. In the first hour, he counted the first 100 cars and found that blue cars, red cars, green cars and cars of a different colour passed in the ratio **4 : 2 : 1 : 3**.

What is the difference between the number of red cars and the number of cars of a different colour?



Car colour	Tally
	
	
	
	

A 5

B 10

C 15

D 20

Working out...

