

# Main Task

## White Rose Problem Solving and Reasoning

Alex is adding fractions.

$$\frac{3}{5} + \frac{1}{15} = \frac{4}{20} = \frac{1}{5}$$

Do you agree with her?

Explain your answer.

A car is travelling from Halifax to Brighton.

In the morning, it completes  $\frac{2}{3}$  of the journey.

In the afternoon, it completes  $\frac{1}{5}$  of the journey.

What fraction of the journey has been travelled altogether?

What fraction of the journey is left to travel?



If the journey is 270 miles, how far did the car travel in the morning?

How far did the car travel in the afternoon?

How far does the car have left to travel?

Mr and Mrs Rose are knitting scarves.

Mr Rose's scarf is  $\frac{5}{9}$  m long.

Mrs Rose's scarf is  $\frac{1}{5}$  m longer than Mr Rose's scarf.

How long is Mrs Rose's scarf?

How long are both the scarves altogether?

Fill in the boxes to make the calculation correct.

$$\frac{\boxed{1}}{\boxed{\phantom{00}}} = \frac{\boxed{3}}{\boxed{\phantom{00}}} + \frac{\boxed{\phantom{00}}}{\boxed{10}}$$

Each row and column adds up to make the total at the end.

Use this information to complete the diagram.

$\frac{2}{4}$	$\frac{1}{4}$	$\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$	$\frac{1}{2}$	$= 3\frac{7}{8}$
$\frac{1}{\boxed{\phantom{00}}}$	$\frac{\boxed{\phantom{00}}}{8}$	$\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$	$\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$	
$\frac{3}{\boxed{\phantom{00}}}$	$\frac{1}{12}$	$\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$	$\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$	
				$5\frac{1}{2}$

Dora is baking muffins.

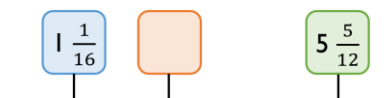
She uses  $2\frac{1}{2}$  kg of flour,  $1\frac{3}{5}$  kg of sugar and  $1\frac{1}{4}$  kg of butter.

How much flour, sugar and butter does she use altogether?

How much more flour does she use than butter?

How much less butter does she use than sugar?

A blue, orange and green box are on a number line.



The number in the green box is  $3\frac{2}{3}$  more than the number in the orange box.

The number in the orange box is:  $\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$

The number in the orange box is  $\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$  greater than the number in the blue box.

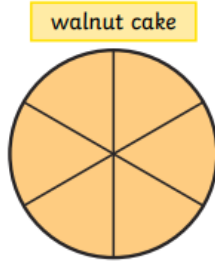
# Support task



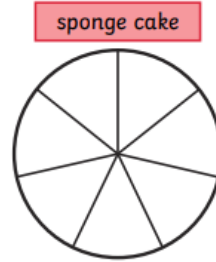
- 1) A school is having a cake sale. There are four cakes of equal size. Each cake is sliced into different size servings.



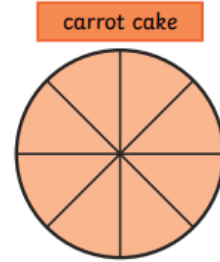
The chocolate cake is cut into fifths.



The walnut cake is cut into sixths.



The sponge cake is cut into sevenths.



The carrot cake is cut into eighths.

Calculate the amount of cake each child buys as a fraction of a whole cake.



Jo

I bought 1 slice of chocolate cake and 1 slice of carrot cake.



Hasim

I bought 2 slices of walnut cake and 2 slices of sponge cake.



Krystal

I bought 2 slices of chocolate cake and 3 slices of sponge cake.

- 2) At the end of the cake sale, there are 2 slices of walnut cake and 3 slices of carrot cake left. What fraction of the two cakes had been eaten?

- 3) Decide how many slices of the cakes you would buy. Calculate your answer as a fraction of a whole cake.