

How to calculate fractions of a total

Children might be asked to solve a problem like this example:

Three-quarters of the 48 people in a room have brown eyes. How many people is this?

In reading this question, the first important part to focus on is the word '**quarters**'. Quarters means four equal parts. So in this example we need to start by breaking 48 into 4 parts.
(Division ie $48 \div 4$ gives us the answer of 12 in each group).

It's a good idea to make a little drawing like this. Write the number 48 and draw four short lines (to represent the four parts/quarters we just calculated). Write 12 next to each line.



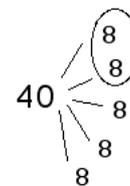
The question says **three-quarters** which means we want **three out of the four groups**. We can circle **three** of the four groups. We add ($12 + 12 + 12$) or multiply (12×3) to get an answer of **36** people that have brown eyes. Of course we could have subtracted one group of 12 from 48 to be left with three groups. ($48 - 12 = 36$)

Here's another example:

Calculate $\frac{2}{5}$ of 40

The question is asking for two-**fifths**. Our starting point therefore is to work out what the fifths are. To make fifths we have to break 40 into five equal groups. (Division ie $40 \div 5$ gives us the answer of 8 in each group).

Write the number 40 and draw five short lines (to represent the five parts/fifths we just calculated). Write 8 next to each line.

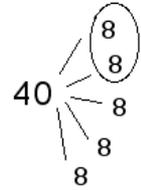


The question says **two-fifths** which means we want **two out of the five groups**. We can circle **two** of the five groups. We add ($8 + 8$) or multiply (8×2) to get an answer of **16**.

This method is a meaningful way for children to learn how to calculate fractions of a total.

Calculating fractions of a total

To calculate $\frac{2}{5}$ of 40 first make five equal groups ie $40 \div 5 = 8$ then make a diagram. Two groups of 8 make a total of 16



Here are some fraction questions to solve:

$$\frac{2}{3} \text{ of } 744$$

$$\frac{3}{5} \text{ of } 800$$

$$\frac{3}{4} \text{ of } 512$$

$$\frac{4}{7} \text{ of } 1036$$

$$\frac{9}{10} \text{ of } 750$$

