

Warm up your brain!

What are factors?

What are the factors of 25?

## Answers

What are factors?

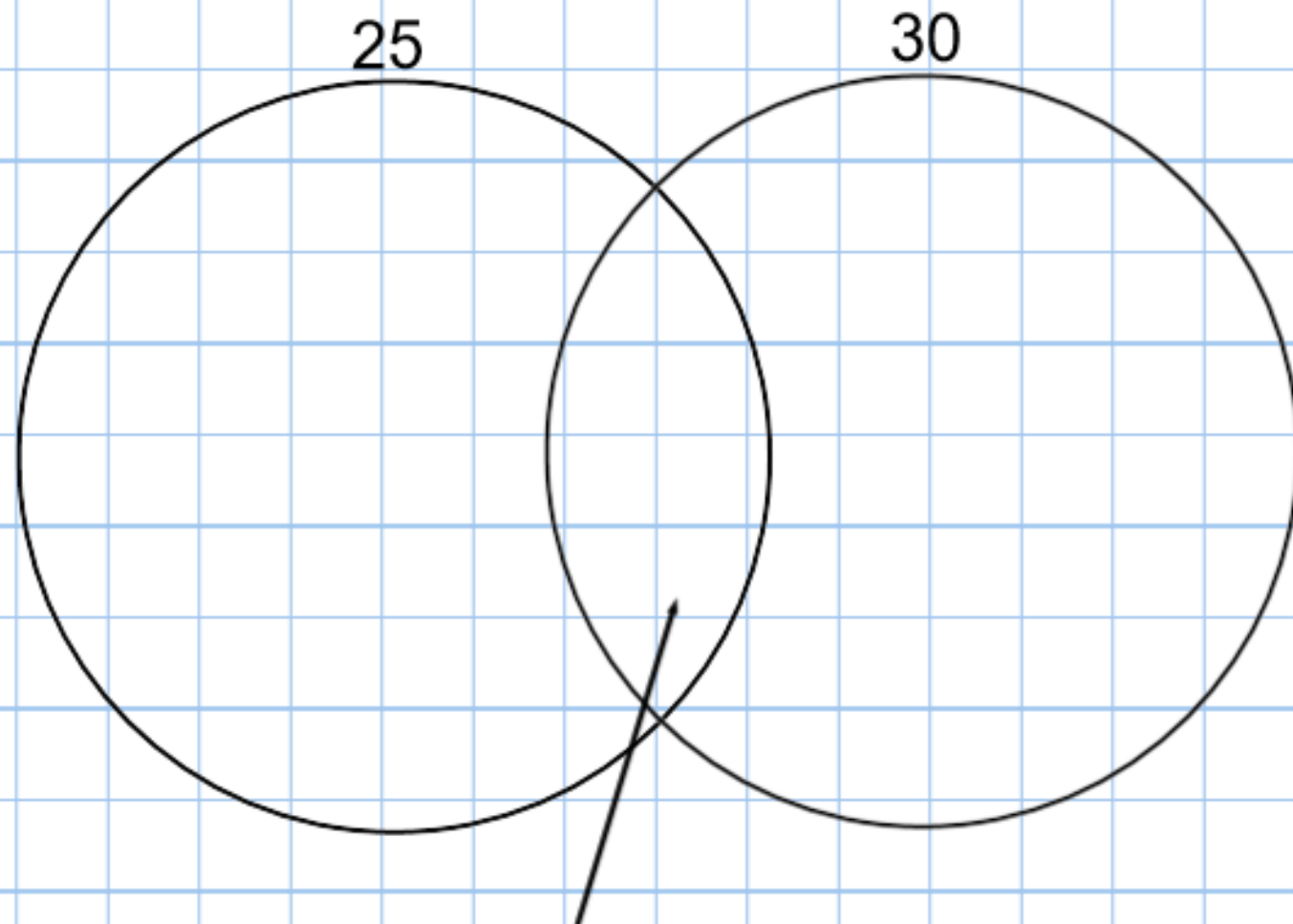
What are the factors of 25?

Factors are numbers that divide exactly into another number

Factors of 25 are: 5, 25, 1

<https://www.bbc.co.uk/bitesize/topics/zfq7hyc/articles/zp6wfcw>

Complete the Venn diagram and show the factors of 25 and 30



*Remember: this is where common factors go*

## LO: To revise finding fractions of amounts

SC:

\*I can use a bar model to show my understanding of fractions

\*I can divide the whole amount by the denominator and multiply by the numerator

\*I can solve word problems by identifying key information

## Multiplying a fraction or mixed number by an integer

①  $2 \times \frac{3}{7} = \frac{6}{7}$

multiply the integer by the numerator

the denominator stays the SAME!

What does this show? Two lots of  $\frac{3}{7}$

$$\frac{3}{7} + \frac{3}{7} = \frac{6}{7}$$

②  $3 \times 2 \frac{2}{9} = 6 \frac{6}{9} = 6 \frac{2}{3}$

Then multiply the integer by the numerator

First multiply the whole numbers together

simplified!

## Multiplying a fraction or mixed number by an integer

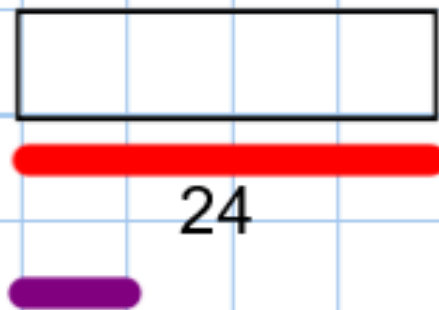
$$6 \times \frac{2}{15}$$

$$3 \times \frac{1}{5}$$

$$2 \times 7 \frac{2}{6}$$

## Fraction of an amount

Find  $\frac{1}{4}$  of 24



How many equal groups should you share 24 into?

24 divided by 4 = 6      so  $\frac{1}{4}$  of 24 = 6

## Fraction of an amount

Find  $\frac{1}{7}$  of 35



35



How many equal groups should you share 35 into?

35 divided by 7 = 5 so  $\frac{1}{7}$  of 35 = 5



Use a bar model to work out the questions below

$$\frac{1 \text{ of } 24}{6}$$

$$\frac{1 \text{ of } 48}{8}$$

$$\frac{1 \text{ of } 35}{5}$$

## ANSWERS

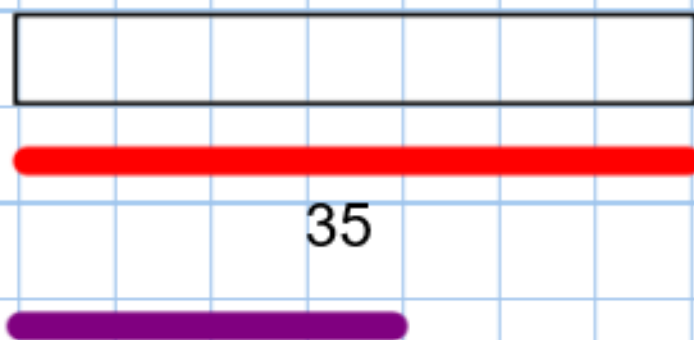
$$\frac{1 \text{ of } 24}{6} = 4$$

$$\frac{1 \text{ of } 48}{8} = 6$$

$$\frac{1 \text{ of } 35}{5} = 7$$

## Fraction of an amount

Find  $\frac{4}{7}$  of 35



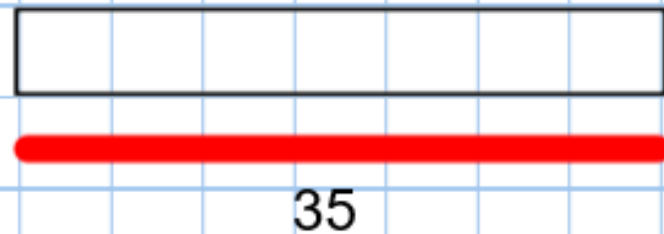
Now we want to find  $\frac{4}{7}$  of 35

First find  $\frac{1}{7}$  of 35 =

Then multiply your answer by 4 =

Answer

Find  $\frac{4}{7}$  of 35



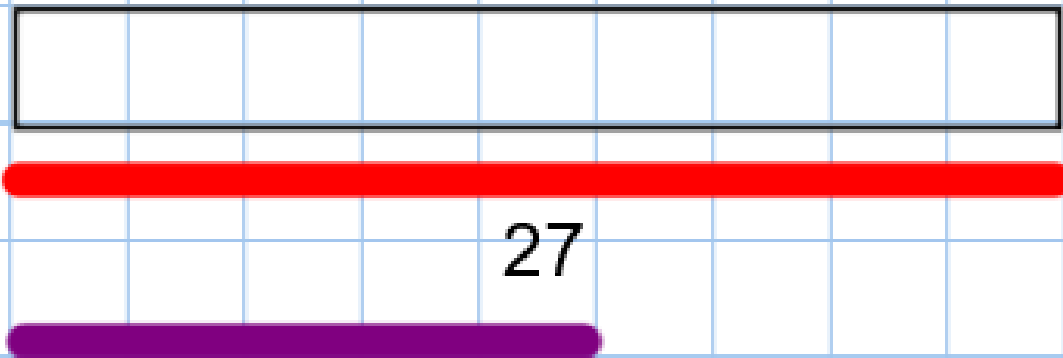
$$\frac{4}{7} \text{ of } 35 = 20$$

$$\text{First find } \frac{1}{7} \text{ of } 35 = 5$$

$$\frac{4}{7} \text{ of } 35 = 5 \times 4 = 20$$

## Fraction of an amount

Find  $\frac{5}{9}$  of 27

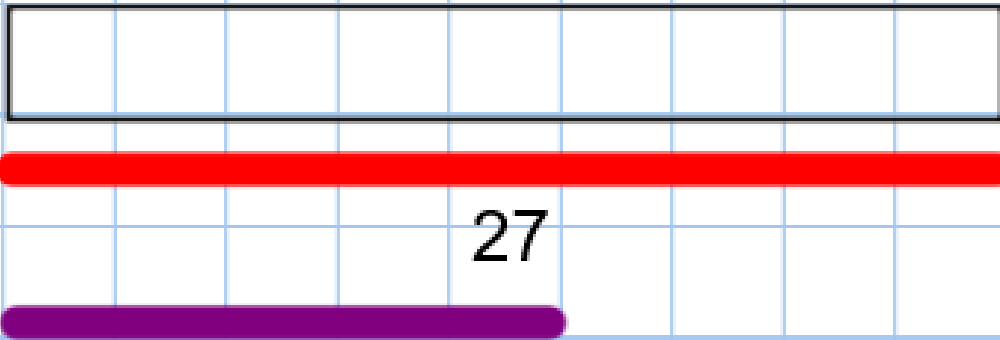


First find  $\frac{1}{9}$  of 27 =

Then find  $\frac{5}{9}$  of 27 =

Answer

$$\text{Find } \frac{5}{9} \text{ of } 27 = 15$$



$$\text{First find } \frac{1}{9} \text{ of } 27 = 3$$

$$\text{Then find } \frac{5}{9} \text{ of } 27 = 3 \times 5 = 15$$

## The rule and the trick.....

It is important that you can show your working out using a bar model so that you understand that we are finding a FRACTION (a part) of an amount (a number or total)

However....

What is the quicker and 'easier' way of working out a fraction of an amount?

$$\frac{3}{4} \text{ of } 16 =$$

**12**

First, divide the WHOLE number by the bottom (denominator) = 16  
divided by 4 = 4

Then, multiply your answer by the top (numerator) = 4 x 3 = 12

Use a bar model or 'the trick' to work out the questions below

3 of 24

6

4 of 48

8

5 of 35

7



## Answers

$$\frac{3 \text{ of } 24}{6} = 12$$

$$\frac{4 \text{ of } 48}{8} = 24$$

$$\frac{5 \text{ of } 35}{7} = 25$$

## Fraction of an amount in a real life context

On a bus there are 24 passengers.  
 $\frac{2}{6}$  of those are children.

a) How many adults are there?

AS A FRACTION

B) How many children are there?

IN NUMBERS

## Answers

On a bus there are 24 passengers.  
 $\frac{2}{6}$  of those are children.

a) How many adults are there?

$\frac{4}{6}$

B) How many children are there?

8

Now use these methods to work out the questions. You can find the skill, reasoning and problem solving questions in Week 2 – Lesson 5 – Fraction of Amount Questions.

Please try and answer as many questions as you can. Everyone should answer the skill questions and as many of the reasoning and problem solving questions as possible.

Skill	Reasoning and Problem Solving
<p>1. A) <math>\frac{1}{3}</math> of 40    B) <math>\frac{1}{3}</math> of 9</p> <p>2. A) <math>\frac{1}{7}</math> of 35    B) <math>\frac{1}{6}</math> of 66</p> <p>3. A) <math>\frac{1}{11}</math> of 99    B) <math>\frac{1}{7}</math> of 48</p> <p>4. Find (use a bar model if necessary)</p> <p>a) <math>\frac{3}{8}</math> of 56                  b) <math>\frac{5}{6}</math> of 480                  c) <math>\frac{4}{9}</math> of 81</p> <p>d) <math>\frac{2}{3}</math> of 33                  e) <math>\frac{2}{5}</math> of 40                  f) <math>\frac{2}{9}</math> of 45</p>	<p>5. A shark chases 36 fish and eats <math>\frac{1}{4}</math> of them. How many does he eat?</p> <p>6. Sam is reading a book. There are 75 pages in the book and so far he has read <math>\frac{4}{5}</math>. How many pages has he <u>not</u> read?</p> <p>7. Mr McLean got 16 chocolates for Easter and ate <math>\frac{1}{4}</math> of them on his way to work this morning. How many chocolates did he eat?</p> <p>8. Ethan collected 256 conkers but lost <math>\frac{3}{4}</math> of them on his way to school through a hole in his bag. When he arrived at school how many conkers did Ethan have left?</p> <p>9. There are 25 pupils in a class, <math>\frac{3}{5}</math> of the pupils support Chelsea and the remainder support Arsenal. How many pupils support Arsenal?</p> <p>10. McDonalds sell milkshakes in two sizes. A small milkshake contains 300ml and a large milkshake contains <math>\frac{2}{3}</math> more.</p> <p>(i) How much does a large milkshake contain?</p> <p>(ii) If Miss Torrens drinks <math>\frac{2}{3}</math> of a small milkshake and Miss Sage <math>\frac{2}{6}</math> of a large</p>