

Year 4 Maths, 19/1/21

RECALL

A fraction has two parts. To help us understand what they mean, have a look at this spelling test.

Spelling Test

1: believe ✓
2: enough ✓
3: knowledge ✓
4: posible ✗
5: although ✓

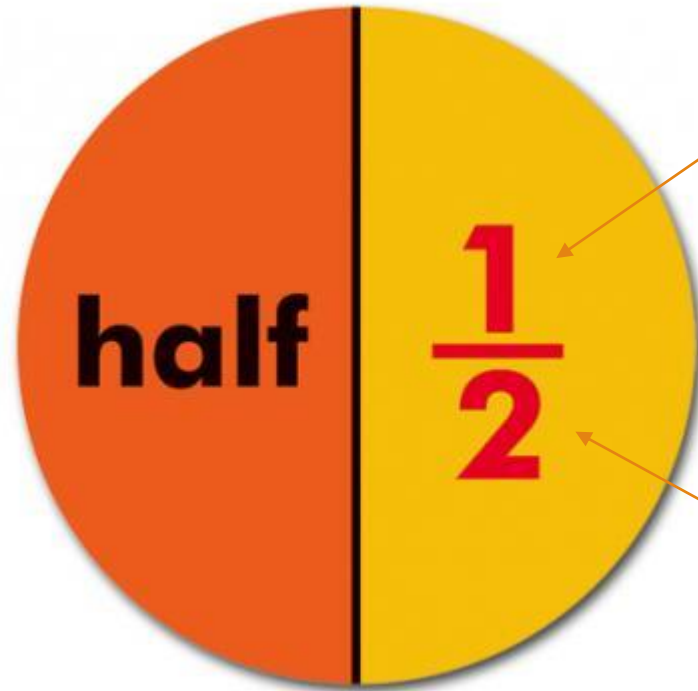
$\frac{4}{5}$

This means that 4 out of 5 answers are right.

The bottom number tells us how many parts there are in the whole thing
(5 questions in the whole spelling test)

The top number tells us how many of those parts
(4 questions correct)

Let's look at a half again.



The top part of the fraction is called the numerator.

The bottom part of the fraction is called the denominator.

When the numerator of a fraction is 1, it is called a **unit fraction**.

one

out of

two

parts

Learning objective: recognise and work out unit fractions

SOME WILL EVEN work out unit fractions of money

SOME will use short division to work out unit fractions of bigger numbers

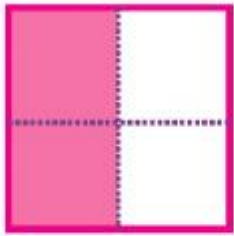
MOST will use bar models to show how to find various unit fractions

ALL use bar models to find halves and quarters

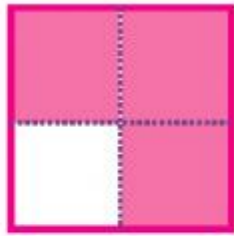
Can you circle all the unit fractions on this page?



$$\frac{1}{4}$$



$$\frac{1}{2}$$



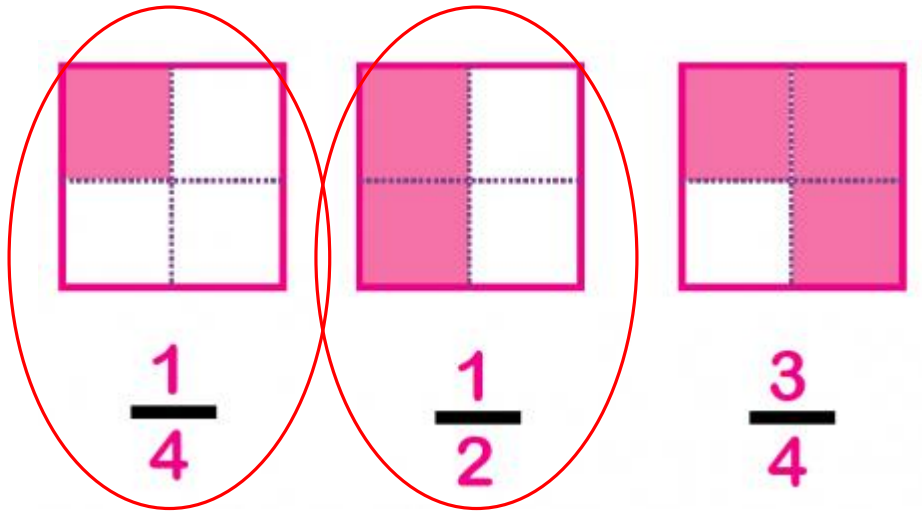
$$\frac{3}{4}$$

$\frac{3}{8}$	$\frac{2}{5}$
$\frac{1}{4}$	$\frac{3}{4}$
$\frac{8}{10}$	$\frac{1}{25}$
$\frac{1}{8}$	

Write your own unit fraction here.

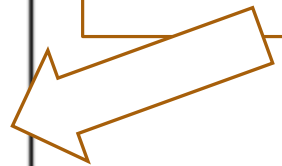


Can you circle all the unit fractions on this page?



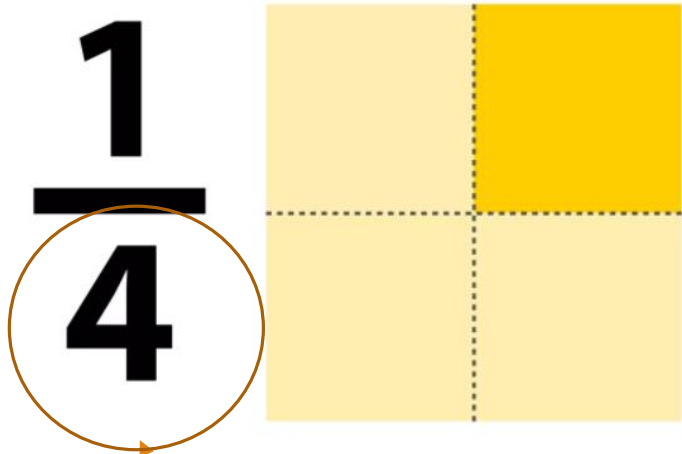
$\frac{3}{8}$	$\frac{2}{5}$
$\frac{1}{4}$	$\frac{3}{4}$
$\frac{8}{10}$	$\frac{1}{25}$
$\frac{1}{8}$	Any fraction with 1 at the top!

Write your own unit fraction here.

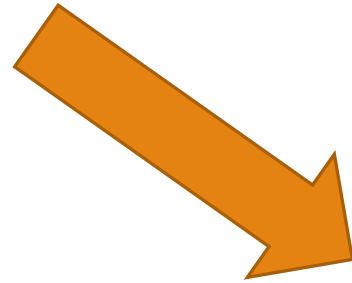


GUIDED PRACTICE

We are going to learn how to find a unit fraction of a number.



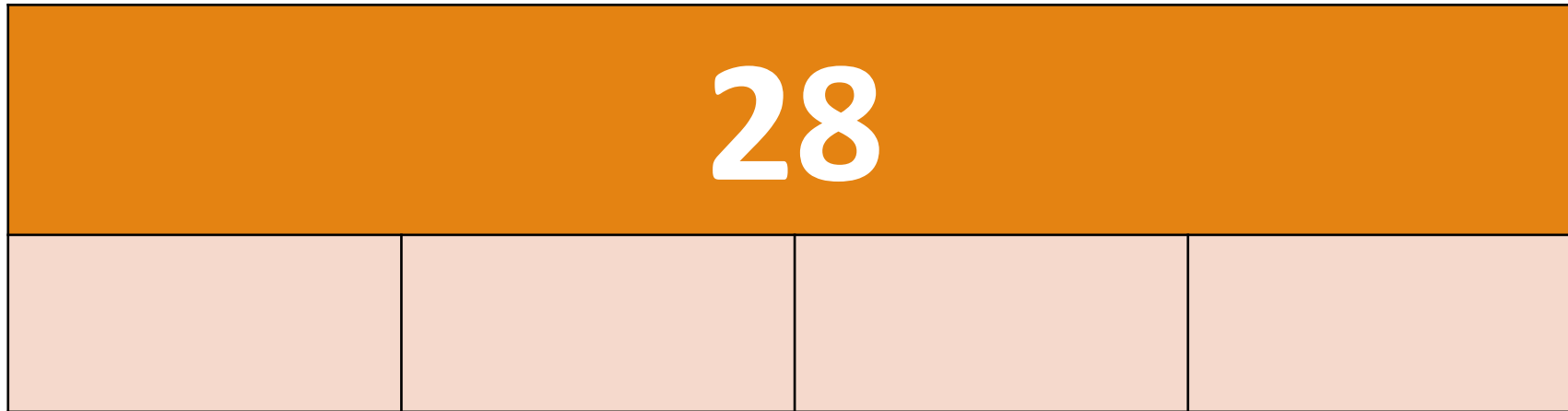
This fraction is a quarter. It means one out of four parts.



If we want to find a quarter of a number, we need to split that number into 4 equal parts. Remember, the denominator tells us how many parts to split into.

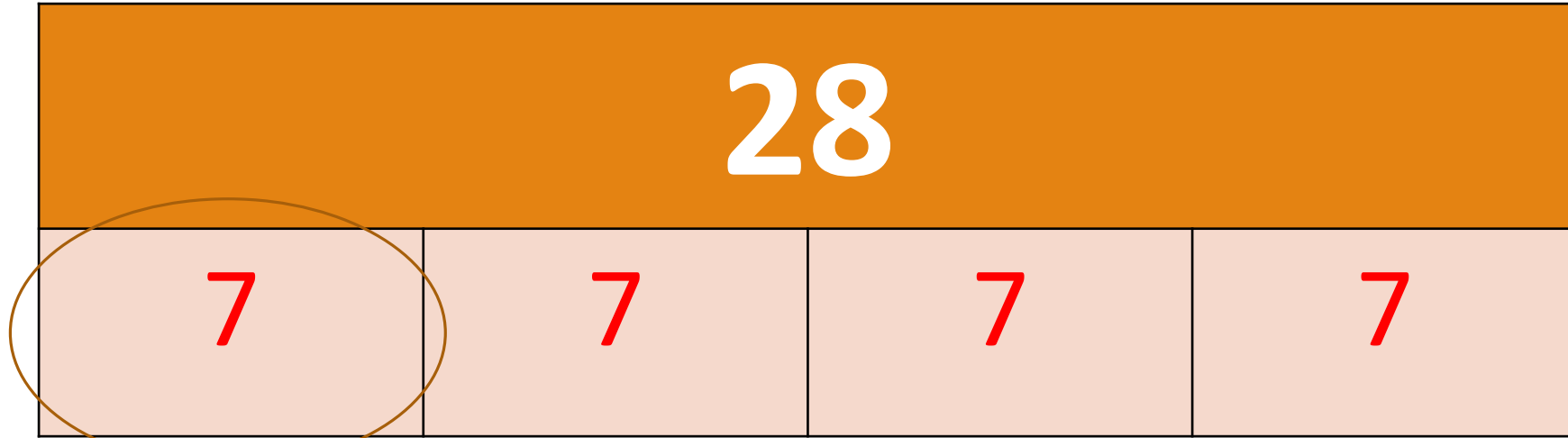
What is $\frac{1}{4}$ of 28?

To find out, we need to split 28 into four equal parts. We can use a bar model to represent this.



I know that 28 divided by 4 is _____, so one quarter of 28 is _____.

What is $\frac{1}{4}$ of 28?



One quarter of
28

I know that 28 divided by 4 is 7, so one quarter of 28 is 7.

We need to use division to find unit fractions of numbers. The denominator of the fraction tells us what to divide by.

Intelligent Practice

<p>Chilli 1- Draw bar models to show:</p> <p>A: $\frac{1}{2}$ of 20</p> <p>B: $\frac{1}{4}$ of 44</p> <p>C: $\frac{1}{4}$ of 440</p> <p>D: One quarter of two hundred and twenty</p>	<p>Chilli 2 – draw bar models to show the problem, then find the answer.</p> <p>A: $\frac{1}{5}$ of 45</p> <p>B: $\frac{1}{6}$ of 72</p> <p>C: $\frac{1}{8}$ of 240</p> <p>D: $\frac{1}{7}$ of 84</p>	<p>Chilli 3 – draw bar models to show the problem, then use short division to find the answer.</p> <p>A: $\frac{1}{5}$ of 365</p> <p>B: $\frac{1}{6}$ of 246</p> <p>C: $\frac{1}{3}$ of 357</p> <p>D: $\frac{1}{7}$ of 847</p>
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CAROLINA REAPER:

A: find $\frac{1}{4}$ of £24.64 B: find $\frac{1}{7}$ of £35.14 C: find $\frac{1}{12}$ of £48.12

Intelligent Practice **ANSWERS**

20	
10	10

44			
11	11	11	11

440			
110	110	110	110

220			
55	55	55	55

45				
9	9	9	9	9

A: $1/5$ of 45 = **9**

72					
7	7	7	7	7	7

B: $1/6$ of 72 = **7**

240							
30	30	30	30	30	30	30	30

C: $1/8$ of 240 = **30**

84						
12	12	12	12	12	12	12

D: $1/7$ of 84 = **12**

Chilli 3 – draw bar models to show the problem, then use short division to find the answer.

A: $1/5$ of 365 = **73**

B: $1/6$ of 246 = **41**

C: $1/3$ of 357 = **119**

D: $1/7$ of 847 = **121**

CAROLINA REAPER:

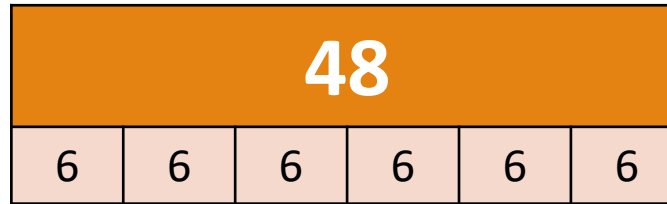
A: find $1/4$ of £24.64 = **£6.16** B: find $1/7$ of £35.14 = **£5.02** C: find $1/12$ of £48.12 = **£4.01**

DIVE DEEPER

One quarter of a number is 32. What is the number?

Show this problem in a bar model.

Spot the mistake:



I split 48 into 6 equal groups, so I wrote 6 in each box under 48. So one sixth of 48 is 6.

Why is this wrong?

Sometimes, always or never?

A quarter of a number is less than a half of the number.

Explain your answer.

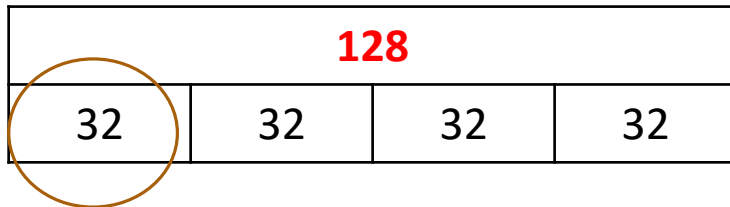
MEGA CHALLENGE:

I bought a Playstation game that had a third off its price. I paid £26.66. What was the original price?

DIVE DEEPER ANSWERS

One quarter of a number is 32. What is the number?

Show this problem in a bar model.



If one quarter of the number is 32, then the other three quarters must each be 32. There are four quarters, so $4 \times 32 = 128$

Spot the mistake:



I split 48 into 6 equal groups, so I wrote 6 in each box under 48. So one sixth of 48 is 6.

Why is this wrong?

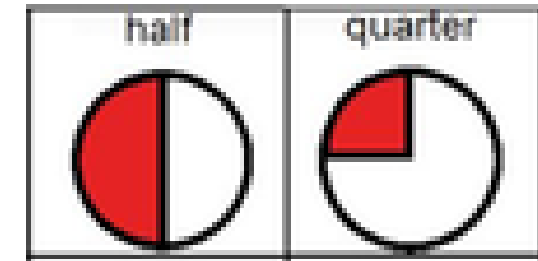
48 divided by 6 is not 6, it's 8.
So one sixth of 48 is 8.

Sometimes, always or never?

A quarter of a number is less than a half of the number.

Explain your answer.

This is always true. A quarter is smaller than a half.



MEGA CHALLENGE:

I bought a Playstation game that had a third off its price. I paid £26.66. What was the original price?

£26.66		
£13.33	£13.33	£13.33
£39.99		

Self assessment – how did you do?

Learning objective:
recognise and work out unit
fractions

Do you know what a unit
fraction is?

Can you calculate a unit
fraction of a number?

SOME WILL EVEN work out unit fractions of money

Did you complete the Carolina
Reaper or Mega Challenge?

SOME will use short division to work out unit fractions of bigger
numbers

Did you use short division to
solve the 3 Chilli questions?

MOST will use bar models to show how to find various unit
fractions

Did you get the 2 Chilli
questions right?

ALL use bar models to find halves and quarters

Did you get the 1 chilli
questions right?