

Please note: This session is being recorded for future use.

Welcome to Year 5.

The teachers are:

Beech: Miss Cheetham
Cedar: Miss Campbell
Rowan: Miss Rayment


Miss Cheetham will be available to answer any questions you may have in the chat.




Year 5 -

Finding non-unit fractions of quantities

In Year 5, the end of year expectation is that children will be able to find **unit** and **non-unit** fractions of quantities.


$$\frac{1}{5}$$


$$\frac{3}{5}$$



Year 5 -

Finding non-unit fractions of quantities

Before Year 5, children should already understand the connection between a unit fraction of a quantity and dividing that quantity by the denominator.

“To find $\frac{1}{5}$ of 15, we divide 15 into 5 equal parts.”

“15 divided by 5 is equal to 3, so $\frac{1}{5}$ of 15 is equal to 3.”

Now they should learn to reason about finding a non-unit fraction of a quantity, using division (to find the unit fraction) then multiplication (to find multiples of the unit fraction), and link this to their understanding of parts and wholes.

Year 5 -

Finding non-unit fractions of quantities

Have a go at working out the following:

$$\frac{3}{8} \text{ of } 32$$

$$\frac{2}{9} \text{ of } 45$$

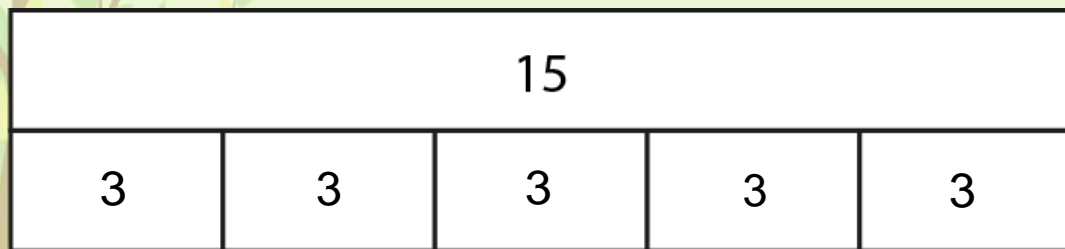
$$\frac{3}{5} \text{ of } 30$$

$$\frac{3}{8} \text{ of } 32$$



Year 5 -

Finding non-unit fractions of quantities



$\frac{1}{5}$ of 15

$$\frac{1}{5} \text{ of } 15 = 3$$

$$\frac{2}{5} \text{ of } 15 = 6$$

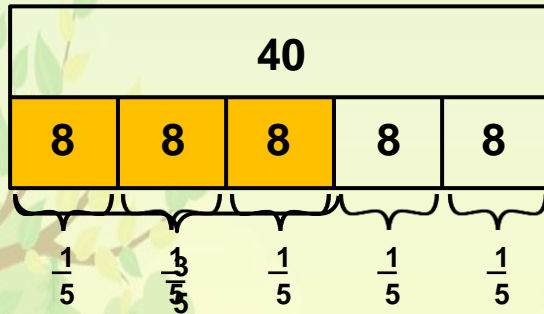
$$\frac{3}{5} \text{ of } 15 = 9$$

$$\frac{4}{5} \text{ of } 15 = 12$$

$$\frac{5}{5} \text{ of } 15 = 15$$

*2 one-fifths of 15 is equal to 6,
3 one-fifths of 15 is equal to 9...*

Year 5 - Finding non-unit fractions of quantities



$$40 \div 5 = 8$$

$$\text{so } \frac{1}{5} \text{ of } 40 = 8$$

$$\frac{3}{5} \text{ of } 40 = 24$$

- What fraction of 40 is 8? How do you know?
- Identify how to find $\frac{1}{5}$ of 40 and how this can be used to find non-unit fractions of the same whole.

"Three-fifths is equal to 3 one-fifths."

"To find 3 one-fifths of 40, first find one-fifth of 40 by dividing by 5, and then multiply by 3."

Year 5 -

Finding non-unit fractions of quantities

Once the children can carry out these calculations fluently, and explain their reasoning, they should extend their understanding to calculate unit and non-unit fractions of quantities for calculations that go beyond known multiplication table facts.

For example, they should be able to:

apply place-value understanding to known number facts to find $\frac{3}{7}$ of 210

use short division followed by short multiplication to find $\frac{4}{9}$ of 3,411

Year 5 -

Finding non-unit fractions of quantities

285				
57	57	57	57	57

$$285 \div 5 =$$

$$5 \overline{) 285}$$

2 8 5

$$\frac{1}{5} \text{ of } 285 = 57$$

- How many parts has the whole been split into?
- How can we use the fact $\frac{1}{5}$ of 285 = 57 to help us calculate $\frac{2}{5}$, $\frac{3}{5}$ and $\frac{4}{5}$ of the same amount?

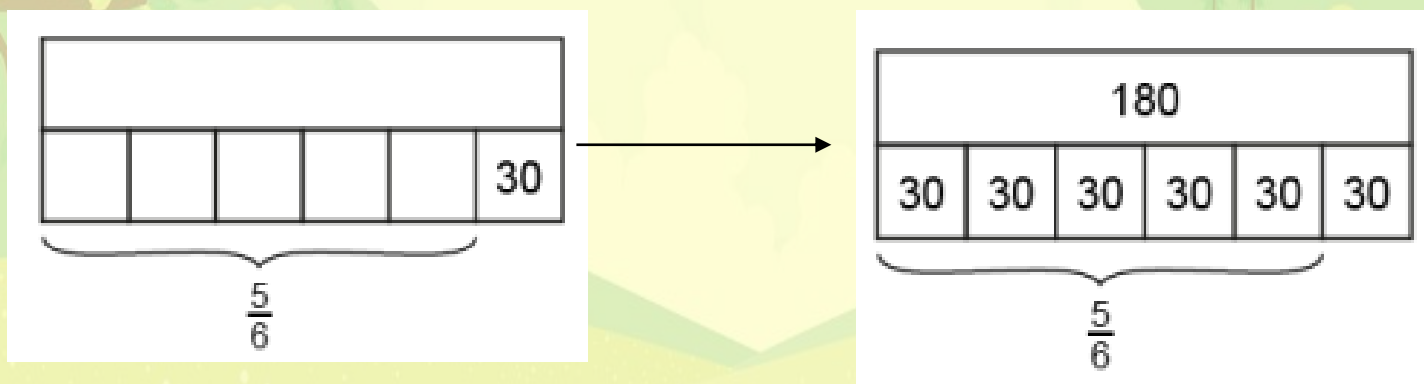
2 one-fifths is equal to two lots of one-fifth.

$$57 \times 2 = \underline{\quad}$$

Year 5 -

Finding non-unit fractions of quantities

Miss Reeves has some tangerines to give out during break-time. She has given out $\frac{5}{6}$ of the tangerines, and has 30 left. How many tangerines did Miss Reeves have to begin with?

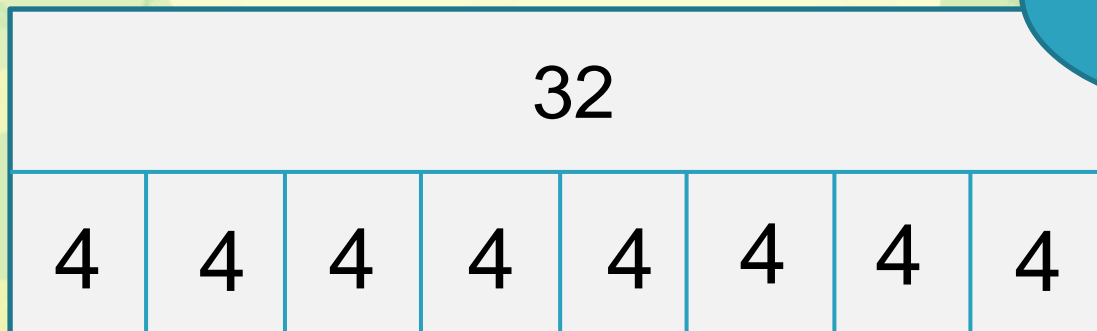


Year 5 -

Finding non-unit fractions of quantities

Now have a go at working out the following question again, using a bar model:

$$\frac{3}{8} \text{ of } 32$$



Hopefully yours looked something like this

1. Find:

$\frac{3}{8}$ of 32

$\frac{2}{9}$ of 45

$\frac{3}{5}$ of 30

$\frac{2}{7}$ of 630

$\frac{4}{9}$ of 315

$\frac{2}{5}$ of 3,500

$\frac{5}{8}$ of 2,720

2. Stan bought 15 litres of paint and used $\frac{2}{3}$ of it decorating his house. How much paint has he used?
3. My granny lives 120km from us. We are driving to see her and are $\frac{5}{6}$ of the way there. How far have we driven so far?
4. I am $\frac{3}{4}$ of the way through my holiday. I have 3 days of holiday left. How many days have I already been on holiday for?
5. A school is trying to raise £7,500 for charity. They have raised $\frac{5}{6}$ of the total so far. How much have they raised?
6. $\frac{4}{5}$ of the runners in a race have finished the race so far. If 92 people have finished, how many runners were in the race altogether?
7. There are 315 cows on a farm. $\frac{3}{5}$ of the cows are having calves this year. How many cows are not having calves?

Year 5 -

Finding non-unit fractions of quantities

Questions?

