



Year 3  
Maths Answers

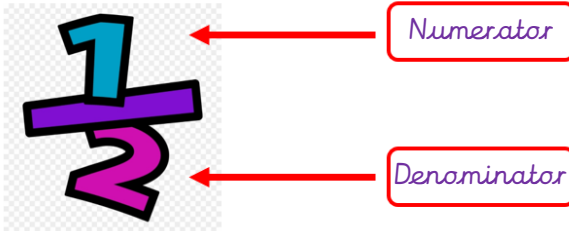
Week 6 - Additional answers/feedback to support with Maths learning

Day 1

To describe the part whole relationship

Starter

What is it called?



Main Activity

The answers are given at the end of the video provided.

<https://www.thenationalacademy/year-3/maths/to-describe-the-part-whole-relationship-year-3-wk1-1>

HOTS



These teddy bears belong to Sally.



She wants to share them equally between her friends.  
How many friends can she have to share her teddy bears equally.  
How many different ways can you find?

Sally can share them equally between:

- 1 friend  $12 \div 1 = 12$  each
- 2 friends  $12 \div 2 = 6$  each
- 3 friends  $12 \div 3 = 4$  each
- 4 friends  $12 \div 4 = 3$  each
- 6 friends  $12 \div 6 = 2$  each
- 12 friends  $12 \div 12 = 1$  each

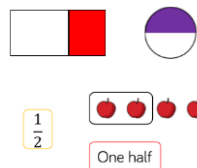


When the denominators are the same, the larger the numerator, the smaller the fraction.

Is Jack correct?  
Prove it.

Jack is incorrect. When the denominators are the same, the larger the numerator the larger the fraction. Children could prove this using bar models or strips of paper etc.

Odd One Out



Which is the odd one out?  
Explain your answer.

Children need to link their explanation to the shape not having two equal parts.



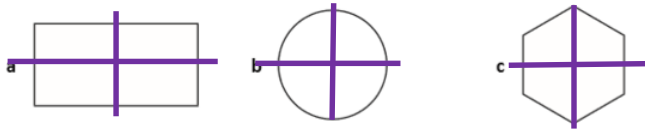
Day 2 To recognise parts that are equal and parts that are unequal

Starter

1 Show one half in a different way on each rectangle:



2 Show how each shape can be divided into quarters:



Main Activity

The answers are given at the end of the video provided.

<https://www.thenationalacademy/year-3/maths/to-recognise-parts-that-are-equal-and-parts-that-are-unequal-year-3-wkl-2>

HOTS



Ryan has 14 sweets to share between his friends.



Ryan thinks he can share the sweets equally. Is he correct? Explain your answer

Ryan is incorrect because 14 doesn't share/divide between 5 people equally.



$14 \div 5 = 2 \text{ remainder } 4$   
This is not equal

True or False?

$\frac{1}{4}$  of the shape is shaded.



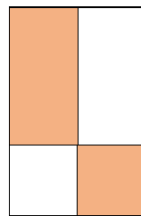
Explain your answer.

Children will need to split the shape into four equal parts in order to show that this is true.



Giving children paper to fold will help them understand this concept.

Rosie says the shaded part of the shape does not show a half because there are four parts, not two equal parts.



Do you agree? Explain why.

Possible answer: I disagree because you can swap the red and white squares/rectangles and you would have two equal parts with one part shaded.

# Day 3 To recognise, identify and describe unit fractions

## Starter

To complete this activity you will need to design a meal.



On your plate you will need to have the following things.

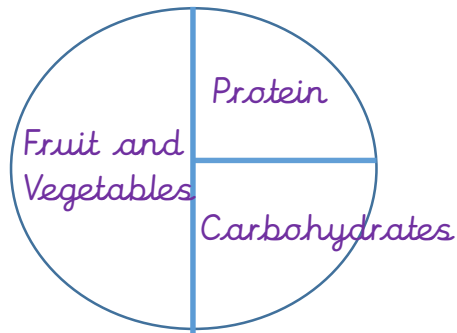
$\frac{1}{4}$  of the plate will need to be protein

$\frac{1}{4}$  of the plate will need to be fruit or vegetables

$\frac{1}{4}$  of your plate will need to be carbohydrates



For this question there are multiple different answers providing you have followed the instructions given.



## Main Activity

The answers are given at the end of the video provided.

<https://www.thenational.academy/year-3/maths/to-recognise-identify-and-describe-unit-fractions-year-3-wk1-3>

## HOTS



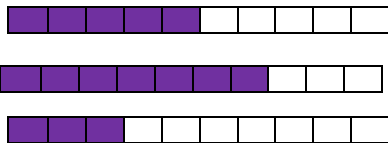
### True or False?

Five tenths is  $\frac{2}{10}$  smaller than 7 tenths.

Five tenths is  $\frac{2}{10}$  larger than three tenths.

Do you agree?

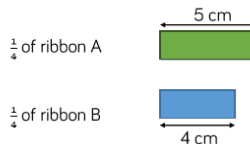
Explain why.



Yes, I do agree. You need to add 2 more tenths to 5 tenths for it to equal 7 tenths.

You also need to subtract 2 tenths from 5 tenths to equal 3 tenths.

Mo has two ribbons. He cuts  $\frac{1}{4}$  from each ribbon.



How long were Mo's whole pieces of ribbon?

Which ribbon was the longest? How much longer?

Ribbon A was 20 cm

Ribbon B was 16 cm

Ribbon A was 4cm longer.

Alex is folding two identical paper strips.



I think  $\frac{1}{4}$  of the strip will be bigger than  $\frac{1}{2}$  of the strip because 4 is bigger than 2

Use paper strips to prove Alex is incorrect.

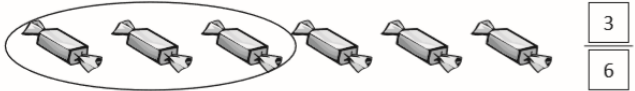
Possible answer:  
When the whole is the same, one quarter will be smaller because it is one of four equal parts compared to a half which is one of two equal parts.



Day 4 To find unit fractions of a given quantity


Starter

Fractions can show part of a collection. 3 out of 6 sweets are circled.




1 What fraction of each group is circled?

a  $\frac{2}{8}$  out of  $\frac{8}{8}$



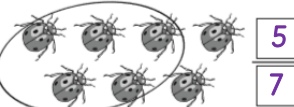
b  $\frac{3}{4}$  out of  $\frac{4}{4}$



c  $\frac{6}{8}$  out of  $\frac{8}{8}$



d  $\frac{5}{7}$  out of  $\frac{7}{7}$



Imagine 20 toy cars. Is it possible to find  $\frac{1}{2}$ ,  $\frac{1}{3}$  and  $\frac{1}{4}$  of them without breaking any of them or having some remaining? Explain your thoughts.



$\frac{1}{2}$  of 20  
 20 divided by 2 = 10 ✓  
 $\frac{1}{3}$  of 20  
 20 divided by 3 = 6r2 X  
 $\frac{1}{4}$  of 20  
 20 divided by 4 = 5 ✓  
 20 can be shared equally between  $\frac{1}{2}$  and  $\frac{1}{4}$ 's but there is 2 remaining when shared between  $\frac{1}{3}$ 's.

Main Activity

The answers are given at the end of the video provided.

<https://www.thenationalacademy/year-3/maths/to-find-unit-fractions-of-a-given-quantity-year-3-wkl-4>

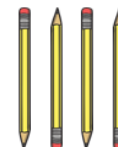
HOTS



- a)  $\frac{2}{3}$  of 21 = 14
- b)  $\frac{3}{4}$  of 28 = 21
- c)  $\frac{5}{10}$  of 40 = 20
- d)  $\frac{2}{5}$  of 60 = 24
- e)  $\frac{1}{2}$  of 50 = 25

Ruby and Mariam each have a pencil case with pencils inside. Each person takes out 4 pencils. Ruby says, "I have  $\frac{1}{5}$  of my pencils in my hand, but you have  $\frac{1}{6}$  of your pencils. I have more pencils than you."

Explain why Ruby is incorrect?

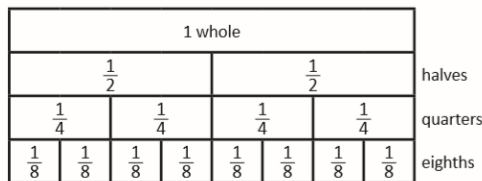


Ruby  
 $4 \times 5 = 20$  ( $\frac{1}{5}$  of 20 is 4)  
 Ruby has 20 pencils  
 Mariam  
 $4 \times 6 = 24$  ( $\frac{1}{6}$  of 24 is 4)  
 Mariam has 24 pencils  
 Ruby is incorrect because she has 4 pencils less than Mariam

Day 5 **To describe unit and non-unit fractions**

Starter

This fraction wall is just like your fraction strips laid out side by side.



2 Use the fraction wall at the top of this page to decide which fraction is larger and circle it:

- a  $\frac{1}{4}$  or  $\frac{3}{8}$       b  $\frac{2}{8}$  or  $\frac{1}{2}$       c  $\frac{3}{4}$  or  $\frac{4}{8}$   
 d  $\frac{1}{2}$  or  $\frac{5}{8}$       e  $\frac{5}{8}$  or  $\frac{3}{4}$       f  $\frac{2}{4}$  or  $\frac{3}{8}$

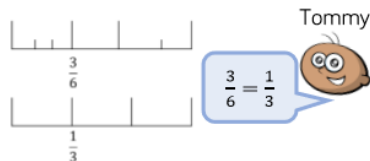
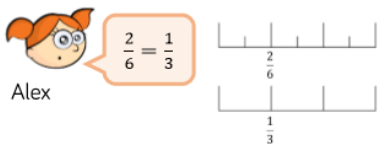
Main Activity

The answers are given at the end of the video provided.

<https://www.thenational.academy/year-3/maths/to-describe-unit-and-non-unit-fractions-year-3-wkl-5>



Alex and Tommy are using number lines to explore equivalent fractions.



Who do you agree with? Explain why.

Alex is correct. Tommy's top number line isn't split into equal parts which means he cannot find the correct equivalent fraction.

Teddy makes this fraction:

Mo says he can make an equivalent fraction with a denominator of 9

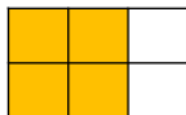
Dora disagrees. She says it can't have a denominator of 9 because the denominator would need to be double 3

Who is correct? Who is incorrect? Explain why.

Mo is correct. He could make three ninths which is equivalent to one third.

Dora is incorrect. She has a misconception that you can only double to find equivalent fractions.

Explain how the diagram shows both  $\frac{2}{3}$  and  $\frac{4}{6}$



The diagram is divided into six equal parts and four out of the six are yellow. You can also see three columns and two columns are yellow.