



**Lesson 33 LO: To understand that  $\frac{1}{2}$  and  $\frac{2}{4}$  are equivalent**



3  
—  
4

**Numerator**

(number on the top)

**Denominator**

(number on the bottom)

1. To get one half, split into 2 **equal** parts and look at 1 of them.
2. To get two quarters, divide into 4 **equal** parts and look at 2 of them.

**Model:**

Here is a delicious chocolate bar:



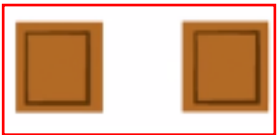
Would you prefer one half ( $\frac{1}{2}$ ) of the bar?

Or two quarters ( $\frac{2}{4}$ ) of the bar?

Here is **one half** of the bar:



Here is **two quarters** of the bar:



They are the same amount! We call  $\frac{1}{2}$  and  $\frac{2}{4}$  **equivalent**.

That just means **the same**.

**Now you try:**

Get two identical strips of paper, see what happens when you fold the strips into two equal pieces and four equal pieces.

Compare one of the two equal pieces with two of the four equal pieces. What do you notice?



**Then have a go at the questions below:**

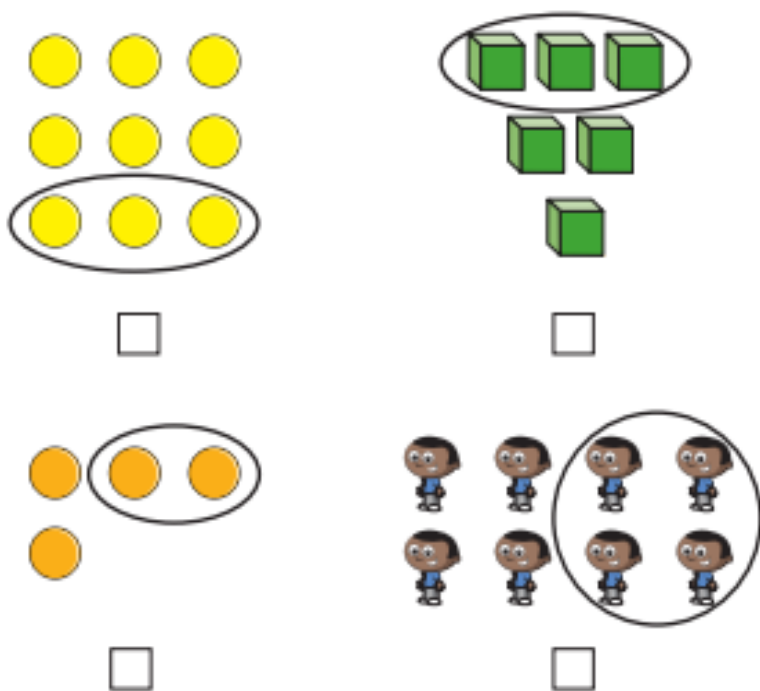
Equivalence of  $\frac{1}{2}$  and  $\frac{2}{4}$



1 Circle the shapes that have  $\frac{1}{2}$  shaded.



2 Tick the groups that have  $\frac{1}{2}$  circled.



3 Here are two bar models.

a) Colour  $\frac{2}{4}$  of the bar model.



b) Colour  $\frac{1}{2}$  of the bar model.



What do you notice? Talk to a partner.

4 Use the sweets to help you answer the questions.

a) What is  $\frac{1}{2}$  of 12?



b) What is  $\frac{1}{4}$  of 12?



c) What is  $\frac{2}{4}$  of 12?



**LO: To find fractions of amounts**

**Success Criteria:**

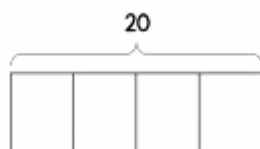
1. Look at the denominator e.g. in  $3/4$
2. Split the bar into the number of parts the denominator says e.g. 4
3. Divide the amount equally between the parts
4. Look at the numerator to tell you how many parts to count e.g.  $3/4$ , so count how many in 3 parts

**Model:**

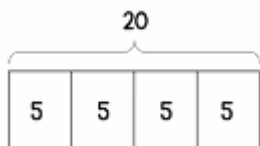
Sarah had 20 patches on her quilt.  
 $3/4$  the patches were blue.  
How many patches were blue?



The denominator of  $3/4$  is 4.  
So split the bar into 4 parts.

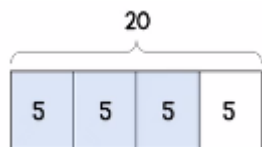


Now share 20 equally between the 4 bars:



The numerator of  $3/4$  is 3.

So count how many in 3 parts altogether.



$$\frac{3}{4} \text{ of } 20 = 15$$

$$20 \div 4 = 5$$

$$5 \times 3 = 15$$

**Model:** Juliet's hamster had 20 carrot sticks.  
He ate  $3/5$  of them.  
How many did he eat?



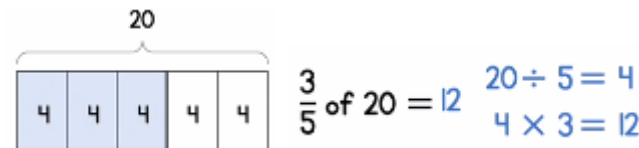
The denominator of  $3/5$  is 5.  
So split the bar into 5 parts.



Now share 20 equally between the 5 bars:



The numerator of  $3/5$  is 3.  
So count how many in 3 parts.



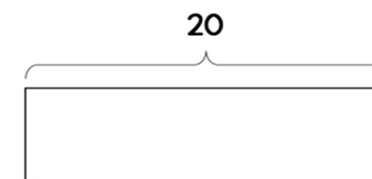
$$\frac{3}{5} \text{ of } 20 = 12$$

$$20 \div 5 = 4$$

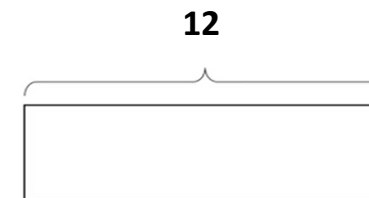
$$4 \times 3 = 12$$

**Now you try:**

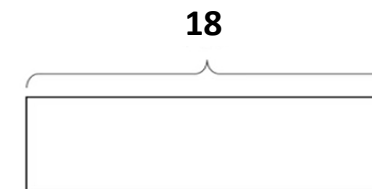
a)  $3/10$  of 20 =



b)  $3/4$  of 12 =



c)  $2/3$  of 18 =



Canonbury Home Learning  
**Year 3 Maths – Main activity**

Fractions of a set of objects (2)

Home  
Maths

- 1 Draw counters in the bar models to help you complete each number sentence.

a)  $\frac{2}{3}$  of 15 = 

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b)  $\frac{3}{4}$  of 8 = 

--	--	--	--

c)  $\frac{2}{5}$  of 20 = 

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- 2 Match the questions and answers.

$\frac{2}{3}$  of 9 = ?

9

$\frac{3}{5}$  of 15 = ?

6

$\frac{5}{6}$  of 12 = ?

15

$\frac{3}{4}$  of 20 = ?

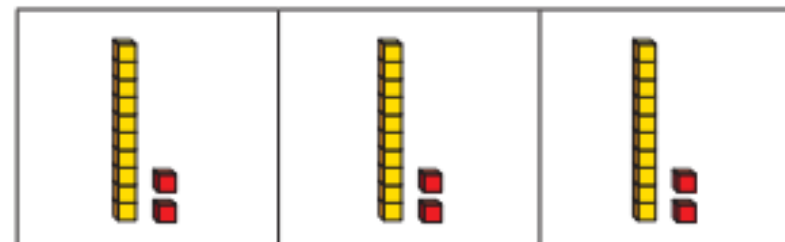
10

- 3 What is  $\frac{6}{6}$  of 18?

How do you know?



- 4 Brett uses a bar model and base 10 to find  $\frac{2}{3}$  of 36



Use Brett's method to complete the number sentences.

a)  $\frac{2}{3}$  of 63 =

b)  $\frac{3}{4}$  of 48 =

c)  $\frac{3}{4}$  of 92 =

- 5 Kim uses a bar model and place value counters to find  $\frac{2}{3}$  of 36



Use Kim's method to complete the number sentences.

a)  $\frac{2}{3}$  of 96 =

b)  $\frac{3}{5}$  of 60 =

c)  $\frac{3}{4}$  of 52 =

Canonbury Home Learning

6 Complete the number sentences.

a)  $\frac{2}{3}$  of  = 30

b)  $\frac{3}{4}$  of  = 30

c)  $\frac{5}{6}$  of  = 30

7



Tommy

To find  $\frac{3}{4}$  of 12,  
you divide by 4 and then  
multiply the answer by 3

To find  $\frac{3}{4}$  of 12,  
you divide by 3 and then  
multiply the answer by 4



Dexter

Who is correct? \_\_\_\_\_

How do you know? Show your working.



8 Dora, Whitney and Ron each find a fraction of 24 using counters.



Dora

I have  $\frac{5}{6}$  of 24

I have  $\frac{2}{3}$  of 24



Whitney



Ron

I have 18 counters.

a) Who has the most counters? Show your workings.

\_\_\_\_\_

b) How many more counters does Dora have than Whitney?

9 Write fractions to make the statements correct.

of 36 < 18

of 36 = 18

of 36 > 18

How many different answers can you find for each?