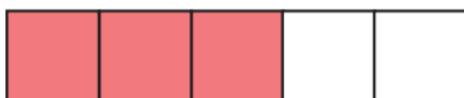


# Maths Week Nine

In maths this week, we are going to be doing some work on Fractions. There is no video material directly linked to the sheets this week, but if you find you are struggling, then **stop** and work your way quickly through the following to jog your memory. There are some video links on the next page that take you through each concept- I would prefer you to take your time doing this if you need to than try to complete the sheets without understanding them. Once you do understand properly what fractions are, then you will whizz through the work!

What is a fraction?

A fraction is a part of a whole, when the whole has been divided into equal parts. The whole could be a shape or a quantity of things. Both of these shapes has been divided into 5 parts, but we can only use fractions to describe the first shape because the parts are equal.



✓ 5 equal parts



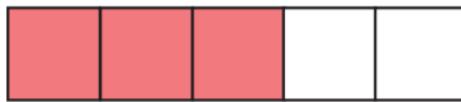
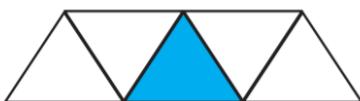
X 5 unequal parts

The **numerator** tells us how many parts we are focussing on

3

Out of

5



There are  $\boxed{5}$  equal parts altogether.

There are  $\boxed{5}$  equal parts altogether.

$\boxed{1}$  out of  $\boxed{5}$  equal parts is shaded.

$\boxed{3}$  out of  $\boxed{5}$  equal parts is shaded.

$\frac{1}{5}$  of the shape is shaded.

$\frac{3}{5}$  of the shape is shaded.

The number of equal parts the whole has been divided into (the **denominator**)

**A note for parents:** We haven't covered much work on fractions yet this year. It is important not to rush the first principles of fractions- the part/whole relationship. The videos listed spend some time going through this idea in detail in the first set- if your child is confused, spend time watching these and talking about them.

Another really good way to explore the idea of equal parts and recording fractions- understanding what the numerator and denominator stand for - is to fold equal size strips of paper into different amounts of parts. This is useful for counting fractions, naming fractions, ordering fractions and finding equivalents as well as showing the rules like the greater the denominator, the smaller the part of the whole.

Try everything you can but remember, there is always going to be a question to make you think more deeply and try to trip you up!

All the sheets are on the next pages- you don't have to print them; you can just write your answers in your Home Learning Journal.

## Videos to support your learning:

These are 1 mini lessons and follow on one after the other. Each video is about 15-20 mins long. You may need some objects to help you, like 1p coins or strips of paper.

### Fractions - 1

- ▶ **Lesson 1** Explore the whole and part relationship in familiar contexts, using area, linear and quantity models
- ▶ **Lesson 2** Explore the whole and part relationship and generalise that a part is always smaller than the whole
- ▶ **Lesson 3** Explore the concept of 'equal' and 'unequal' parts
- ▶ **Lesson 4** Embed the concept of equal parts and unequal parts
- ▶ **Lesson 5** Develop understanding that equal-sized parts do not have to look the same.

Below you'll find links to a YouTube playlist with these lesson videos and a Teacher Guidance document.

[Lesson videos](#)[Teacher guidance](#)

### Beginning fractions:

[Click here for the videos](#)

### Fractions - 1

- ▶ **Lesson 6** Compare the size of parts when the whole is defined using familiar contexts
- ▶ **Lesson 7** Explore that size of part is relative to the size of the whole using familiar contexts
- ▶ **Lesson 8** Consider part-whole relationships within the context of quantity models
- ▶ **Lesson 9** Build a whole when a part is known
- ▶ **Lesson 10** Explore different contexts for building a whole when a part is known.

Below you'll find links to a YouTube playlist with these lesson videos and a Teacher Guidance document.

[Lesson videos](#)[Teacher guidance](#)

### The number of parts

[Click here for the videos](#)

### Fractions - 2

- ▶ **Lesson 1** Divide and describe the same whole when divided into differing numbers of equal parts
- ▶ **Lesson 2** Understand fraction notation to represent a relationship between part and whole
- ▶ **Lesson 3** Begin to use and understand the terms 'numerator' and 'denominator'
- ▶ **Lesson 4** Name unit fractions and match them with the fraction notation and a representation
- ▶ **Lesson 5** Embed previous fraction work using a linear model.

Below you'll find links to a YouTube playlist with these lesson videos and a Teacher Guidance document.

[Lesson videos](#)[Teacher guidance](#)

### Understanding fraction notation

[Click here for the videos](#)

## Fractions - 2

- ▶ **Lesson 6** Assign unit fraction names and notation to 3D representations
- ▶ **Lesson 7** Assign unit fraction names and notation to equal parts of quantities
- ▶ **Lesson 8** Recognise and reasoning about unit fractions in a variety of contexts
- ▶ **Lesson 9** Understand that equal parts can look different - area context
- ▶ **Lesson 10** Understand that equal parts can look different - volume and area contexts.

Below you'll find links to a YouTube playlist with these lesson videos and a Teacher Guidance document.

**Fractions with the numerator 1**  
[Click here to see the videos](#)

[Lesson videos](#)

[Teacher guidance](#)

## Fractions - 2

- ▶ **Lesson 11** Compare unit fractions using a fraction wall
- ▶ **Lesson 12** Reason about comparing unit fractions
- ▶ **Lesson 13** Compare unit fractions in a measure's context
- ▶ **Lesson 14** Can we compare unit fractions of different wholes?
- ▶ **Lesson 15** Construct a whole from a part and identify the fraction it represents.

**Comparing fractions**

[Click here to see the videos](#)

Below you'll find links to a YouTube playlist with these lesson videos and a Teacher Guidance document.

[Lesson videos](#)

[Teacher guidance](#)

## Fractions - 2

- ▶ **Lesson 16** Build and compare different wholes from different unit fractions that have the same length
- ▶ **Lesson 17** Build and compare different wholes from the same unit fractions that represent different lengths
- ▶ **Lesson 18** Build and compare different wholes from different unit fractions that represent the same quantity
- ▶ **Lesson 19** Build and compare different wholes from the same unit fractions that represent different quantities
- ▶ **Lesson 20** Build and compare wholes when different unit fractions represent different amounts.

**Reasoning about unit fractions**

[Click here for the videos](#)

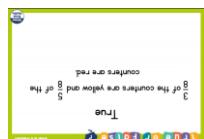
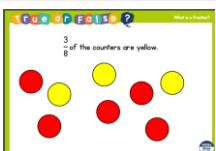
Below you'll find links to a YouTube playlist with these lesson videos and a Teacher Guidance document.

[Lesson videos](#)

[Teacher guidance](#)

# Week 9 Maths Lesson 1

Monday 08.06.2020



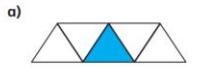
If you got this right, carry on. If you got it wrong, go back and look at the video set 2.

[Full size sheet for printing](#)  
[Answers](#)

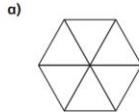
## What is a fraction?



1 What fraction of each shape is shaded?



2 Shade each diagram to represent the fractions.



$\frac{1}{6}$



$\frac{5}{8}$



$\frac{5}{6}$



$\frac{5}{8}$

3 Which are unit fractions?

$\frac{1}{3}$

$\frac{1}{5}$

$\frac{3}{5}$

$\frac{1}{8}$

$\frac{2}{3}$

$\frac{10}{11}$

How do you know?



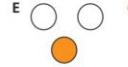
4 a) Which shapes have one third shaded?



B



D



F



b) Complete the sentences to describe the shapes with one third shaded.

There are  equal parts altogether.

out of  equal parts is shaded.

of the shape is shaded.

5 Draw an arrow to show the position of the fraction on the number line.



## What is a fraction?



4 a) Which shapes have one third shaded?



C



G



D



b) Complete the sentences to describe the shapes with one third shaded.

There are  equal parts altogether.

out of  equal parts is shaded.

of the shape is shaded.

6 Draw an arrow to show the position of  $\frac{5}{5}$  on the number line.



What do you notice?

7 Draw four different representations of  $\frac{3}{4}$



8 Amir has drawn some 2D shapes.



a) What fraction of the shapes are triangles?

b) What fraction of the shapes are squares?

c) What fraction of the shapes have four sides?

d) Draw 2D shapes to match the description.

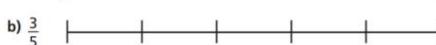
$\frac{1}{5}$  are squares,  $\frac{2}{5}$  are triangles,  $\frac{3}{5}$  have more than 3 sides.

Compare shapes with a partner.

What is the same about your shapes? Is anything different?



5 Draw an arrow to show the position of the fraction on the number line.



# Week 9 Maths Lesson 2

Tuesday 09.06.2020

True or False? Equivalent Fractions 1

$\frac{6}{27} = \frac{16}{72}$

True or False? Equivalent Fractions 1

$\frac{9}{6} = \frac{27}{16}$

If you got this right, carry on. If you got it wrong, go back and look at the video set 2. Using strips of paper, make different numbers of equal folds to make yourself a fraction wall

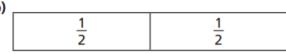
[Full size sheet for printing](#)

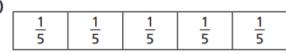
[Answers](#)

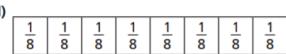
## Equivalent fractions (1)

- 1 Shade the bar models to represent the equivalent fractions.

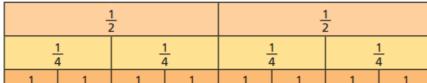
a)   
 $\frac{1}{2} = \frac{3}{6}$

b)   
 $\frac{1}{2} = \frac{5}{10}$

c)   
 $\frac{4}{5} = \frac{8}{10}$

d)   
 $\frac{6}{8} = \frac{3}{4}$

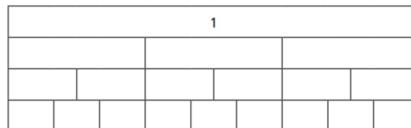
- 2 Use the fraction wall to complete the equivalent fractions.



a)  $\frac{1}{2} = \frac{\square}{4}$       c)  $\frac{2}{4} = \frac{4}{\square}$       e)  $\frac{\square}{8} = \frac{3}{4}$

b)  $\frac{1}{2} = \frac{\square}{8}$       d)  $\frac{2}{8} = \frac{\square}{4}$       f)  $\frac{2}{2} = \frac{\square}{4} = \frac{\square}{8}$

- 3 a) Label the fractions on the fraction wall.



- b) Use the fraction wall to complete the equivalent fractions.

$\frac{1}{3} = \frac{\square}{6} = \frac{3}{\square}$        $\frac{\square}{3} = \frac{4}{\square} = \frac{6}{9}$

$\frac{3}{\square} = \frac{6}{\square} = \frac{9}{\square} = 1$

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## Equivalent fractions (1)

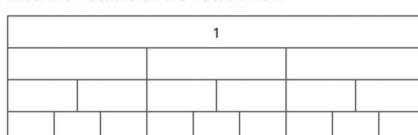
- 2 Use the fraction wall to complete the equivalent fractions.



a)  $\frac{1}{2} = \frac{\square}{4}$       c)  $\frac{2}{4} = \frac{4}{\square}$       e)  $\frac{\square}{8} = \frac{3}{4}$

b)  $\frac{1}{2} = \frac{\square}{8}$       d)  $\frac{2}{8} = \frac{\square}{4}$       f)  $\frac{2}{2} = \frac{\square}{4} = \frac{\square}{8}$

- 3 a) Label the fractions on the fraction wall.

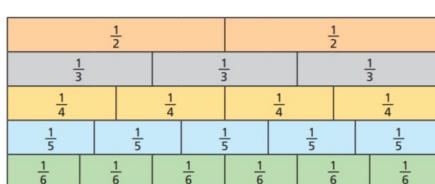


- b) Use the fraction wall to complete the equivalent fractions.

$\frac{1}{3} = \frac{\square}{6} = \frac{3}{\square}$        $\frac{\square}{3} = \frac{4}{\square} = \frac{6}{9}$

$\frac{3}{\square} = \frac{6}{\square} = \frac{9}{\square} = 1$

- 4 Here is a fraction wall.



Is each statement true or false?

- a)  $\frac{1}{2}$  is equivalent to  $\frac{3}{6}$       d)  $\frac{2}{3}$  is equivalent to  $\frac{4}{5}$   
 b)  $\frac{2}{3}$  is equivalent to  $\frac{3}{4}$       e)  $\frac{2}{3}$  is equivalent to  $\frac{4}{6}$   
 c)  $\frac{2}{4}$  is equivalent to  $\frac{3}{6}$       f)  $\frac{3}{5}$  is equivalent to  $\frac{4}{6}$

Write your own equivalent fractions statements.

Ask a partner to say if they are true or false.

- 5 Are the statements always, sometimes or never true?

Draw a diagram to support your answer.

- a) The greater the numerator, the greater the fraction.  
 b) Fractions equivalent to one half have even numerators.  
 c) If a fraction is equivalent to one half, the denominator will be double the numerator.



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# Week 9 Maths Lesson 3

Wednesday 10.06.2020

**Issue up to date?**

**Spiral fractions 2**

$$\frac{6}{27} = \frac{16}{72}$$

**True or False?**

$$\frac{9}{2} = \frac{27}{16} = \frac{2}{2}$$

True

That was a hard question- can you work out why it is what it is?

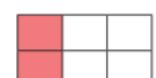
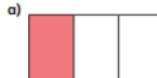
[Full size sheet for printing](#)  
[Answers](#)

## Equivalent fractions (2)

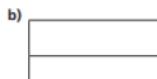


- 1 Shade the diagrams to help you complete the equivalent fractions.

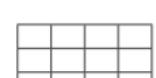
The first one has been done for you.



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



$$\frac{1}{2} = \frac{\square}{\square}$$



$$\frac{1}{4} = \frac{\square}{\square}$$

- 2 Draw a diagram to show that  $\frac{3}{4} = \frac{6}{8}$

- 3 Match the equivalent fractions.

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

$$\frac{4}{10}$$

$$\frac{10}{15}$$

$$\frac{1}{7}$$

$$\frac{3}{21}$$

$$\frac{2}{3}$$

$$\frac{2}{5}$$

$$\frac{3}{12}$$



- 4 Complete the equivalent fractions.

a)  $\frac{1}{5} = \frac{\square}{10}$

d)  $\frac{3}{10} = \frac{9}{\square}$

g)  $\frac{8}{12} = \frac{2}{\square}$

b)  $\frac{4}{5} = \frac{\square}{10}$

e)  $\frac{6}{8} = \frac{3}{\square}$

h)  $\frac{2}{\square} = \frac{10}{25}$

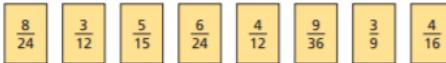
c)  $\frac{3}{10} = \frac{6}{\square}$

f)  $\frac{8}{12} = \frac{\square}{3}$

i)  $\frac{1}{\square} = \frac{4}{28}$

- 5 a)

Write the fractions in the correct place on the sorting diagram.



	equivalent to $\frac{1}{3}$	equivalent to $\frac{1}{4}$
odd denominator		
even denominator		

## Equivalent fractions (2)

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- 4 Complete the equivalent fractions.

a)  $\frac{1}{5} = \frac{\square}{10}$

d)  $\frac{3}{10} = \frac{9}{\square}$

g)  $\frac{8}{12} = \frac{2}{\square}$

b)  $\frac{4}{5} = \frac{\square}{10}$

e)  $\frac{6}{8} = \frac{3}{\square}$

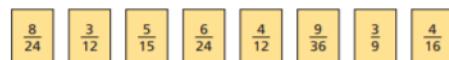
h)  $\frac{2}{\square} = \frac{10}{25}$

c)  $\frac{3}{10} = \frac{6}{\square}$

f)  $\frac{8}{12} = \frac{\square}{3}$

i)  $\frac{1}{\square} = \frac{4}{28}$

- 5 a)



	equivalent to $\frac{1}{3}$	equivalent to $\frac{1}{4}$
odd denominator		
even denominator		

- b) Are any of the boxes empty?

Why do you think this is?

Talk about your answer with a partner.



- 6 Find three ways to make the fractions equivalent.

a)  $\frac{2}{\square} = \frac{4}{\square}$

b)  $\frac{1}{\square} = \frac{4}{\square}$

c)  $\frac{\square}{3} = \frac{4}{9}$



- 7 Eva and Ron have a baguette each.

The baguettes are the same size.

Eva cuts her baguette into 8 equal pieces.



3 of my equal pieces are equal to 6 of Eva's.



How many equal pieces has Ron cut his baguette into?



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# Week 9 Maths Lesson 4

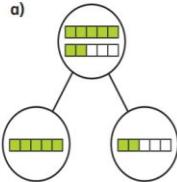
Thursday 11.06.2020

[Full size sheet for printing](#)

[Answers](#)

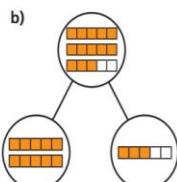


- 1 Complete the sentences.



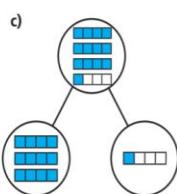
There are 7 fifths altogether.

$$7 \text{ fifths} = \square \text{ whole} + \square \text{ fifths}$$



There are  $\square$  fifths altogether.

$$\square \text{ fifths} = \square \text{ wholes} + \square \text{ fifths}$$



There are  $\square$  quarters altogether.

$$\square \text{ quarters} = \square \text{ wholes} + \square \text{ quarter}$$

- 2 Shade bar models to represent the fractions.

Complete the number sentences.

a)  $\frac{5}{3} = \square \text{ whole} + \square \text{ thirds} = \square$

b)  $\frac{8}{3} = \square \text{ wholes} + \square \text{ thirds} = \square$

c)  $\frac{8}{5} = \square \text{ whole} + \square \text{ fifths} = \square$

- 3 Complete the statements.

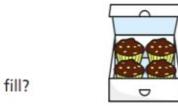
a)  $\frac{12}{2} = \square \text{ wholes}$  e)  $\frac{15}{3} = \square \text{ wholes}$

b)  $\frac{12}{4} = \square \text{ wholes}$  f)  $\frac{15}{5} = \square \text{ wholes}$

c)  $\frac{12}{6} = \square \text{ wholes}$  g)  $\frac{15}{4} = \square \text{ wholes} + \square \text{ quarters}$

d)  $\frac{12}{3} = \square \text{ wholes}$  h)  $\frac{15}{2} = \square \text{ wholes} + \square \text{ half}$

- 4 Whitney bakes 26 muffins.



Muffins are packed in boxes of 4

- a) How many boxes can Whitney fill?

- b) How many more muffins does Whitney need to fill another box?

Explain how you know.

How does writing  $\frac{26}{4}$  help you to answer this?

## Fractions greater than 1

- 2 Shade bar models to represent the fractions.

Complete the number sentences.

a)  $\frac{5}{3} = \square \text{ whole} + \square \text{ thirds} = \square$

b)  $\frac{8}{3} = \square \text{ wholes} + \square \text{ thirds} = \square$

c)  $\frac{8}{5} = \square \text{ whole} + \square \text{ fifths} = \square$



- 5 Write  $<$ ,  $>$  or  $=$  to complete the statements.

a) 2 wholes and 3 quarters  $\square$  5 quarters

b) 2 wholes and 3 quarters  $\square$  15 quarters

c) 2 wholes and 3 sixths  $\square$  15 sixths

d) 2 wholes and 3 eighths  $\square$  15 eighths

e)  $\frac{15}{3} \square \frac{15}{5}$

f)  $\frac{15}{3} \square \frac{20}{4}$

- 3 Complete the statements.

a)  $\frac{12}{2} = \square \text{ wholes}$  e)  $\frac{15}{3} = \square \text{ wholes}$

b)  $\frac{12}{4} = \square \text{ wholes}$  f)  $\frac{15}{5} = \square \text{ wholes}$

c)  $\frac{12}{6} = \square \text{ wholes}$  g)  $\frac{15}{4} = \square \text{ wholes} + \square \text{ quarters}$

d)  $\frac{12}{3} = \square \text{ wholes}$  h)  $\frac{15}{2} = \square \text{ wholes} + \square \text{ half}$

- 4 Whitney bakes 26 muffins.



Muffins are packed in boxes of 4

- a) How many boxes can Whitney fill?

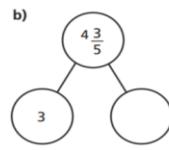
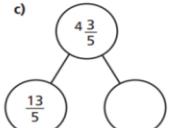
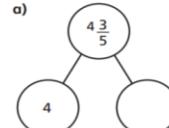
- b) How many more muffins does Whitney need to fill another box?

Explain how you know.

How does writing  $\frac{26}{4}$  help you to answer this?

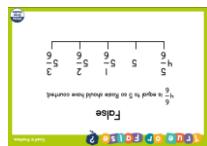
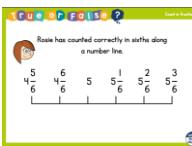


- 6 Complete the part-whole models.



# Week 9 Maths Lesson 5

Friday 12.06..2020



Can you count in quarters?

[Full size sheet for printing](#)

[Answers](#)

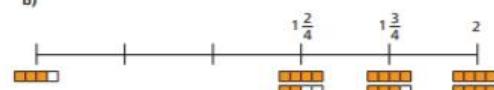
## Count in fractions

- 1 Complete the number lines.

a)

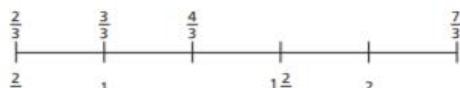


b)

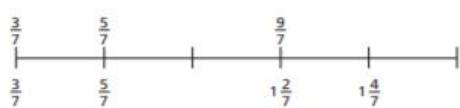


- 2 Complete the number lines.

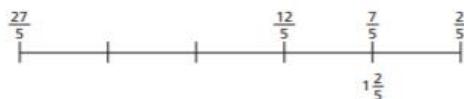
a)



b)



c)



- 3 Write the next three fractions in each sequence.

a)  $\frac{1}{8}, \frac{2}{8}, \frac{3}{8} \dots$

b)  $\frac{1}{4}, \frac{2}{4}, \frac{3}{4} \dots$

c)  $\frac{1}{4}, \frac{3}{4}, 1\frac{1}{4} \dots$

d)  $4, 3\frac{1}{3}, 2\frac{2}{3} \dots$

- 4 What is the missing fraction?

Give two possible answers.

a)  $\frac{8}{3}, \frac{12}{3}, \frac{16}{3}, \frac{20}{3}, \boxed{\phantom{0}}, \frac{28}{3}, \frac{32}{3}$

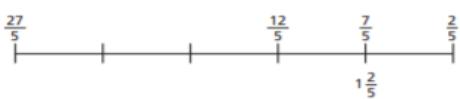
b)  $\frac{8}{5}, \frac{12}{5}, \frac{16}{5}, \frac{20}{5}, \boxed{\phantom{0}}, \frac{28}{5}, \frac{32}{5}$

c)  $\frac{8}{7}, \frac{12}{7}, \frac{16}{7}, \frac{20}{7}, \boxed{\phantom{0}}, \frac{28}{7}, \frac{32}{7}$

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## Count in fractions

c)



- 3 Write the next three fractions in each sequence.

a)  $\frac{1}{8}, \frac{2}{8}, \frac{3}{8} \dots$

b)  $\frac{1}{4}, \frac{2}{4}, \frac{3}{4} \dots$

c)  $\frac{1}{4}, \frac{3}{4}, 1\frac{1}{4} \dots$

d)  $4, 3\frac{1}{3}, 2\frac{2}{3} \dots$

- 4 What is the missing fraction?

Give two possible answers.

a)  $\frac{8}{3}, \frac{12}{3}, \frac{16}{3}, \frac{20}{3}, \boxed{\phantom{0}}, \frac{28}{3}, \frac{32}{3}$

b)  $\frac{8}{5}, \frac{12}{5}, \frac{16}{5}, \frac{20}{5}, \boxed{\phantom{0}}, \frac{28}{5}, \frac{32}{5}$

c)  $\frac{8}{7}, \frac{12}{7}, \frac{16}{7}, \frac{20}{7}, \boxed{\phantom{0}}, \frac{28}{7}, \frac{32}{7}$

- 5 Amir, Dexter and Dora are counting in fractions.

$$\frac{8}{10}, \frac{9}{10}, \frac{10}{10}, \frac{11}{10}$$



The next fraction  
is  $\frac{12}{10}$

Amir



The next fraction  
is  $1\frac{2}{10}$

Dexter



The next fraction  
is  $1\frac{1}{5}$

Dora

- a) Who is correct?

Explain your answer.

- b) Compare answers with a partner.

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