

Year 5 - Maths (Week 8)

Group 2

Fractions 1

Lesson 1 - I can order fractions in number sequences.

Lesson 2- I can compare and order fractions.

Lesson 3 - I can compare and order fractions including mixed numbers.

Hello Year 5!

This week is all about learning about fractions. Each lesson will have instructions if you can't watch the video, but please do so if you can.

If you have any questions, problems, comments or would like to share your learning, email year5@mpjs.org.uk

I can order fractions in number sequences.

We are going to continue to use mixed numbers and improper fractions in today's lesson.

Three Types of Fractions

There are three types of fraction:

Smaller → $\frac{3}{5}$
Larger → $\frac{3}{5}$
Proper Fraction

Larger (or equal) → $\frac{9}{5}$
Smaller (or equal) → $\frac{9}{5}$
Improper Fraction

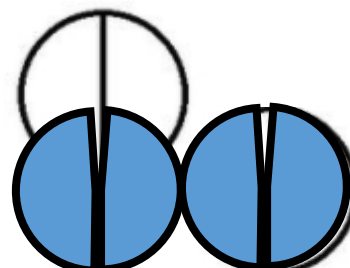
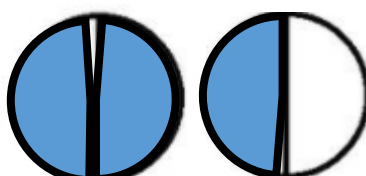
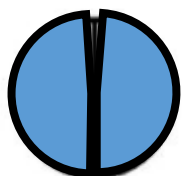
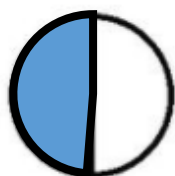
$2\frac{1}{3}$
Mixed Number

Today we are going to order fractions in sequences.

Getting Started

- Continue the sequences by completing the fractions as improper fractions.

a.



b.

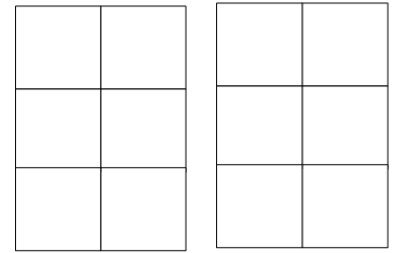
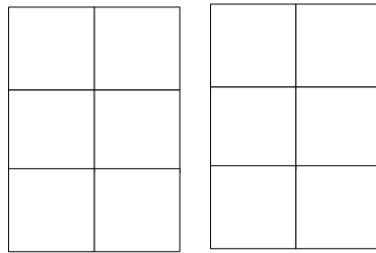
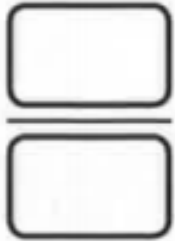
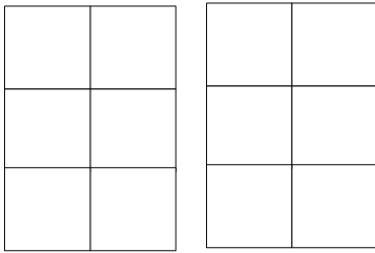


2. Can you shade the shapes with the correct fractions to complete the sequences?

a.



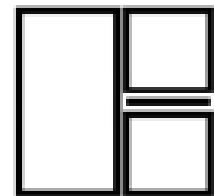
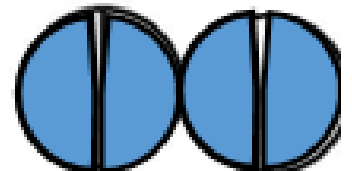
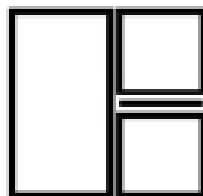
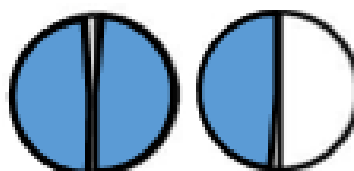
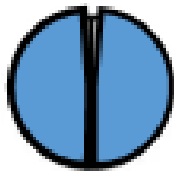
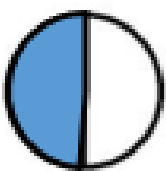
b.



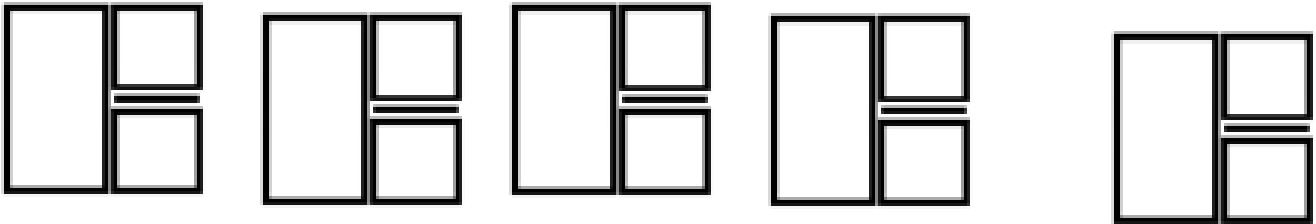
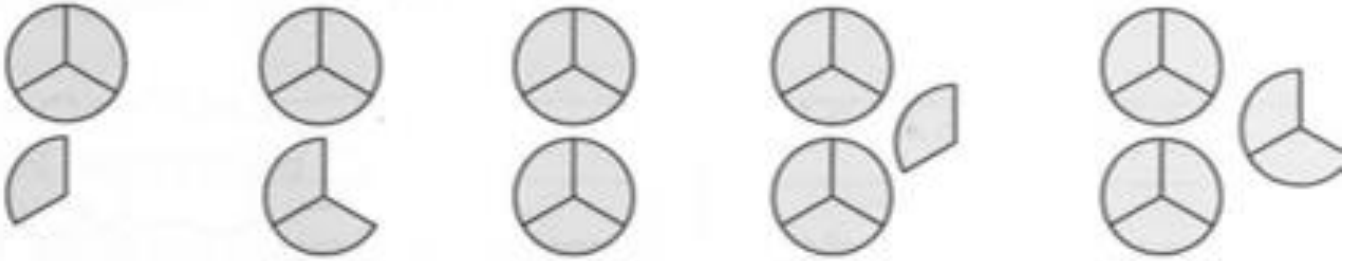
Making Headway

3. Now, can you complete the same sequences from question 1 but using mixed numbers instead of improper fractions? I have started the first one for you.

a.



b.



4. Order the fractions in ascending order (smallest to largest)

a.

$$\frac{2}{4}$$

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

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

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



Smallest

Largest



b.

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

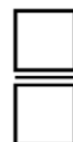
$$\frac{1}{3}$$

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



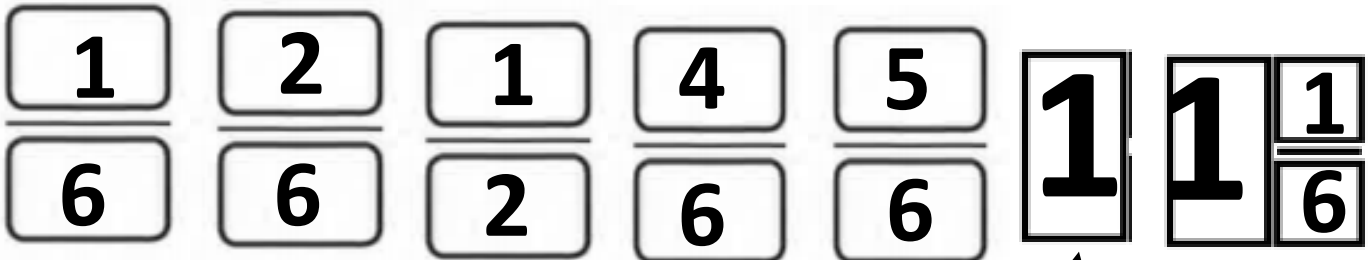
Smallest

Largest



Aiming High - Example

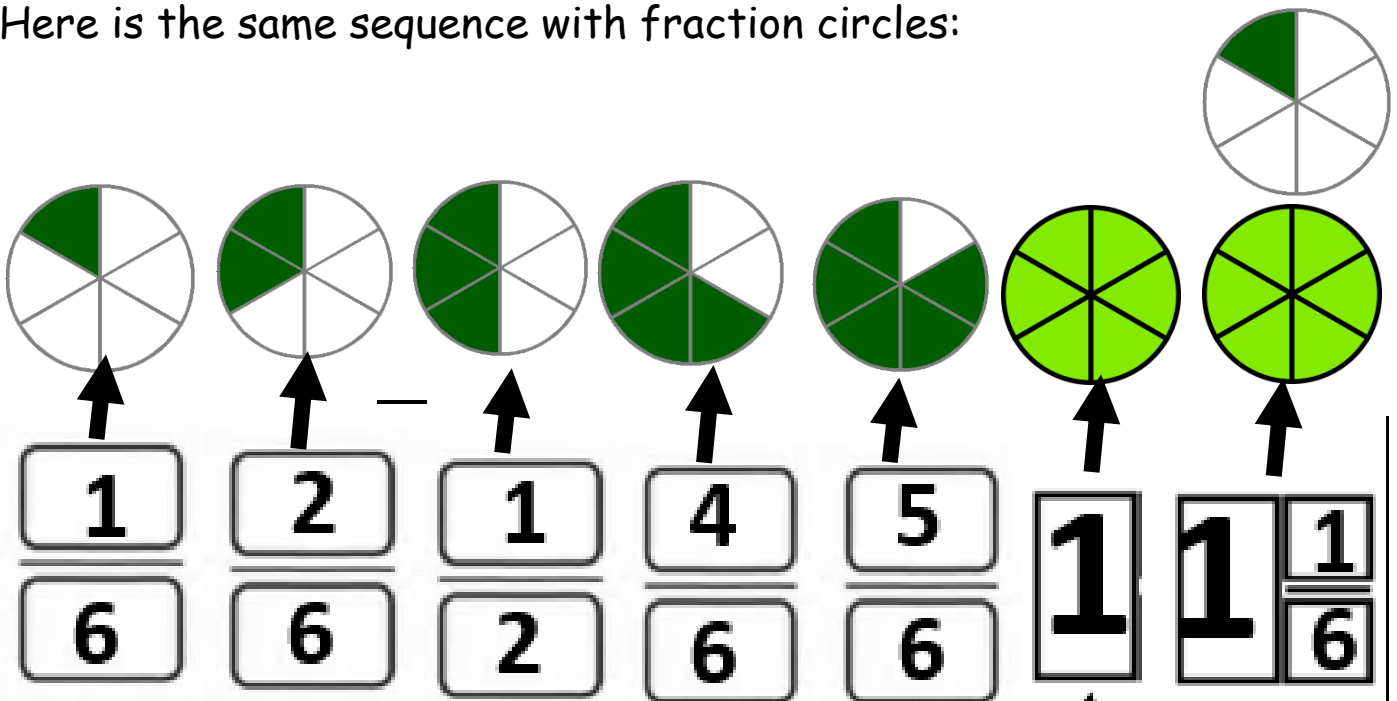
Sometimes when we write fractions in a sequence we can come across different denominators. The reason for this is that we are simplifying the fractions.



The reason I have put '1/2 instead of 3/6 is because they are equivalent (equal to) and the simplified way of saying 3/6 is $\frac{1}{2}$.

I have written one whole instead of 6/6 because when the numerator and denominator are the same it is equal to 1 whole.

Here is the same sequence with fraction circles:



Aiming high - your turn

Draw diagrams to match this sequence.

$3\frac{1}{2}$

$3\frac{1}{4}$

3

$2\frac{3}{4}$

$2\frac{1}{2}$

$2\frac{1}{4}$

2



a. What is the rule of this sequence? Finish the sentence below.

'The rule of the sequence is that the numbers are counting up/down by each time.'

b. What would the next fraction be in the sequence? Write it as a mixed number (a whole number and a fraction)

<input type="text"/>	<input type="text"/>
	<input type="text"/>

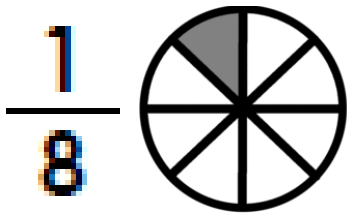
I can compare and order fractions.

Today we will be comparing fractions and seeing which are bigger and which are smaller as well as ordering them as we did yesterday.

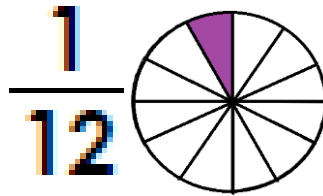
Lets work out which is the largest out of these numbers:

$$\frac{1}{8} \quad \frac{1}{12} \quad \frac{1}{5}$$

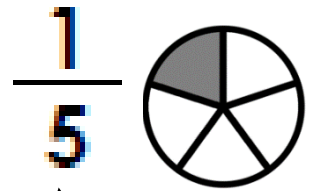
The denominator (bottom number) tells us how many pieces the whole is divided into.



The whole is divided into 8 parts. I have 1 of those parts.



The whole is divided into 12 parts. I have 1 of those parts.



The whole is divided into 5 parts. I have 1 of those parts.

If the numerators are the same - the larger the denominator the smaller the fraction is.

SMALLEST

LARGEST

$$\frac{1}{12}$$

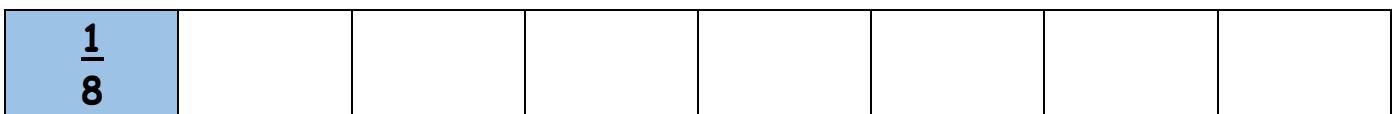
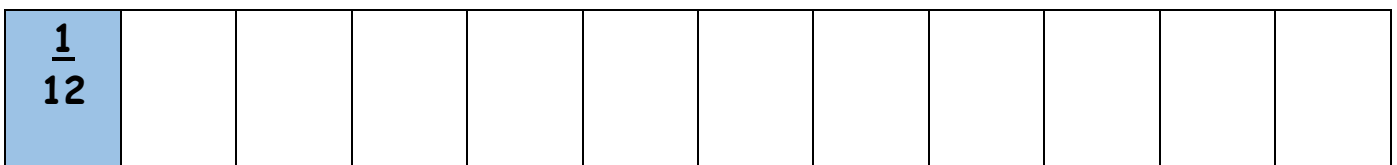
$$\frac{1}{8}$$

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

I am the smallest fraction as my denominator is 12 which means my whole is cut into more pieces than the others.

I am the LARGEST fraction as my denominator is 5 so is cut into less pieces than the others.

Lets see this on a model:



As you can see, $\frac{1}{5}$ is much bigger than $\frac{1}{12}$ and $\frac{1}{8}$. So when you are looking at finding the biggest fraction - look for the smallest denominator.

Getting Started

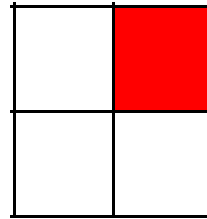
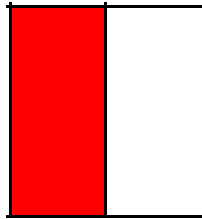
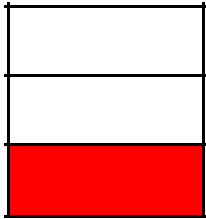
1. Which fraction is the largest? Circle your answer.

a.

$$\frac{1}{3}$$

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

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



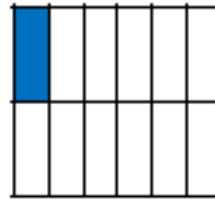
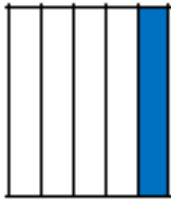
Can you order them in descending order? _____

b.

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

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

$$\frac{1}{12}$$



Can you order them in ascending order? _____

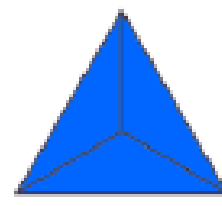
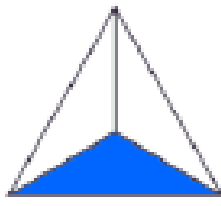
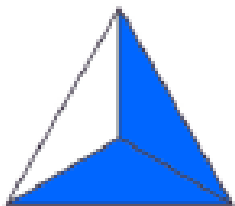
2. Which fraction is the smallest? Circle your answer

a.

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

$$\frac{1}{3}$$

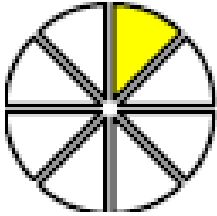
$$\frac{3}{3}$$



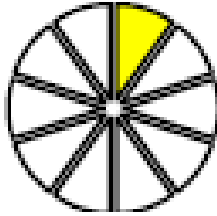
Can you order them in descending order? _____

b.

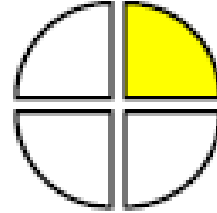
$$\frac{1}{8}$$



$$\frac{1}{10}$$



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



Can you order them in ascending order? _____

Making Headway - Example

We are going to use our comparing symbols:

More than

Less than

equal to (the same as)

>

<

=

We put these between 2 numbers or fractions to compare them.

Number example:

$$4 > 2 \text{ (4 is more than 2)}$$

$$2 < 4 \text{ (2 is less than 4)}$$

$$12 = 12 \text{ (12 is equal to 12)}$$

Fraction example:




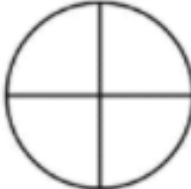


$$\frac{1}{4} > \frac{1}{8} \text{ (1/4 is more than 1/8)}$$





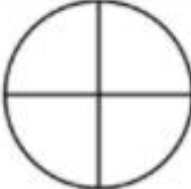

$$\frac{1}{12} < \frac{1}{9} \text{ (1/12 is less than 1/9)}$$

$$\frac{2}{4} = \frac{1}{2} \text{ (2/4 is equal to 1/2)}$$

Making Headway

3. Shade the fractions shown and then use $<$, $>$ or $=$ to compare them. I have done the first one for you.

 $\frac{1}{2}$	$>$	 $\frac{1}{3}$
 $\frac{1}{3}$	 $\frac{1}{4}$	
 $\frac{1}{5}$	 $\frac{1}{3}$	

 $\frac{2}{5}$	 $\frac{1}{2}$
 $\frac{1}{3}$	 $\frac{2}{6}$
 $\frac{1}{4}$	 $\frac{1}{5}$

Put all the fractions above in ascending order. If a fraction is repeated, write it only once.

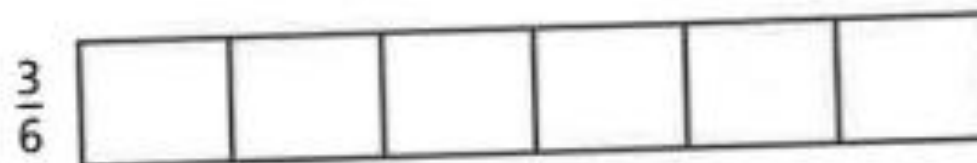
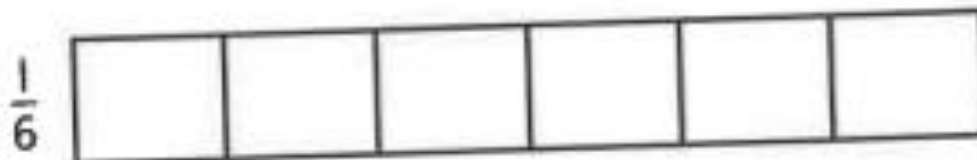
Smallest

Largest

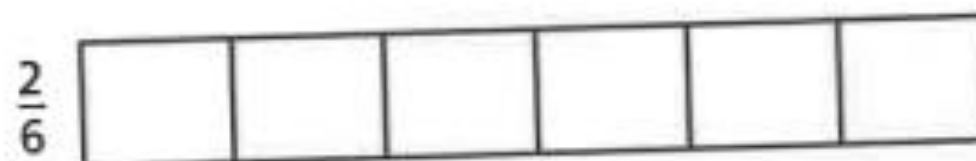
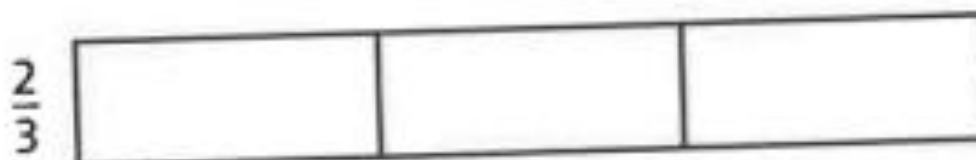
Aiming High

1. Shade and compare and order these fractions using the $<$, $>$ or $=$ symbols.

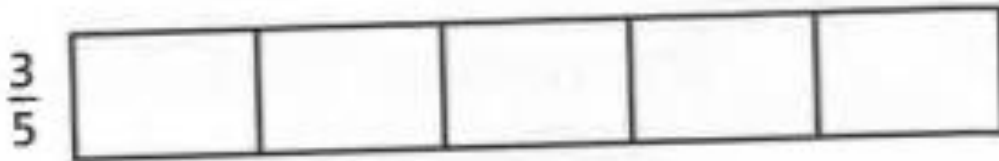
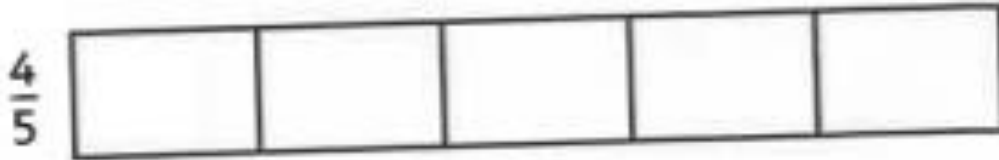
a) $\frac{1}{6}$ ○ $\frac{3}{6}$



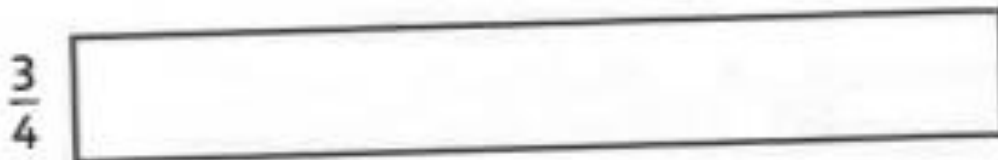
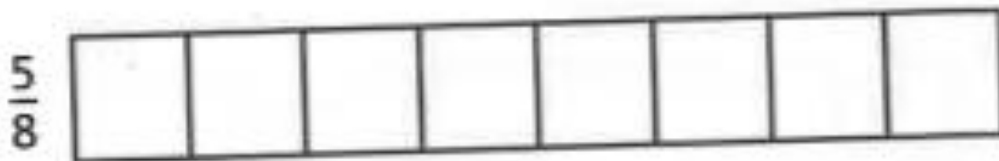
b) $\frac{2}{3}$ ○ $\frac{2}{6}$



c) $\frac{4}{5}$ ○ $\frac{3}{5}$



d) $\frac{5}{8}$ ○ $\frac{3}{4}$



Getting Started - Example

Today we are going to compare and order numbers but include mixed numbers.

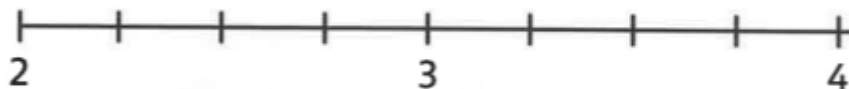


1. Which is closer, the café or the shop?

The café is $3 \frac{1}{4}$ miles away.

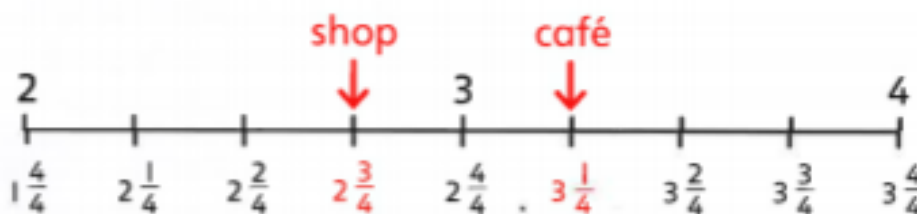
The shop is $2 \frac{3}{4}$ miles away.

To help me work this out I will use a number line:



My number line has 2, 3 and 4 as its whole numbers. Between each number is 4 parts- because there are 4 I know each one is worth $\frac{1}{4}$

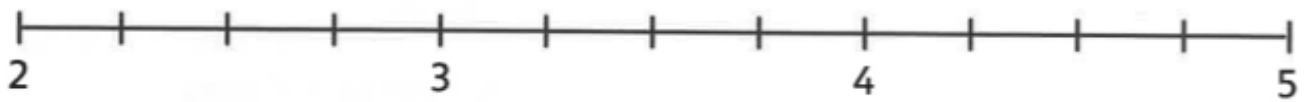
If I place the café and shop distance on my number line it will look like this:



Getting Started - Your turn

a) Place each fraction on the number line.

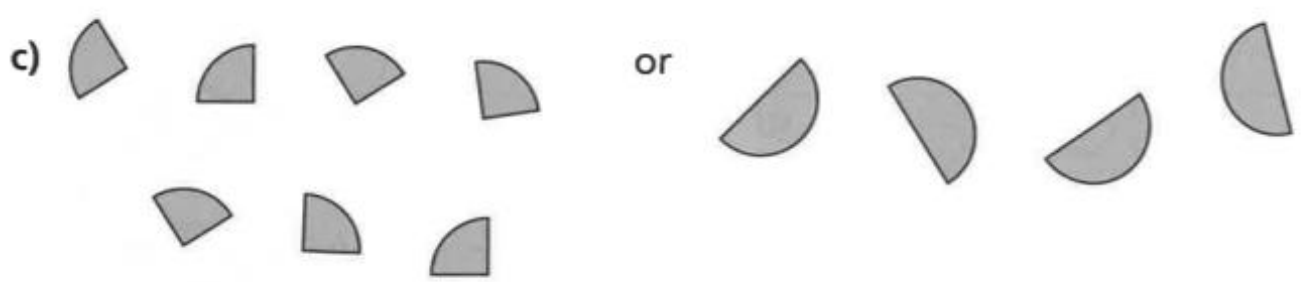
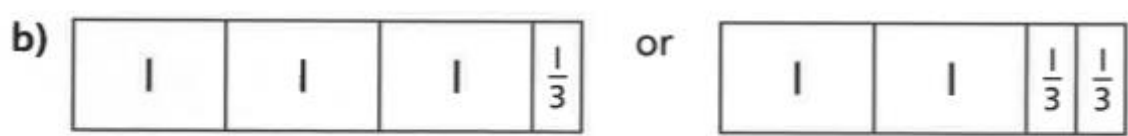
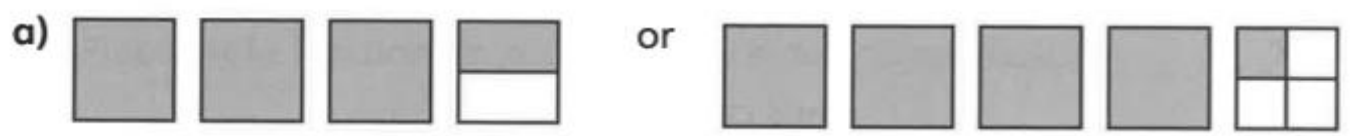
$2\frac{1}{4}$ $4\frac{1}{4}$ $4\frac{1}{2}$ $2\frac{3}{4}$



b) Write the fractions from part a) in order from smallest to greatest.

$\frac{\text{□}}{\text{□}}$, $\frac{\text{□}}{\text{□}}$, $\frac{\text{□}}{\text{□}}$, $\frac{\text{□}}{\text{□}}$

In each pair, circle the diagram that represents the larger number.



Making Headway

Use $<$, $>$ or $=$ to complete each statement.

a) $3\frac{1}{5}$ ○ $3\frac{4}{5}$

c) $\frac{15}{5}$ ○ $3\frac{3}{5}$

b) $\frac{13}{5}$ ○ $\frac{17}{5}$

d) $4\frac{2}{5}$ ○ $\frac{23}{5}$

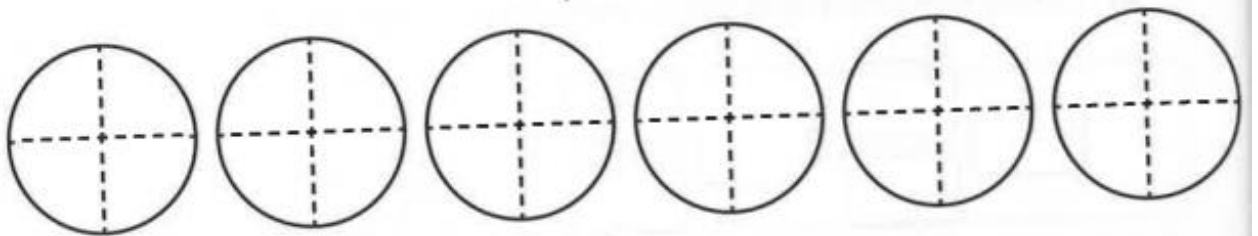
Aiming High

Kate and Lee are cycling laps around a track.

Kate has completed $5\frac{3}{4}$ laps. Lee has completed $5\frac{3}{8}$ laps.

Who has cycled farther? Show this using the diagrams.

Kate



Lee

