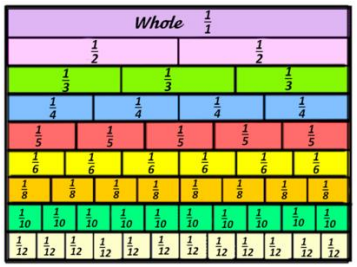
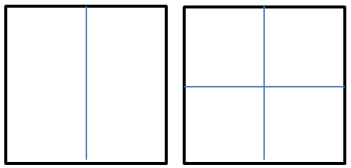
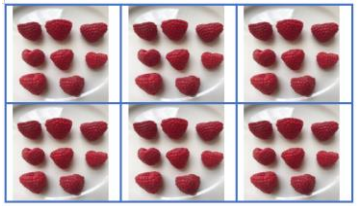
Year 3 maths – Summer 2 Week beginning: 1.6.20

Theme	Fractions Lesson 11 Finding Equivalent Fractions	Fractions Lesson 12 Finding the Simplest Fractions	Fractions Lesson 13 Comparing Fractions	Fractions Lesson 14 Comparing Fractions	Fractions Lesson 15 Adding Fractions
Factual fluency (to aid fluency)	**Can you identify unit fractions on a number line?**	**Can you identify fractions on a number line?**	**Write the correct amount that the fraction bar is shaded in**	**Shade in the fraction of the bar and write the fraction**	**Are the division facts for 2, 5 and 10 true or false?**
Problem/ activity of the day **Remember, just like in class, you can still show the depth of your knowledge** LINK	**MAKING LINKS:** Last week we learnt that some fractions can be equivalent. Today we are going to continue practising this new learning. **THINK: (support below)** Can you help me with this problem? You can use a strip of paper, or a real life object like a chocolate bar to help you.  How can we write $\frac{2}{5}$ as tenths? How many other ways can you write it? **SEE: (model below)** Watch lesson video here. **DO:** Use what you have learnt today to answer the questions below.	**MAKING LINKS:** Yesterday we continued practising finding equivalent fractions. **THINK: (support below)** Can you help me with this problem?  Mr Marlow challenged his year 3 class. "Can you write an equivalent fraction to $\frac{8}{12}$ using the smallest numbers possible?" he asked. "Find the fraction in its simplest form!" The Year 3s were not sure what to do next…. **SEE: (model below)** Watch lesson video here. **DO:** Use what you have learnt today to answer the questions below.	**(Lesson 3 resources below)** **MAKING LINKS:** Yesterday we were finding fractions in their simplest forms. **THINK: (support below)** With a piece of paper, cut it into a square. You may cut, fold or write on the paper to help you. Ahmed and Gemma each have a paper square of the same size. Ahmed cuts the square into 2 equal parts and keeps 1 part. Gemma cuts the square into 4 equal parts and keeps 1 part. Who keeps a bigger part, Ahmed or Gemma?  Ahmed cuts his square into 2 equal parts. Gemma cuts her square into 4 equal parts. **SEE: (model below)** Watch lesson video here. **DO:** Use what you have learnt today to answer the questions below.	**(Lesson 4 resources below)** **MAKING LINKS:** Yesterday we were comparing unit fractions. **THINK: (support below)**  Look at this delicious bar of chocolate. How many pieces are there altogether? Gemma takes 3 pieces. Ahmed takes 5 pieces. Who takes more? Are there other ways for Ahmed to get more pieces than Gemma? **SEE: (model below)** Watch lesson video here. **DO:** Use what you have learnt today to answer the questions below.	**(Lesson 5 resources below)** **MAKING LINKS:** Yesterday we compared fractions with the same denominator. **THINK: (support below)** Can you help me with this problem? Charles took $\frac{1}{6}$ of the berries in the box. Ruby took $\frac{3}{6}$ of the berries in the box. What fraction of the berries did Charles and Ruby take altogether?  Give the answer in its simplest form. **SEE: (model below)** Watch lesson video here. **DO:** Use what you have learnt today to answer the questions below.
Methods, tips, clues & checks	**Day 1 resources and answers (below)**	**Day 2 resources and answers (below)**	**Day 3 resources and answers (below)**	**Day 4 resources and answers (below)**	**Day 5 resources and answers (below)**

See below for resources to support you to THINK-SEE-DO

Quality First Education Trust

DAY 1 RESOURCES:

THINK:

How can we write $\frac{2}{5}$ as tenths? How many other ways can you write it as? You can use a strip of paper, or a real life object like a chocolate bar to help you.

SEE:

See video

Method 1: Below I have a bar showing $\frac{2}{5}$ shaded in purple.

Here I have drawn the same bar, but I have split it into 10 equal parts or tenths. I have shaded the same amount of the bar in blue. I have shaded four out of the ten equal pieces. The purple is $\frac{2}{5}$ whilst the blue is $\frac{4}{10}$. They are equivalent.

Method 2: Multiply the numerator and the denominator by the same amount to find an equivalent fraction.

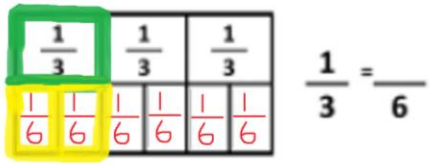
Method 3: use a fraction wall

You could also write it as…

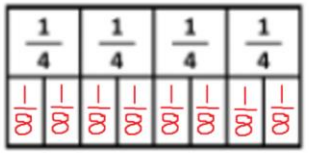
$$\frac{2}{5} = \frac{4}{10} = \frac{8}{20} = \frac{16}{40} \ldots$$

DO: Find the equivalent fractions and explain your answers.

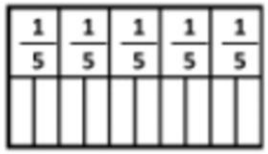
a)



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

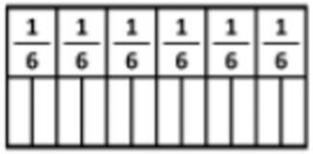


$\frac{1}{4} = \frac{}{8}$



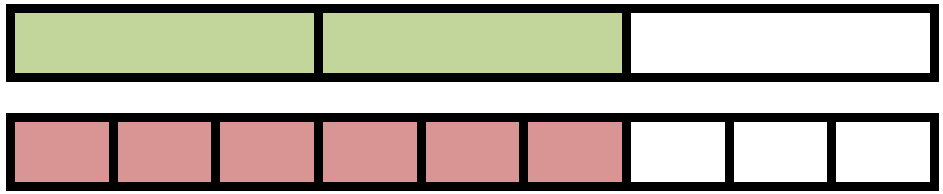
$\frac{1}{5} = \frac{}{10}$

6)



$\frac{1}{6} = \frac{}{12}$

b)



c)

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

$$\frac{4}{5} = \frac{}{15}$$

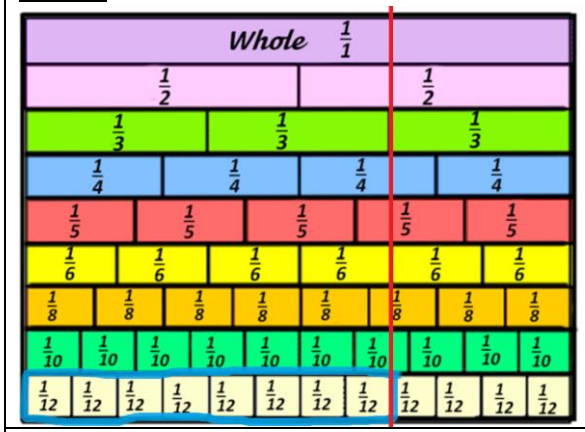
x

x

What has the denominator, 5, been multiplied by to get 15? Multiply the numerator by the same number.

DAY 2 RESOURCES

THINK:



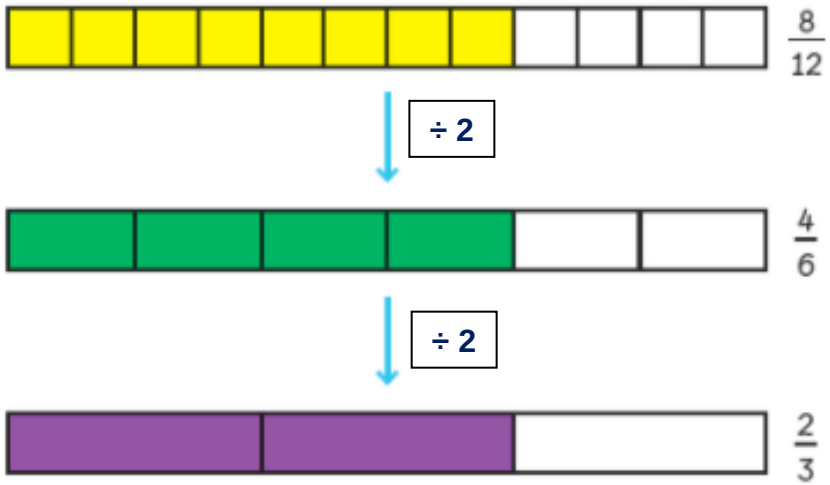
Mr Marlow challenged his year 3 class.

"Can you write an equivalent fraction to $\frac{8}{12}$ using the smallest numbers possible?" he asked. "Find the fraction in its simplest form!"

The Year 3s were not sure what to do next....

SEE:

See video



8 ÷ 4 = 2

÷ 4

$\frac{8}{12} = \frac{2}{3}$

÷ 4

12 ÷ 4 = 3

To simplify a fraction, we divide the numerator and denominator by the same number. I divided by 4 to find the simplest form because I had to divide by 2 twice.

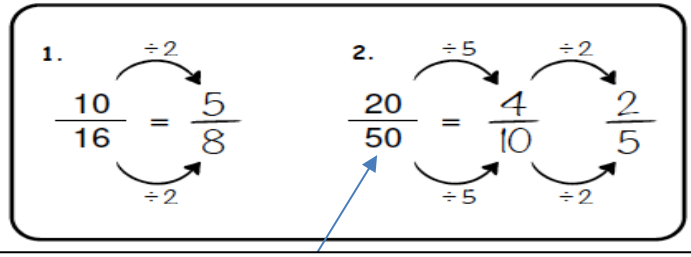
We say that $\frac{2}{3}$ is the **simplest form** of $\frac{8}{12}$. It is equivalent, and the numerator and the denominator are both the smallest possible number.

DO: Write each fraction in its simplest form. Show your working as shown in the example.

Step 1: Think what times table the numerator and denominator are both in.
Step 2: Divide the numerator and denominator by this number.
Step 3: Think what times table the numerator and denominator are both in now. If there is one, divide by this number. If not, the fraction is already in its simplest form.

Simplifying Fractions

Examples:



Step 1: 20 and 50 are both in the 5 times tables.
Step 2: 20 ÷ 5 = 4 50 ÷ 5 = 10
Step 3: Now I have $\frac{4}{10}$. 4 and 10 are both in the 2 times tables. 4 ÷ 2 = 2
10 ÷ 2 = 5
There is no number that both 2 and 5 can be divided by so I know this fraction is now in its simplest form.

÷2
$\frac{18}{20} =$
÷2

$\frac{14}{24} =$

÷3
$\frac{3}{30} =$
÷3

$\frac{4}{40} =$

$\frac{10}{45} =$

$\frac{2}{6} =$

$\frac{5}{15} =$

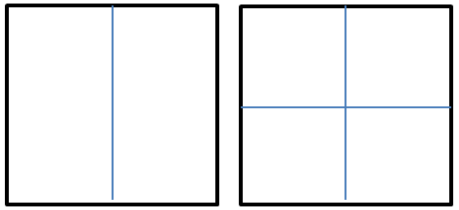
$\frac{45}{50} =$

DAY 3 RESOURCES

THINK:

With a piece of paper, cut it into a square. You may cut, fold or write on the paper to help you.

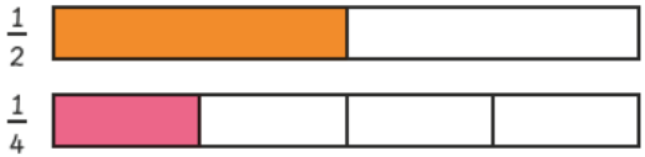
Ahmed and Gemma each have a paper square of the same size.
Ahmed cuts the square into 2 equal parts and keeps 1 part.
Gemma cuts the square into 4 equal parts and keeps 1 part.
Who keeps a bigger part, Ahmed or Gemma?



Ahmed cuts his square into 2 equal parts and keeps 1 part.

Gemma cuts her square into 4 equal parts and keeps 1 part.

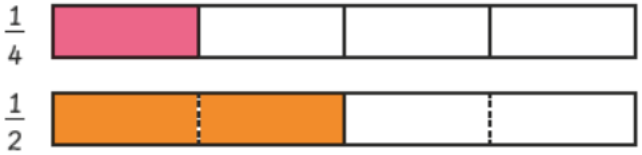
Which is greater, $\frac{1}{2}$ or $\frac{1}{4}$?



$\frac{1}{2}$ is **greater** than $\frac{1}{4}$

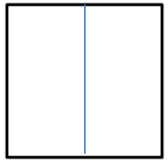
SEE:

See **support video**

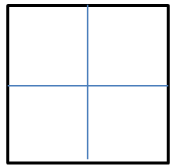


2 quarters is **greater** than 1 quarter.

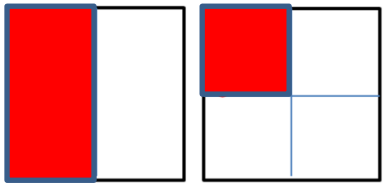
$\frac{1}{2} = \frac{2}{4}$, so $\frac{1}{2}$ is **greater** than $\frac{1}{4}$



Ahmed cuts his square into 2 equal parts.



Gemma cuts her square into 4 equal parts.



Ahmed's piece

Gemma's piece

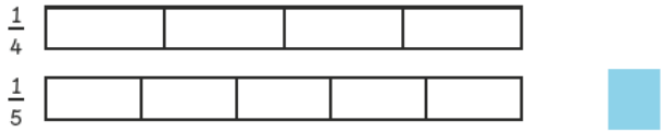
The parts Gemma gets are smaller. ➡ So, $\frac{1}{4}$ is less than a $\frac{1}{2}$

$\frac{1}{2}$ is **greater** than $\frac{1}{4}$

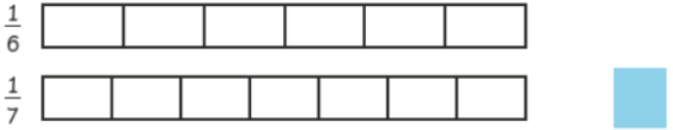
DO:

1. Shade in the amount of the fraction and write which fraction is greater.

Which number is greater?



Which number is smaller?



2. Compare the fractions using =, < or >. Draw and shade in your own bars to help you. Remember each of the parts in your bars need to be equal.

Remember: < means less than (e.g. 1 < 2)
> means greater than (e.g. 2 > 1)

(a) $\frac{1}{2}$ ☐ $\frac{1}{10}$

(b) $\frac{1}{2}$ ☐ $\frac{1}{3}$

(c) $\frac{1}{10}$ ☐ $\frac{1}{3}$

3. Explain why $\frac{1}{3}$ is greater than $\frac{1}{7}$ using diagrams to support your explanation.

DAY 4 RESOURCES

THINK:

Look at this delicious bar of chocolate. How many pieces are there altogether?

Gemma takes **3** pieces.
Ahmed takes **5** pieces.
Who takes more?

$\frac{5}{8}$ is more than $\frac{3}{8}$

$\frac{3}{8}$ is less than $\frac{5}{8}$

Ahmed gets **more** pieces than Gemma.

We can show this information clearly using a **bar model.**

When the denominators are the same, we only need to compare the numerators to see which fraction is greater!

Are there other ways for Ahmed to get more pieces than Gemma?

SEE:

[support video]

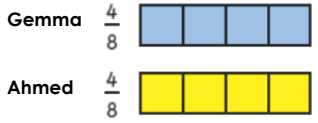
Are other ways for Ahmed to get more pieces than Gemma? What if Ahmed gets 7 pieces? What would the fraction be for Ahmed? What about Gemma?

$\frac{7}{8}$ is **more** than $\frac{1}{8}$

$\frac{1}{8}$ is **less** than $\frac{7}{8}$

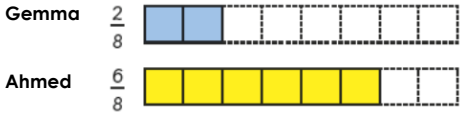
$\frac{7}{8} > \frac{1}{8}$ $\frac{1}{8} < \frac{7}{8}$

What if **both** Ahmed and Gemma take 4 pieces each? Does Ahmed get more than Gemma?



Both get $\frac{4}{8}$, therefore they get the **same amount.** Can you write $\frac{4}{8}$ in its simplest form? Look at Day 2's learning to help you.

What if Ahmed gets 6 pieces? What would that fraction be for Ahmed? What about Gemma?



$\frac{6}{8}$ is **more** than $\frac{2}{8}$

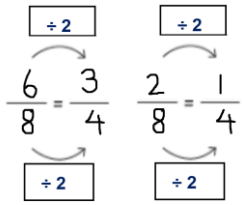
$\frac{2}{8}$ is **less** than $\frac{6}{8}$

$\frac{6}{8} > \frac{2}{8}$ $\frac{2}{8} < \frac{6}{8}$

We can simplify this by dividing the numerator and denominator by the same number: 2.

We can also say: $\frac{3}{4}$ is more than $\frac{1}{4}$.

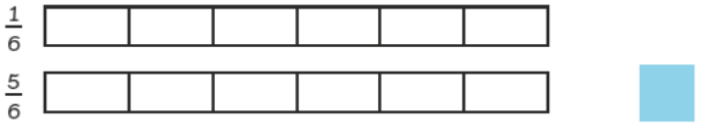
$\frac{3}{4} > \frac{1}{4}$



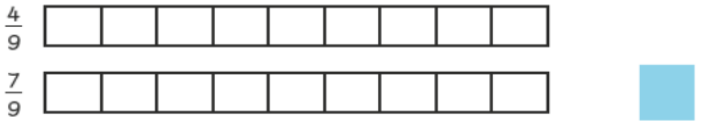
DO:

1. Shade in the amount of the fraction and write which fraction is greater.

Which number is greater?



Which number is smaller?



2. Compare the fractions using =, < or >. Draw and shade in your own bars to help you. Remember each of the parts in your bars need to be equal.

Remember: < means less than (e.g. 1 < 2)
> means greater than (e.g. 2 > 1)

(a) $\frac{2}{7}$ ☐ $\frac{5}{7}$

(b) $\frac{4}{5}$ ☐ $\frac{3}{5}$

(c) $\frac{8}{11}$ ☐ $\frac{7}{11}$

(d) $\frac{2}{7}$ ☐ $\frac{7}{2}$

Hint: Is $\frac{7}{2}$ more or less than one whole? How many bars do you need to draw to show $\frac{7}{2}$?

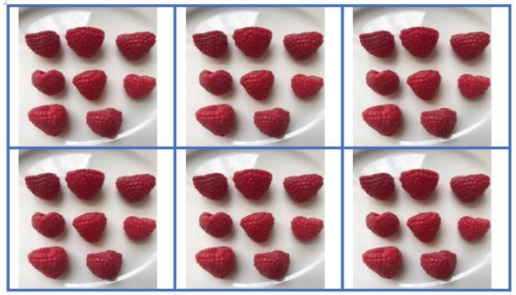
3. Explain why $\frac{3}{5}$ is greater than $\frac{2}{5}$ using diagrams to support your explanation.

DAY 5 RESOURCES:

THINK:

Can you help me with this problem?
Charles took $\frac{1}{6}$ of the berries in the box. Ruby took $\frac{3}{6}$ of the berries in the box. What fraction of the berries did Charles and Ruby take altogether?

Give the answer in its simplest form.



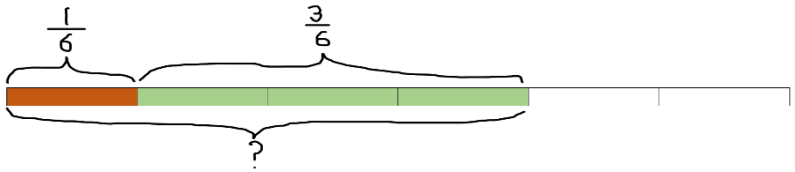
SEE: See video

Charles took $\frac{1}{6}$ of the berries in the box.

Ruby took $\frac{3}{6}$ of the berries in the box.

1 sixth + 3 sixths = 4 sixths $\frac{1}{6} + \frac{3}{6} = \frac{4}{6}$

Charles and Ruby took $\frac{4}{6}$ of the berries.

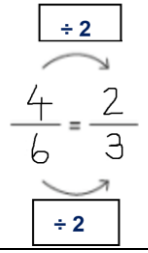


$\frac{1}{6} + \frac{3}{6} = \frac{4}{6}$

To write $\frac{4}{6}$ in its simplest form, we could draw our bar model again but this time make two of the parts into one part. We have put two sixths together to make one third. Now we have 3 equal parts and 2 of them are shaded. We can see that the shaded part is still the same. So $\frac{2}{3}$ is the same as $\frac{4}{6}$.

So, $\frac{1}{6} + \frac{3}{6} = \frac{2}{3}$

You could use this method to find the simplest form instead.



DO:

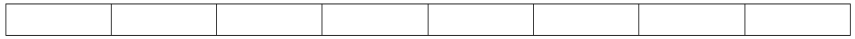
1. Add and fill in the blanks. Write each fraction in its simplest form.

Shade the bars to help you.

a)

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

b)



$\frac{4}{8} + \frac{2}{8} =$

2. Add and write each fraction in its simplest form. You can always draw a bar to help you.

a) $\frac{2}{5} + \frac{3}{5} =$

b) $\frac{7}{12} + \frac{1}{12} =$

c) $\frac{2}{8} + \frac{2}{8} =$

d) $\frac{2}{6} + \frac{2}{6} =$

Answers:

Day 1

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

$\frac{1}{4} = \frac{2}{8}$

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

$\frac{1}{6} = \frac{2}{12}$

$\frac{2}{3} = \frac{6}{9}$

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

Day 2

$\frac{18}{20} = \frac{9}{10}$

$\frac{14}{24} = \frac{7}{12}$

$\frac{3}{30} = \frac{1}{10}$

$\frac{4}{40} = \frac{1}{10}$

$\frac{10}{45} = \frac{2}{9}$

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

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

$\frac{45}{50} = \frac{9}{10}$

Day 3

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

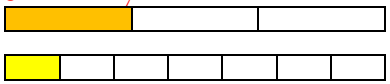
   $\frac{1}{7}$

2. a) >

   b) >

   c) <

3. $\frac{1}{3}$ is greater than $\frac{1}{7}$ because when a whole is cut into three equal parts, each part will be bigger than when it is cut into seven equal parts.
You can see on the diagram that $\frac{1}{3}$ is greater than $\frac{1}{7}$.



Day 4

1. $\frac{5}{6}$

   $\frac{4}{9}$

2. a) <

   b) >

   c) >

   d) <

3. $\frac{3}{5}$ is greater than $\frac{2}{5}$ because in both fractions, the whole is split into five equal parts (fifths), but in the fraction $\frac{3}{5}$, we are looking at three of those parts. In the fraction $\frac{2}{5}$, we are looking at only two of those parts. Because each individual part must be the same size as each other because both fractions are fifths, 3 of those parts must be greater than 2 of those parts.

Day 5

1. a) $\frac{3}{3} = 1$

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

2. a) $\frac{5}{5} = 1$

   b) $\frac{8}{12} = \frac{2}{3}$

   c) $\frac{4}{8} = \frac{1}{2}$

   d) $\frac{4}{6} = \frac{2}{3}$