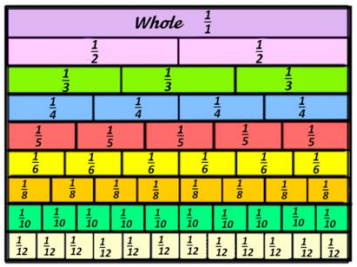
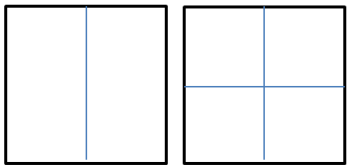
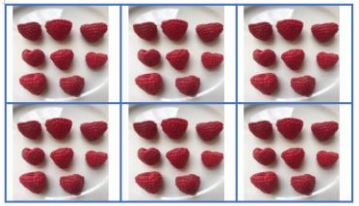
Year 3 maths – Summer 2 Week beginning: 1.6.20

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

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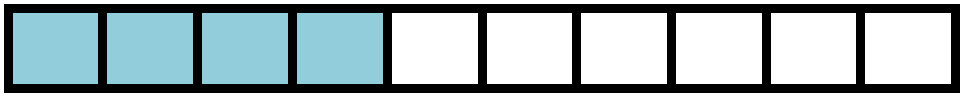
DAY 1 RESOURCES:

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

The purple is $\frac{2}{5}$ whilst the blue is $\frac{4}{10}$. They are equivalent.



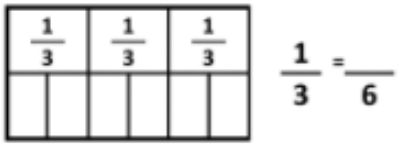
Rather than drawing them out, you can use the method below to find equivalent fraction. Multiply the numerator and the denominator by the same amount to find an equivalent fraction.

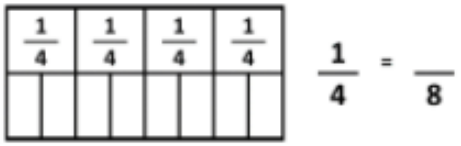
You could also write it as…

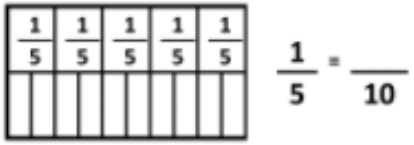
$\frac{2}{5} = \frac{4}{10} = \frac{8}{20} = \frac{16}{40} \ldots$

DO: Find the equivalent fractions and explain your answers.

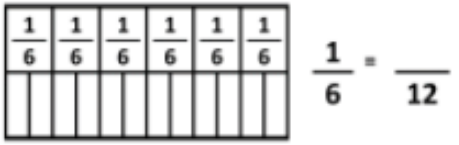
a)







6)



b)

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

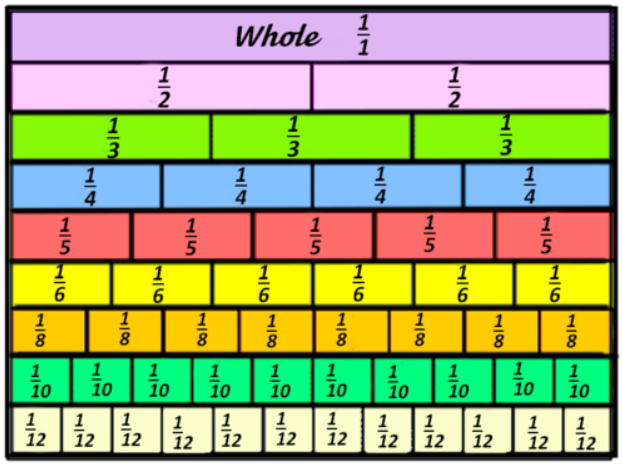
$\frac{4}{5} = \frac{\quad}{15}$

Deepening:

Max says there are infinite ways of saying $\frac{1}{2}$. Is he correct? Explain your answer using sentences and diagrams.

DAY 2 RESOURCES

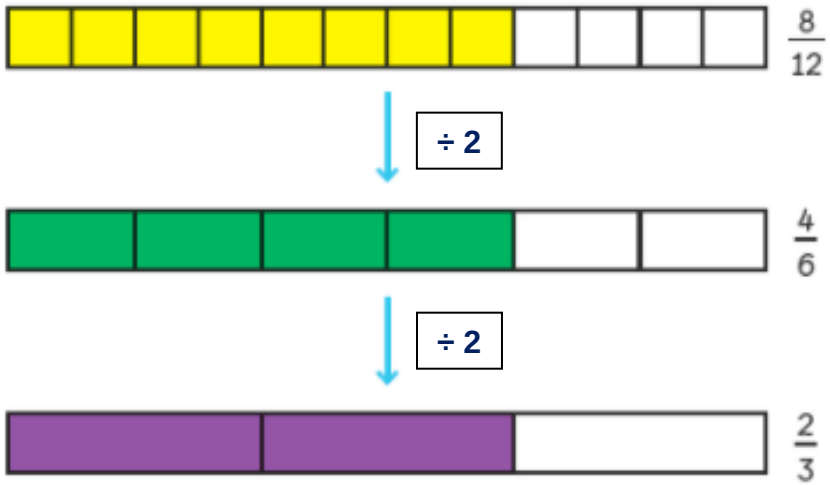
THINK:



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

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.

Simplifying Fractions

Examples:

1. $\frac{10}{16} \overset{\div 2}{=} \frac{5}{8}$ (÷2 above and ÷2 below)

2. $\frac{20}{50} \overset{\div 5}{=} \frac{4}{10} \overset{\div 2}{=} \frac{2}{5}$ (÷5 above and ÷5 below; ÷2 above and ÷2 below)

$\frac{18}{20} =$ $\frac{14}{24} =$

$\frac{3}{30} =$ $\frac{4}{40} =$

$\frac{10}{45} =$ $\frac{2}{6} =$

$\frac{5}{15} =$ $\frac{45}{50} =$

Deepening: Can a fraction be made simpler if its numerator is 1? Explain your answer.

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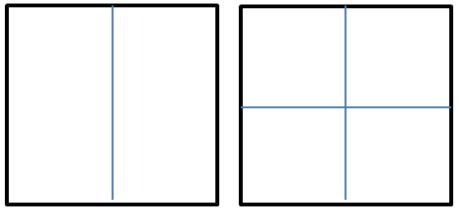
DAY 3 RESOURCES

THINK:

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

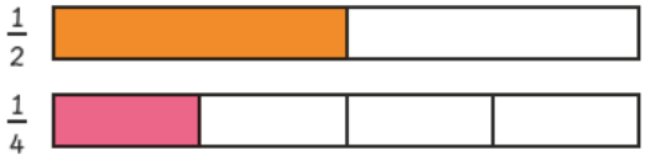
Ahmed and Gemma each have a paper square of the same size.
Ahmed cuts the square into 2 equal parts and keeps 1 part.
Gemma cuts the square into 4 equal parts and keeps 1 part.
Who keeps a bigger part, Ahmed or Gemma?



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

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

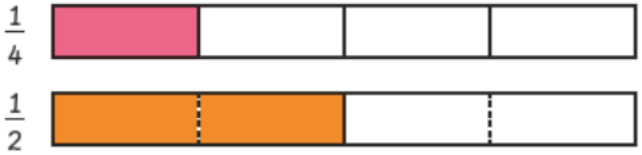
Which is greater, $\frac{1}{2}$ or $\frac{1}{4}$?



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

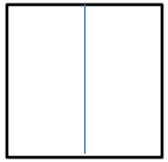
SEE:

See **support video**

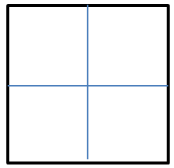


2 quarters is **greater** than 1 quarter.

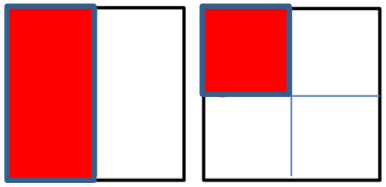
$\frac{1}{2} = \frac{2}{4}$, so $\frac{1}{2}$ is **greater** than $\frac{1}{4}$



Ahmed cuts his square into 2 equal parts.



Gemma cuts her square into 4 equal parts.



Ahmed's piece

Gemma's piece

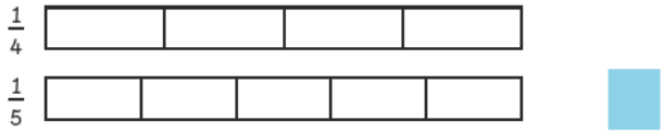
The parts Gemma gets are smaller. ➡ So, $\frac{1}{4}$ is less than a $\frac{1}{2}$

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

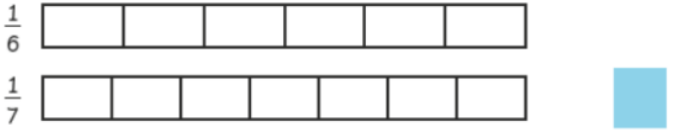
DO:

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 >.

(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.

Deepening: Maria says that $\frac{3}{3}$ is greater than 1. Tom says they are equal. Who is correct? Why? Explain your answer using diagrams as well as words.

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

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

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

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

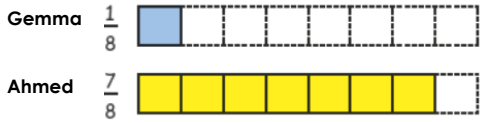
Ahmed gets **more** pieces than Gemma.

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

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?

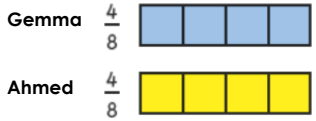


$\frac{7}{8}$ is **more** than $\frac{1}{8}$

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

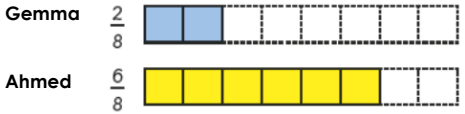
$\frac{7}{8} > \frac{1}{8}$ $\frac{1}{8} < \frac{7}{8}$

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?

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.

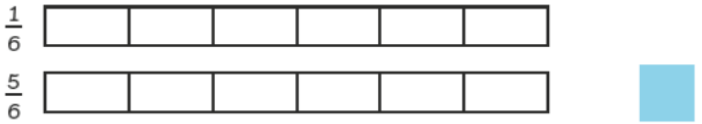
We can also say: $\frac{3}{4}$ is more than $\frac{1}{4}$.

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

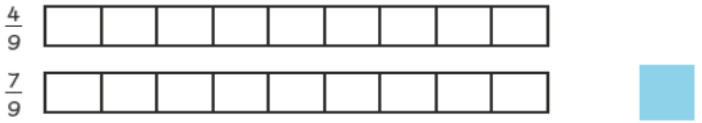
DO:

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 >.

(a) $\frac{2}{7}$ ☐ $\frac{5}{7}$

(b) $\frac{4}{5}$ ☐ $\frac{3}{5}$

(c) $\frac{8}{11}$ ☐ $\frac{7}{11}$

(d) $\frac{2}{7}$ ☐ $\frac{7}{2}$

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

Deepening:

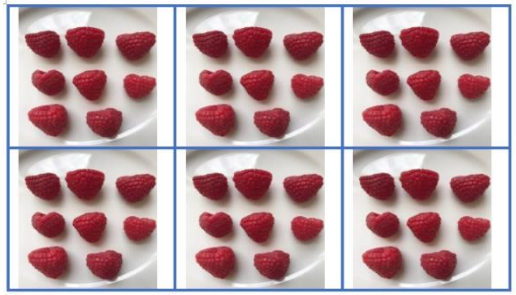
Create your own word problems for the THINK, e.g. Rebecca and her friend shared a large sandwich. They cut it into 6 equal pieces. Rebecca ate 1 piece and her friend ate 5 pieces. Who ate more? How much of the sandwich was left over?

DAY 5 RESOURCES:

THINK:

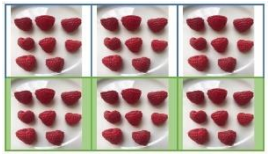
Can you help me with this problem?
Charles took $\frac{1}{6}$ of the berries in the box. Ruby took $\frac{3}{6}$ of the berries in the box. What fraction of the berries did Charles and Ruby take altogether?

Give the answer in its simplest form.



SEE: See video

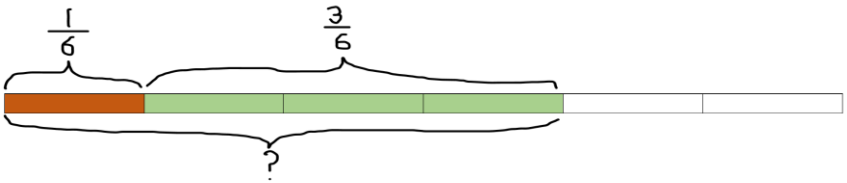
Charles took $\frac{1}{6}$ of the berries in the box.



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.



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

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

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

DO:

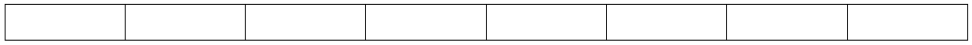
1. Add and fill in the blanks. Write each fraction in its simplest form.

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

Deepening: How do you know when a fraction can't be simplified? Explain using diagrams as well as words.

Answers:

Day 1

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

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

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

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

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

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

Deepening:
Max is correct. As long as the numerator is half of the denominator, the fraction represents $\frac{1}{2}$.

Day 2

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

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

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

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

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

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

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

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

Deepening: No, if the numerator is 1 then the fraction is in its' simplest form. That is because 1 cannot be divided to find an answer that is a whole number (unless you divide it by 1 which means it stays the same).

Day 3

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

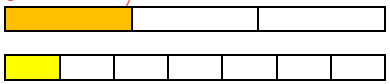
   $\frac{1}{7}$

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 $\frac{1}{7}$.



Deepening: Tom is correct. $\frac{3}{3}$ is equal to 1 because the whole is split into three equal parts, but 3 thirds means all three of them, which is the same as one whole.

Day 4

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

   $\frac{4}{9}$

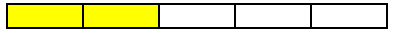
2. a) <

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

Deepening: You know a fraction is in its simplest form and can't be simplified if you cannot divide the numerator and the denominator by the same number equally. For example, in the fraction $\frac{6}{8}$, both 6 and 8 can be divided by 2. 6 ÷ 2 = 3 and 8 ÷ 2 = 4, so it can be simplified to become $\frac{3}{4}$. You cannot divide 3 and 4 by the same number equally, so this is the fraction in its simplest form.