1) a) $\frac{3}{4} > \frac{3}{5}$

   b) $\frac{5}{6} > \frac{5}{8}$

2) a) $\frac{8}{14} < \frac{8}{10}$

   b) $\frac{9}{12} > \frac{9}{15}$

   c) $\frac{10}{12} > \frac{10}{16}$

3) Children can use a range of answers to help them explain how they know, including equivalent fraction knowledge and referencing how the fractions compare to $\frac{1}{2}$.

   a) $\frac{3}{8}$

   b) $\frac{4}{9}$

   c) $\frac{8}{12}$

   d) $\frac{14}{20}$

1) Felix's statement is always true. When the numerator is the same, you need to compare the denominators and the greater the denominator, the smaller the fraction. For example, when you compare $\frac{4}{9}$ and $\frac{4}{6}$, $\frac{4}{6}$ is the greater fraction.

2) Children may use a range of answers to help them explain how they know, including equivalent fraction knowledge and referencing how the fractions compare to $\frac{1}{2}$.

3) Abi has made the mistake of drawing the diagrams incorrectly. The wholes need to be the same size in order to compare the two fractions. The diagram below is correct and clearly shows that $\frac{3}{4}$ is greater than $\frac{3}{7}$.

1) Jia has run further so far because $\frac{2}{3}$ is equivalent to $\frac{6}{9}$ and $\frac{6}{9}$ is less than $\frac{7}{9}$.

2) a) Drew's fraction could be $\frac{4}{6}$.

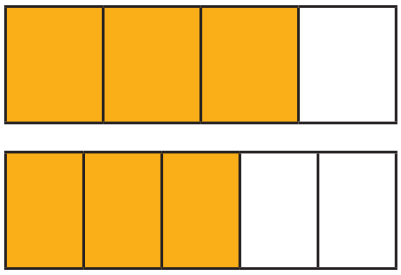
   b) Other fractions Drew could be thinking of are $\frac{2}{3}$, $\frac{3}{6}$, $\frac{4}{6}$, $\frac{5}{12}$, $\frac{6}{12}$, $\frac{7}{12}$, $\frac{8}{12}$.

   c) Emily is incorrect. Drew cannot be thinking of $\frac{5}{6}$ because $\frac{5}{6}$ is equivalent to $\frac{10}{12}$, which is greater than $\frac{9}{12}$.

Compare Fractions Less than 1

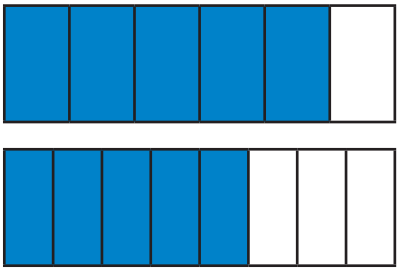
1) Use <, > or = to compare the fractions. Use the bar models to help you.

a)



$\frac{3}{4}$ ☐ $\frac{3}{5}$

b)



$\frac{5}{6}$ ☐ $\frac{5}{8}$

2) Use a common numerator to compare the following fractions.

a) $\frac{4}{7}$ and $\frac{8}{10}$ → $\frac{\square}{\square} < \frac{\square}{\square}$

b) $\frac{3}{5}$ and $\frac{9}{12}$ → $\frac{\square}{\square} > \frac{\square}{\square}$

c) $\frac{5}{8}$ and $\frac{10}{12}$ → $\frac{\square}{\square} < \frac{\square}{\square}$

3) Find the smallest fraction in each of the pairs. Explain how you know.

a) $\frac{6}{8}$ $\frac{3}{8}$

b) $\frac{4}{7}$ $\frac{4}{9}$

c) $\frac{3}{4}$ $\frac{8}{12}$

d) $\frac{4}{5}$ $\frac{14}{20}$

Compare Fractions Less than 1

1) Is Felix's statement always, sometimes or never true? Prove your reasoning with diagrams.

Felix

If there are two fractions with the same numerator, the one with the greater denominator is the smallest of the two fractions.

2) Explain how you know the following statements are true without using diagrams.

a) $\frac{4}{6}$ is greater than $\frac{3}{6}$.

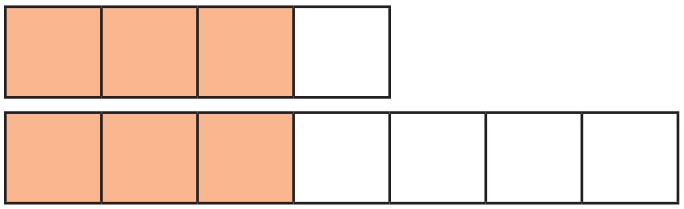
b) $\frac{8}{12}$ is less than $\frac{3}{4}$.

c) $\frac{5}{8}$ is greater than $\frac{5}{9}$.

3) Explain and correct Abi's mistake.

Abi

I've used bar models to compare $\frac{3}{4}$ and $\frac{3}{7}$. I can see that they are equal fractions.



Compare Fractions Less than 1

1) Bartek and Jia are running a marathon.

Bartek: So far, I have completed $\frac{2}{3}$ of the marathon.

Jia: So far, I have completed $\frac{7}{9}$ of the marathon.

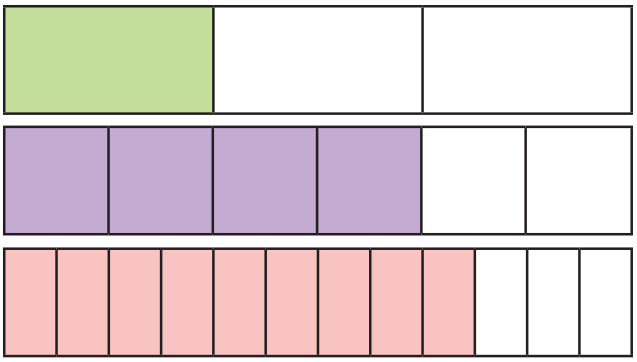
Who has run further so far? Prove it!

2) I am thinking of a fraction that is greater than $\frac{1}{3}$ but less than $\frac{9}{12}$.

The denominator is a multiple of 3.

Drew

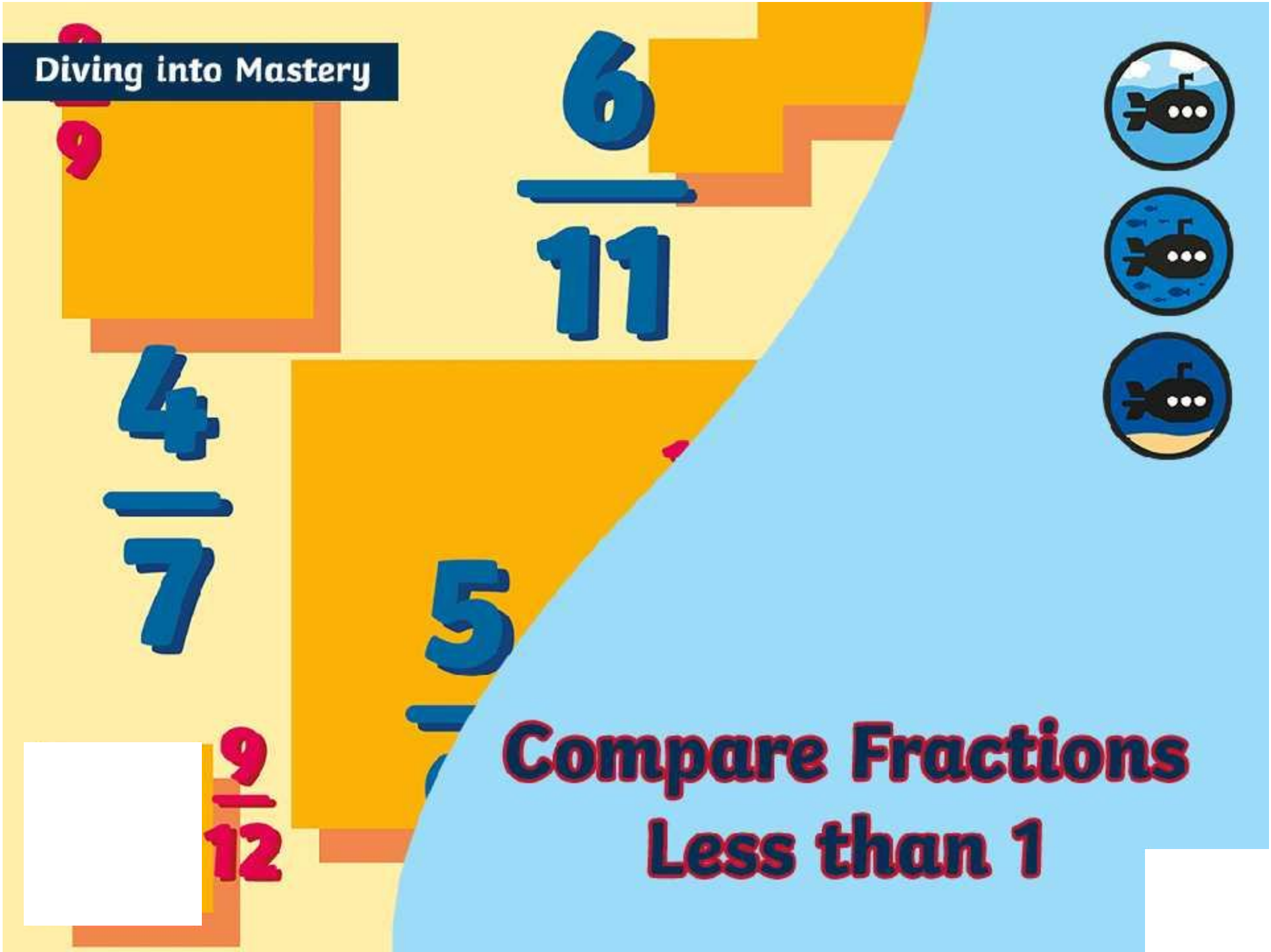
a) Use the bar model diagram to help you identify one of the possible fractions Drew could be thinking of.



b) What other fractions could Drew be thinking of? Draw three other bar model diagrams to prove your answer.

c) Is Emily correct? Explain why.

Emily: I think the fraction Drew is thinking of is $\frac{5}{6}$.


Diving into Mastery
6/11
4/7
9/12
Compare Fractions
Less than 1

Diving into Mastery Guidance for Educators

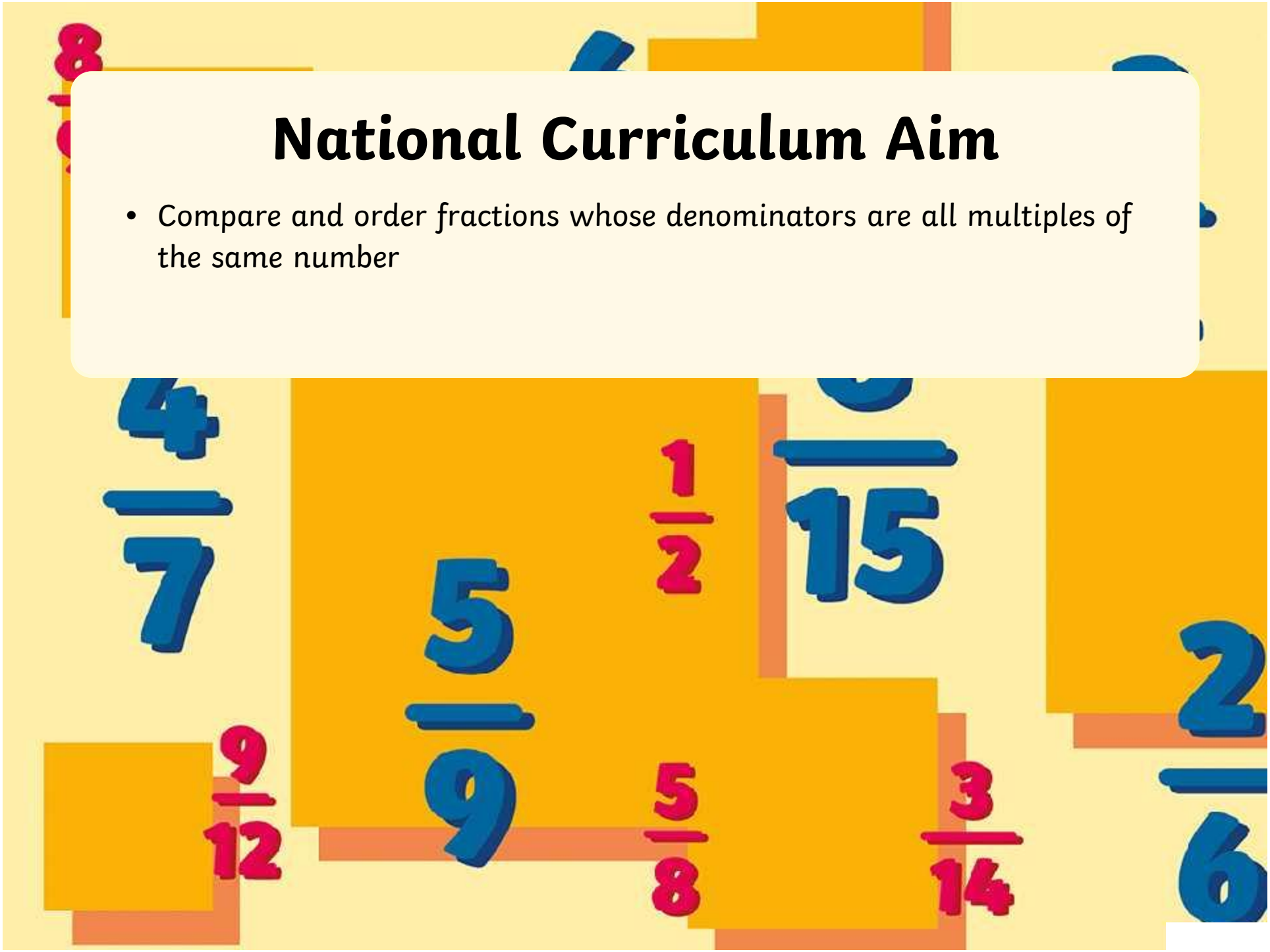
Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

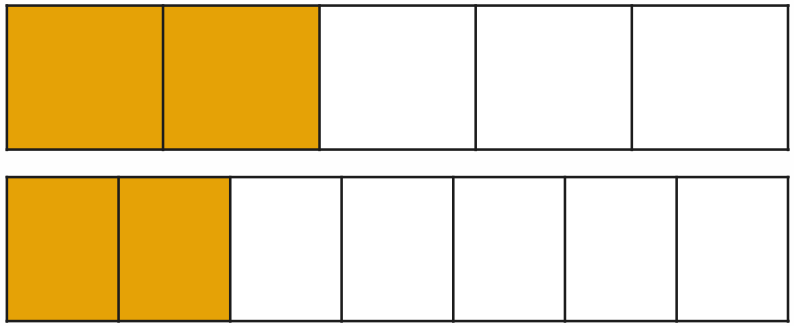
National Curriculum Aim

- Compare and order fractions whose denominators are all multiples of the same number

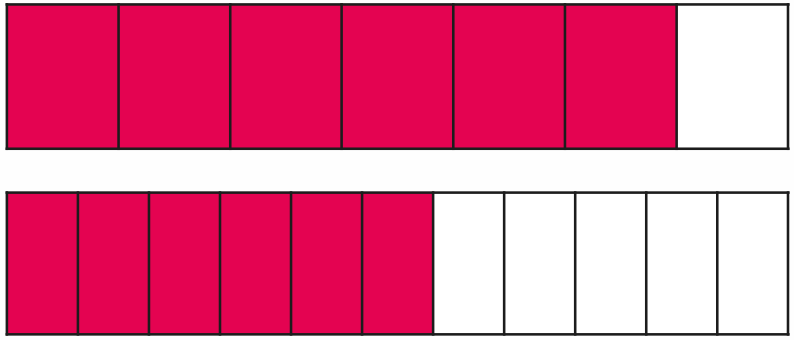


Compare Fractions Less than 1 | Diving

Use <, > or = to compare the fractions.
Use the bar models to help you.



$\frac{2}{7} \square \frac{2}{5}$



$\frac{6}{11} \square \frac{6}{7}$

Compare Fractions Less than 1 | Diving

Find the smallest fraction in each of the pairs. Explain how you know.

$\frac{5}{12}$ $\frac{6}{12}$

$\frac{5}{12}$ is the smaller fraction because it is less than half and $\frac{6}{12}$ is equivalent to $\frac{1}{2}$.

$\frac{4}{9}$ $\frac{4}{11}$

$\frac{4}{11}$ is the smaller fraction because a whole split into elevenths has smaller parts than a whole split into ninths.

Compare Fractions Less than 1 | Deeper

Felix is feeling confused about comparing fractions. How can you help him? What advice could you give him?

Felix

If there are two fractions with different denominators, I cannot compare them.

You could advise Felix that in order to compare fractions with different denominators, he could: use equivalent fraction knowledge, find a common numerator or denominator, draw diagrams to help or compare each of the fractions to $\frac{1}{2}$.

Compare Fractions Less than 1 | Deeper

Explain how you know the following statements are correct without using diagrams.

$\frac{5}{7}$ is greater than $\frac{4}{7}$.

$\frac{8}{15}$ is less than $\frac{4}{5}$.

$\frac{6}{8}$ is greater than $\frac{6}{20}$.

Have you compared your fractions to $\frac{1}{2}$, used your equivalent fraction knowledge or found common numerators or denominators to prove these statements are correct?

Compare Fractions Less than 1 | Deepest

Bartek and Jia are both eating a large pizza. Who has eaten the most?

Bartek

So far, I have eaten $\frac{14}{20}$ of my pizza.

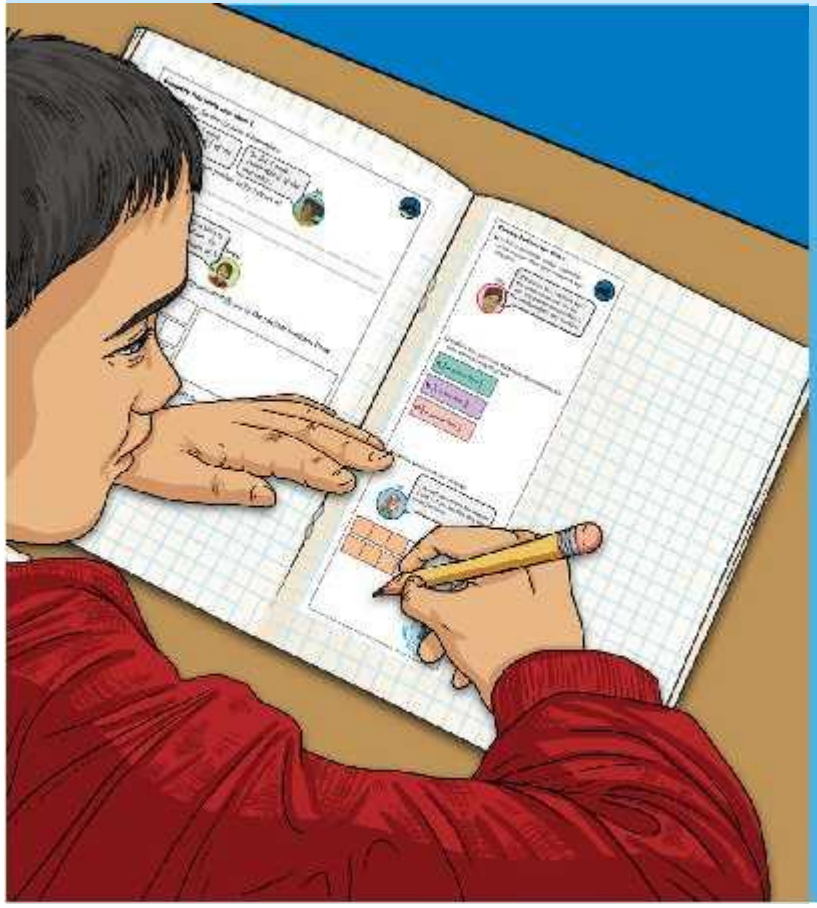
Jia

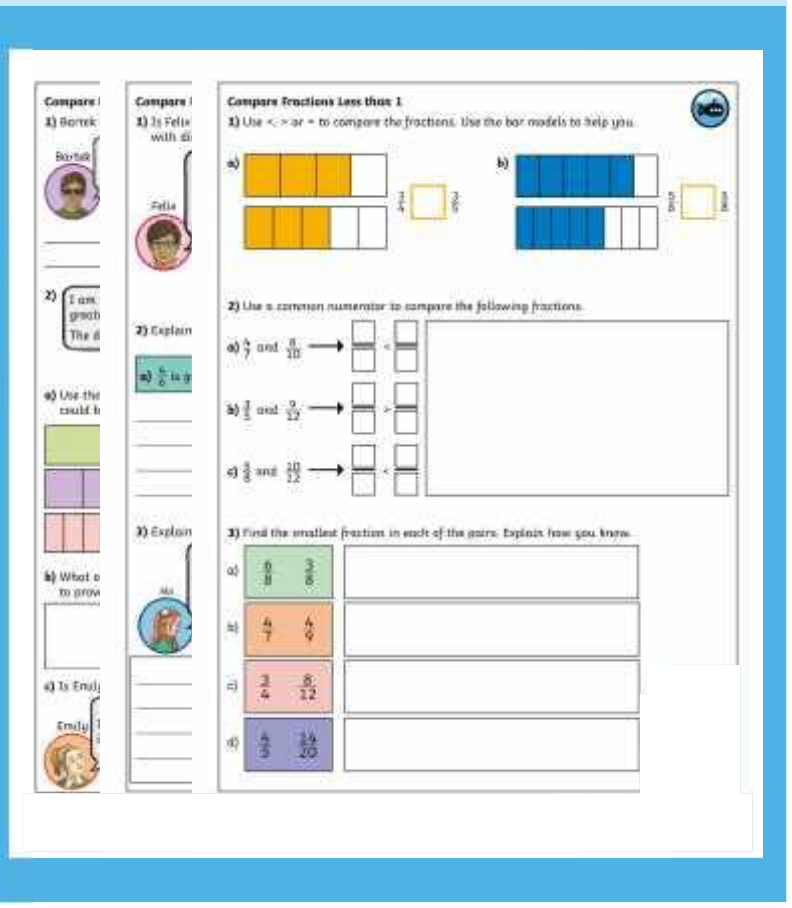
So far, I have eaten $\frac{3}{4}$ of my pizza.

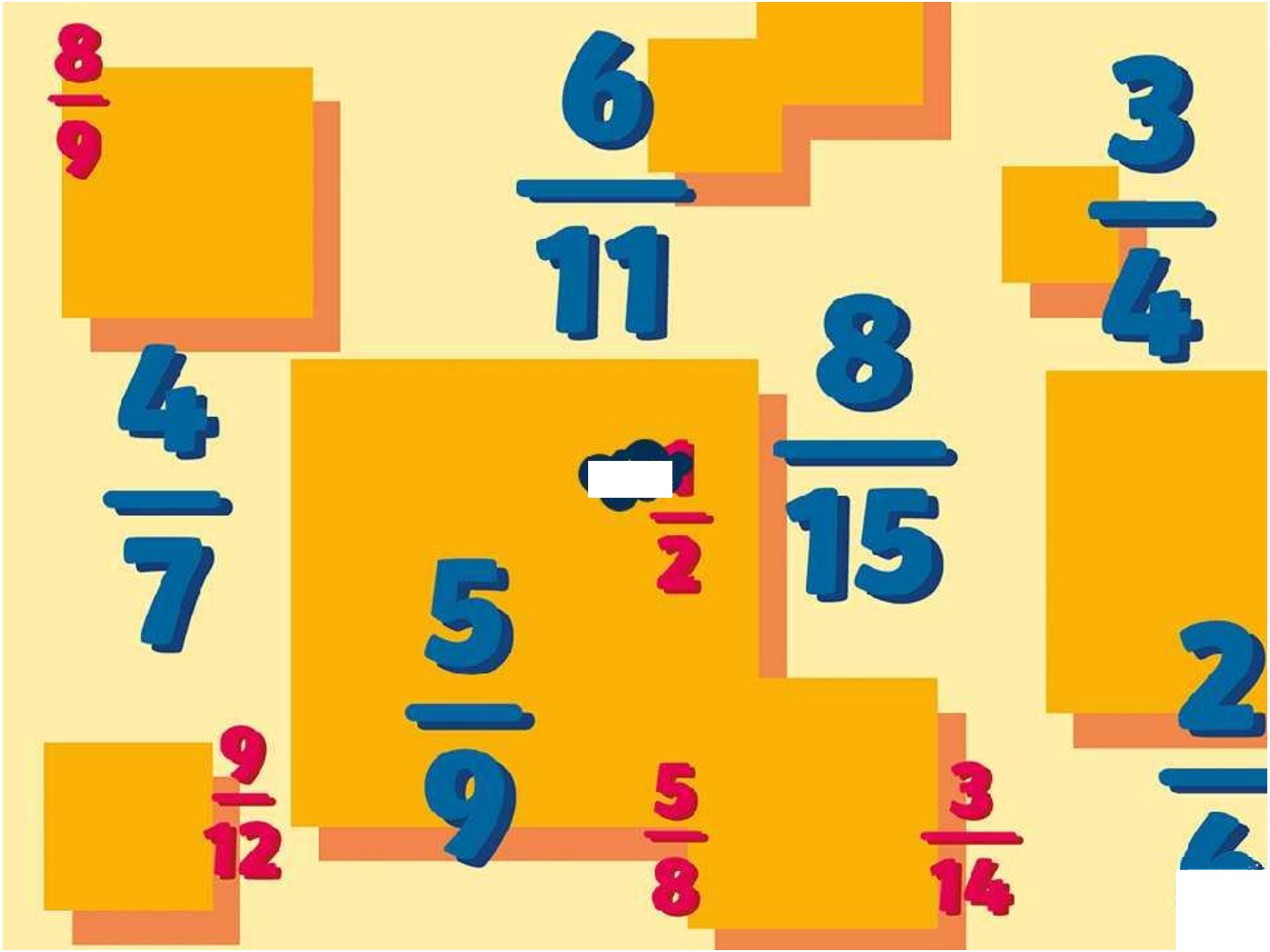
Jia has eaten the most pizza because $\frac{3}{4}$ is equivalent to $\frac{15}{20}$, which is greater than $\frac{14}{20}$.

Compare Fractions Less than 1

Dive in by completing your own activity!



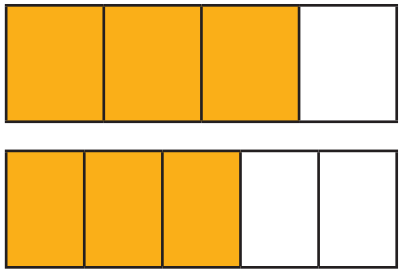



8/9
6/11
3/4
4/7
8/15
1/2
5/9
9/12
5/8
3/14
2/4

Compare Fractions Less than 1

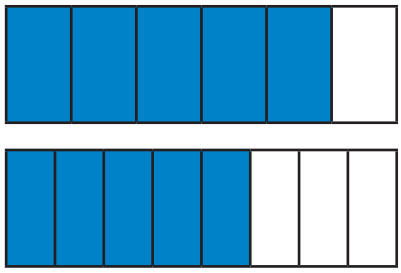
1) Use <, > or = to compare the fractions. Use the bar models to help you.

a)



$\frac{3}{4}$ ☐ $\frac{3}{5}$

b)



$\frac{5}{6}$ ☐ $\frac{5}{8}$

2) Use a common numerator to compare the following fractions.

a) $\frac{4}{7}$ and $\frac{8}{10}$ → $\frac{\square}{\square}$ < $\frac{\square}{\square}$

b) $\frac{3}{5}$ and $\frac{9}{12}$ → $\frac{\square}{\square}$ > $\frac{\square}{\square}$

c) $\frac{5}{8}$ and $\frac{10}{12}$ → $\frac{\square}{\square}$ > $\frac{\square}{\square}$

3) Find the smallest fraction in each of the pairs. Explain how you know.

a) $\frac{6}{8}$ $\frac{3}{8}$

b) $\frac{4}{7}$ $\frac{4}{9}$

c) $\frac{3}{4}$ $\frac{8}{12}$

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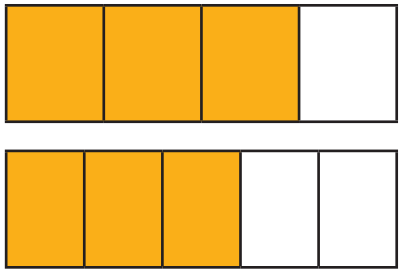

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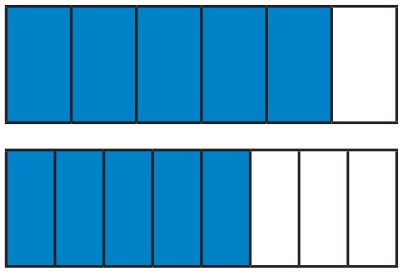

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Compare Fractions Less than 1

1) Is Felix's statement always, sometimes or never true? Prove your reasoning with diagrams.

Felix

If there are two fractions with the same numerator, the one with the greater denominator is the smallest of the two fractions.

2) Explain how you know the following statements are true without using diagrams.

a) $\frac{4}{6}$ is greater than $\frac{3}{6}$.

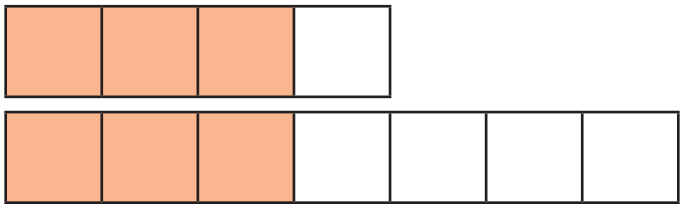
b) $\frac{8}{12}$ is less than $\frac{3}{4}$.

c) $\frac{5}{8}$ is greater than $\frac{5}{9}$.

3) Explain and correct Abi's mistake.

Abi

I've used bar models to compare $\frac{3}{4}$ and $\frac{3}{7}$. I can see that they are equal fractions.



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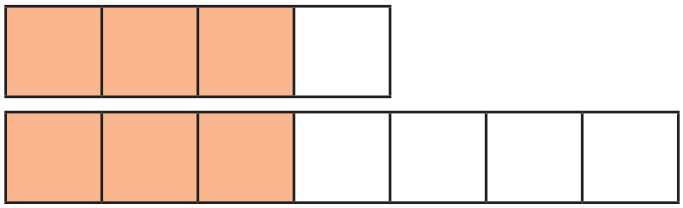


Compare Fractions Less than 1

1) Bartek and Jia are running a marathon.

Bartek: So far, I have completed $\frac{2}{3}$ of the marathon.

Jia: So far, I have completed $\frac{7}{9}$ of the marathon.

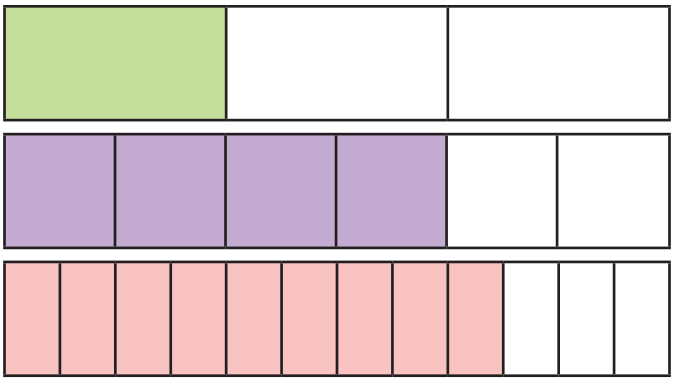
Who has run further so far? Prove it!

2)

Drew: I am thinking of a fraction that is greater than $\frac{1}{3}$ but less than $\frac{9}{12}$.

The denominator is a multiple of 3.

a) Use the bar model diagram to help you identify one of the possible fractions Drew could be thinking of.



b) What other fractions could Drew be thinking of? Draw three other bar model diagrams to prove your answer.

c) Is Emily correct? Explain why.

Emily: I think the fraction Drew is thinking of is $\frac{5}{6}$.

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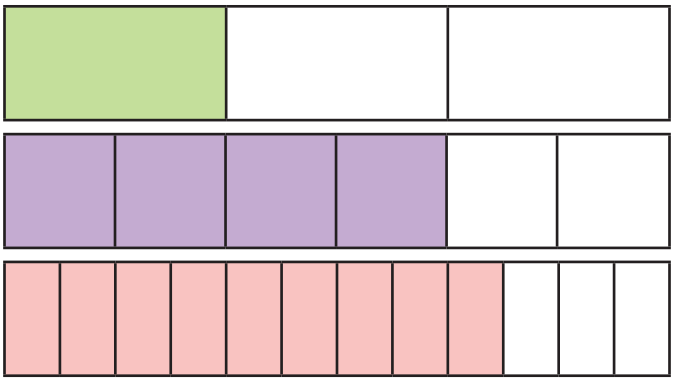

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