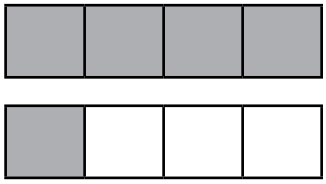
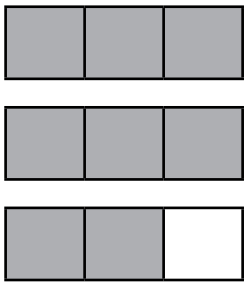
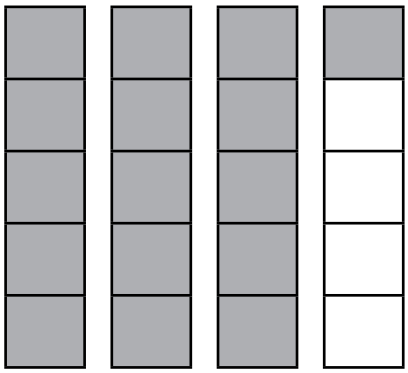
1) a) $1\frac{1}{4}$



b) $2\frac{2}{3}$



c) $3\frac{1}{5}$



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

b) $3\frac{2}{4}$ $(=3\frac{1}{2})$

c) $4\frac{3}{6}$

d) $3\frac{1}{4}$

1) $\frac{17}{4}$ *is an improper fraction and, when converted into a mixed number, it is* $4\frac{1}{4}$*, which is greater than* $3\frac{3}{4}$.

2) a) *This is incorrect as it still includes an improper fraction. The answer should be* $2\frac{2}{6}$.

b) *This is incorrect as 12 thirds make four whole ones. The answer should be* $3\frac{2}{3}$.

c) *The fraction in the mixed number is incorrect. The answer should be* $3\frac{2}{5}$.

1) There are 2 possible answers:

   A = 7, B = 1 $\frac{7}{3} = 2\frac{1}{3}$

   A = 8, B = 2 $\frac{8}{3} = 2\frac{2}{3}$

2) Possible answers:

   A = 4, B = 1 $\frac{4}{3} = 1\frac{1}{3}$

   A = 7, B = 2 $\frac{7}{3} = 2\frac{1}{3}$

   A = 10, B = 3 $\frac{10}{3} = 3\frac{1}{3}$

   (In all answers that the children give, A should be one more than B × 3.)

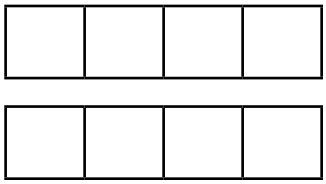
3) a) $\frac{18}{4} = 4\frac{2}{4}$

   b) $\frac{28}{5} = 5\frac{3}{5}$

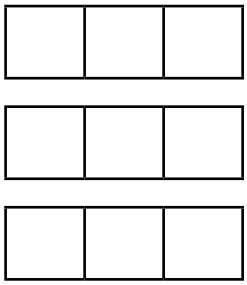
   c) $\frac{13}{2} = 6\frac{1}{2}$

1) Colour the bar models to represent the fractions shown and then complete the statements converting the improper fractions into mixed numbers.

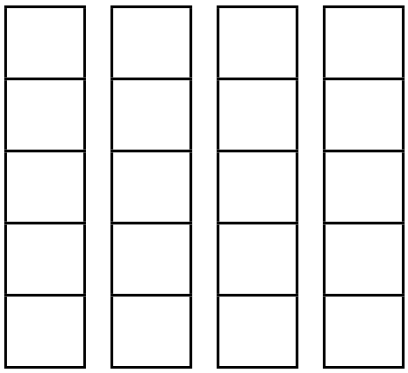
a) $\frac{5}{4}$ is equivalent to _____.



b) $\frac{8}{3}$ is equivalent to _____.



c) $\frac{16}{5}$ is equivalent to _____.



2) Now, convert these improper fractions into mixed numbers. Use drawings or cubes to help you, if needed.

a) $\frac{15}{6}$ = _____

b) $\frac{14}{4}$ = _____

c) $\frac{23}{5}$ = _____

d) $\frac{13}{4}$ = _____

1) Henri says,

$3\frac{3}{4}$ is greater than $\frac{17}{4}$ because it has 3 whole ones in it.

Explain why Henri is wrong.

2) Timmy has converted some mixed numbers to improper fractions. Can you spot the mistakes he has made? Explain Timmy's mistakes and then work out the correct answers.

a) $\frac{14}{6} = 1\frac{8}{6}$

b) $\frac{11}{3} = 4$

c) $\frac{17}{5} = 3\frac{3}{5}$

1) What could be the values of A and B? Find all possibilities.

$\frac{A}{3} = 2\frac{B}{3}$

2) What could be the values of A and B now? Find 3 possibilities.

$\frac{A}{3} = B\frac{1}{3}$

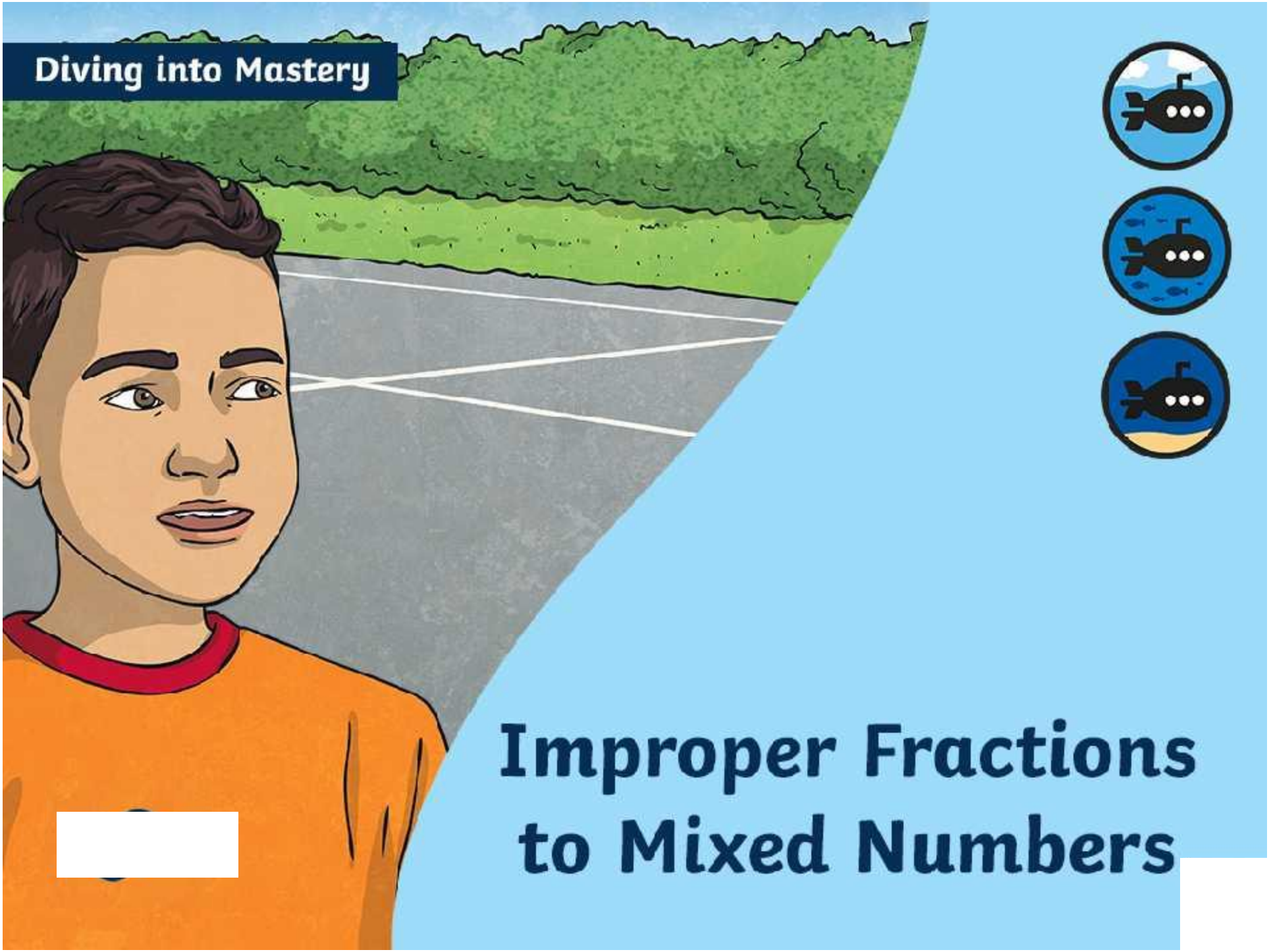
3) Franco has created improper fractions and equivalent mixed numbers using number tiles, but he has knocked some of the tiles and can't remember where to put them. Can you place the following numbers in the correct places to complete the mathematical statements? (Each tile can only be used once.)

1	2	3	4	5	6	13	28	18

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

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

c) $\frac{\square}{2} = \square\frac{\square}{2}$


Diving into Mastery
Improper Fractions
to Mixed Numbers

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:

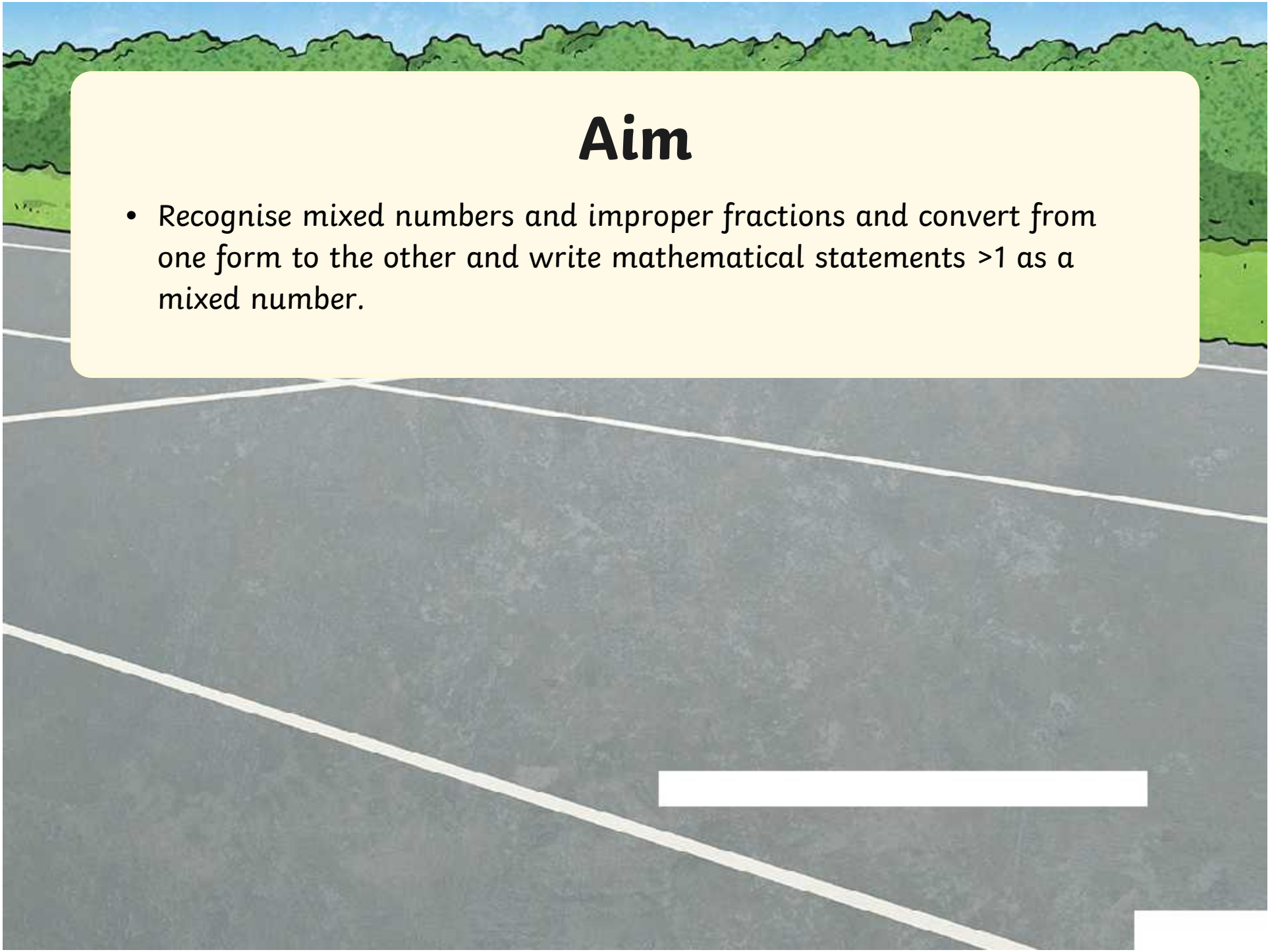
Diving

Deeper

Deepest

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.



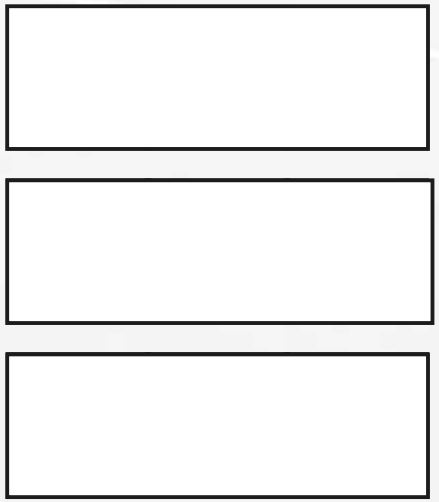
Aim

- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number.

Improper Fractions to Mixed Numbers | Diving

Colour the bar models to represent the fraction shown and then complete the statement converting the improper fraction into a mixed number.

$$\frac{7}{3}$$



$\frac{7}{3}$ is equivalent to $2\frac{1}{3}$.

Improper Fractions to Mixed Numbers | Diving

Colour the fraction shown and then complete the sentence converting the improper fractions to a mixed number.

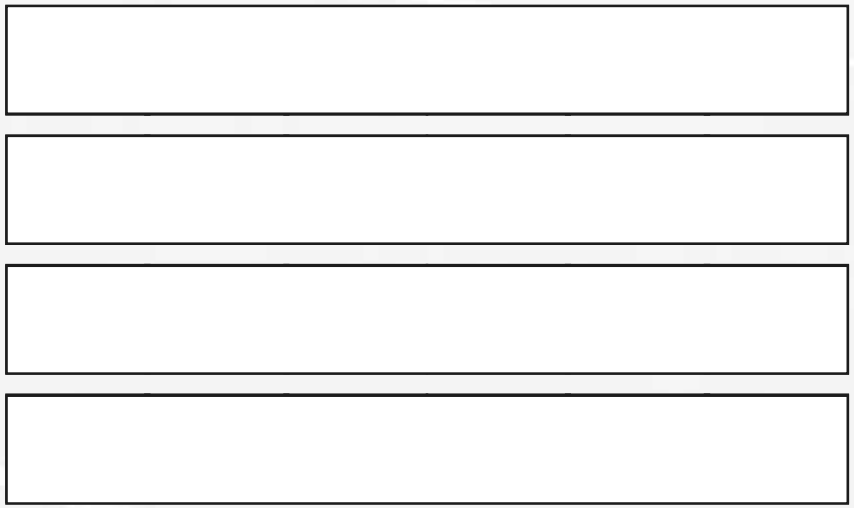
$$\frac{7}{4}$$

$\frac{7}{4}$ is the same value as $1\frac{3}{4}$.

Improper Fractions to Mixed Numbers | Diving

Colour the fraction shown and then complete the sentence converting the improper fractions to a mixed number.

$$\frac{22}{6}$$



$\frac{22}{6}$ is equivalent to $3\frac{4}{6}$.

Improper Fractions to Mixed Numbers | **Diving**

Now, convert these improper fractions to mixed numbers.

$\frac{15}{2}$	=	$7\frac{1}{2}$	$\frac{14}{6}$	=	$2\frac{2}{6}$
$\frac{19}{5}$	=	$3\frac{4}{5}$	$\frac{21}{4}$	=	$5\frac{1}{4}$

Improper Fractions to Mixed Numbers | Deeper

Timmy has converted some mixed numbers into improper fractions.

Can you spot the mistakes he has made? Explain Timmy's mistakes and work out the correct answers.

$\frac{7}{3} = 2\frac{2}{3}$ **The fraction in the mixed number is incorrect. The answer should be $2\frac{1}{3}$.**

$\frac{11}{5} = 10\frac{1}{5}$ **This is incorrect as 10 fifths make 2 whole ones. The answer should be $2\frac{1}{5}$.**

$\frac{17}{4} = 3\frac{5}{4}$ **This is incorrect as it still includes an improper fraction. The answer should be $4\frac{1}{4}$.**

Improper Fractions to Mixed Numbers | **Deepest**

What could be the values of A and B be? Find all the possibilities.

$$\frac{A}{4} = 2\frac{B}{4}$$

There are 3 possible answers:

A = 9, B = 1

1 = 10, B = 2

A = 11, B = 3

Improper Fractions to Mixed Numbers | Deepest

What could be the values of A and B? Find three possibilities.

$$\frac{A}{5} = B\frac{1}{5}$$

A = 6, B = 1

1 = 11, B = 2

A = 16, B = 3

Other answers are possible.

A should be 1 more than B × 5.

Improper Fractions to Mixed Numbers | Deepest

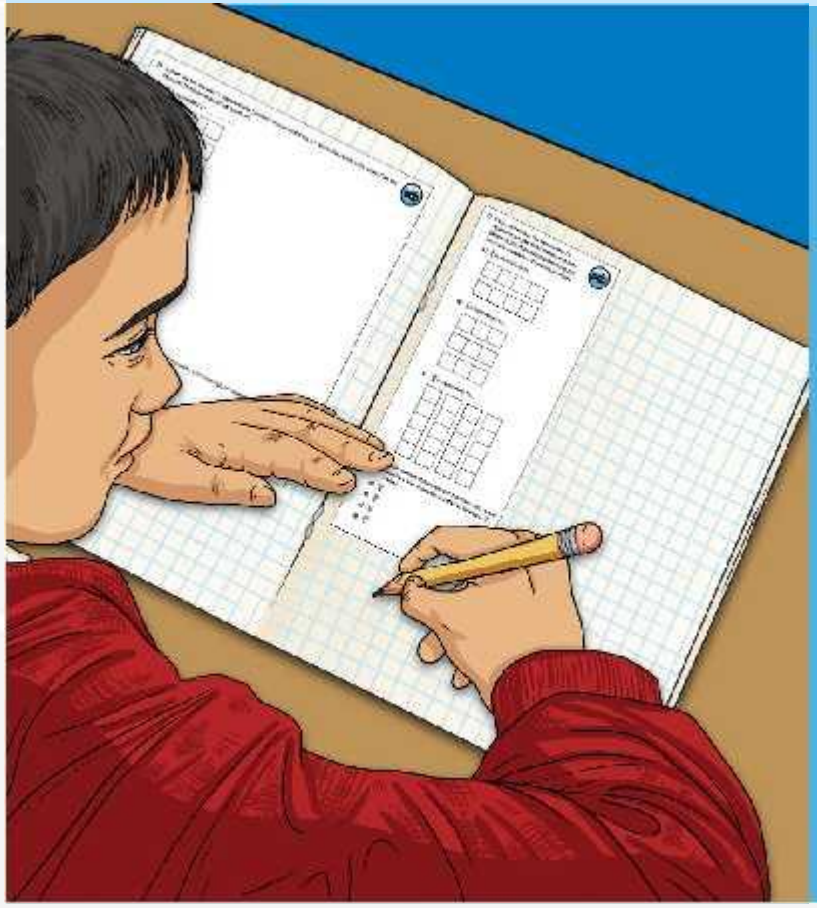
Franco has created improper fractions and equivalent mixed numbers using number tiles, but he has knocked some of the tiles and can't remember where to put them.
Can you place the following numbers in the correct places to complete the mathematical statements? (Each tile can only be used once.)

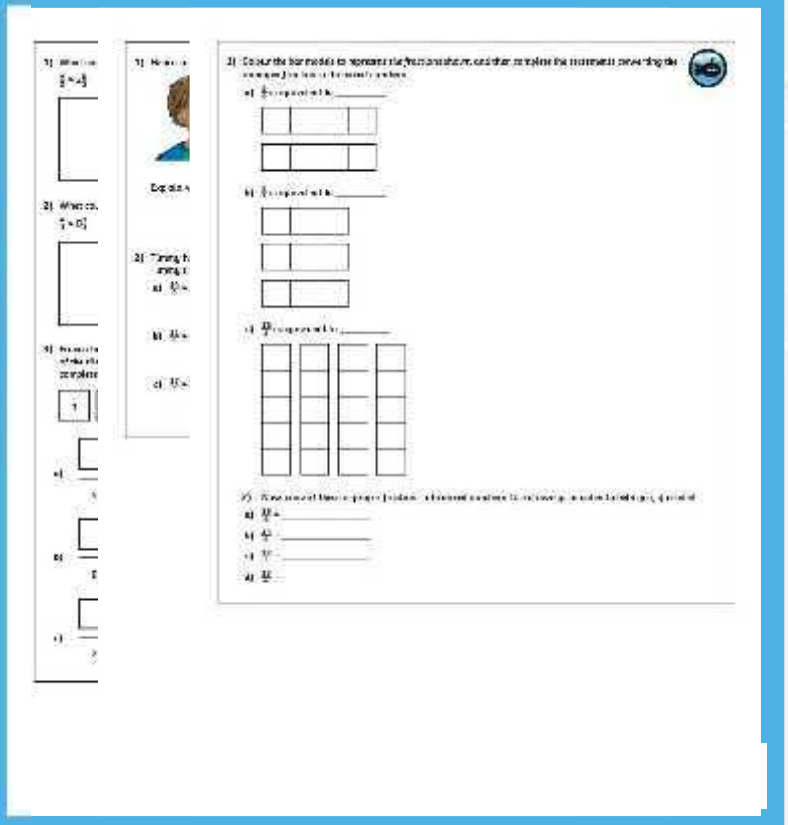
1	2	3	4	5	19

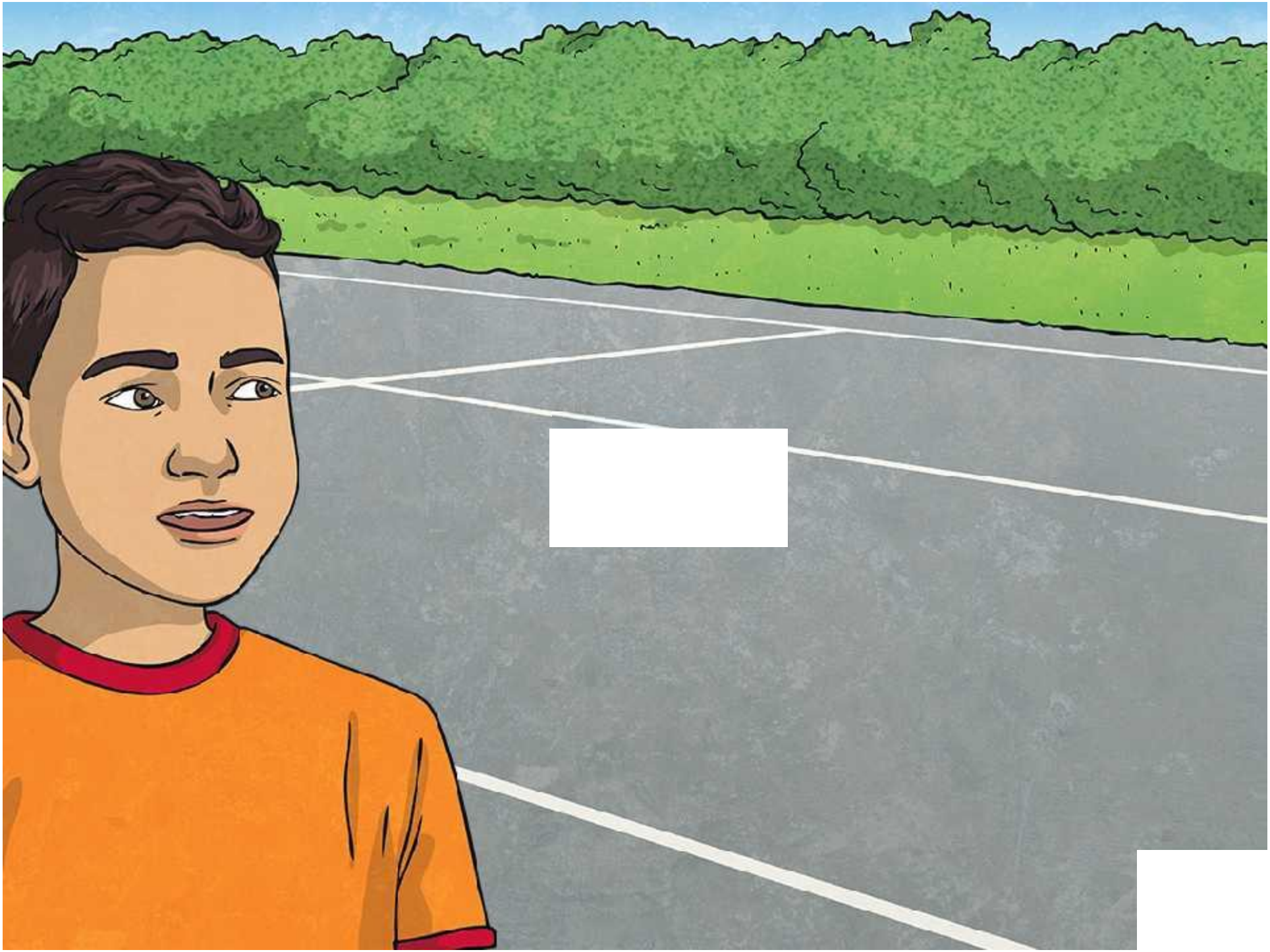
$$\frac{5}{2} = 2\frac{1}{2} \qquad \frac{19}{4} = 4\frac{3}{4}$$

Improper Fractions to Mixed Numbers

Dive in by completing your own activity!

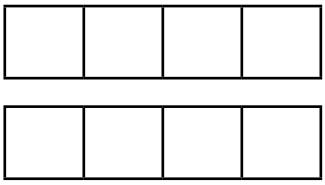




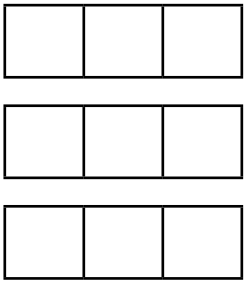


1) Copy and colour the bar models to represent the fractions shown and then complete the statements converting the improper fractions into mixed numbers.

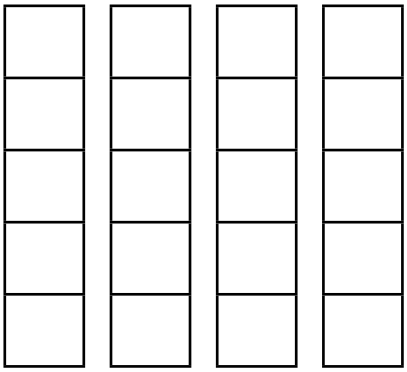
a) $\frac{5}{4}$ is equivalent to...



b) $\frac{8}{3}$ is equivalent to...



c) $\frac{16}{5}$ is equivalent to...



2) Now, convert these improper fractions into mixed numbers. Use drawings or cubes to help you, if needed.

a) $\frac{15}{6}$

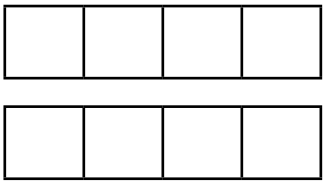
b) $\frac{14}{4}$

c) $\frac{23}{5}$

d) $\frac{13}{4}$

1) Copy and colour the bar models to represent the fractions shown and then complete the statements converting the improper fractions into mixed numbers.

a) $\frac{5}{4}$ is equivalent to...



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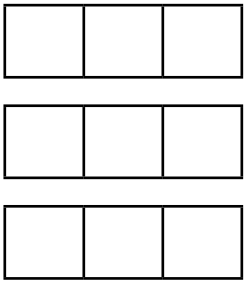
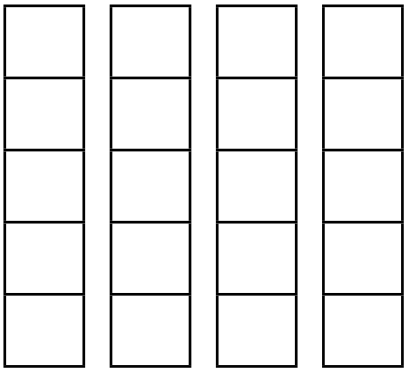


c) $\frac{16}{5}$ is equivalent to...



2) Now, convert these improper fractions into mixed numbers. Use drawings or cubes to help you, if needed.

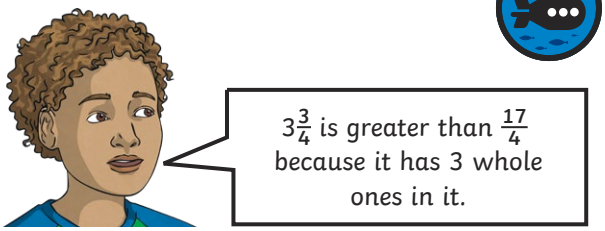
a) $\frac{15}{6}$

b) $\frac{14}{4}$

c) $\frac{23}{5}$

d) $\frac{13}{4}$

1) Henri says,



Explain why Henri is wrong.

2) Timmy has converted some mixed numbers to improper fractions. Can you spot the mistakes he has made? Explain Timmy's mistakes and then work out the correct answers.

a) $\frac{14}{6} = 1\frac{8}{6}$

b) $\frac{11}{3} = 4$

c) $\frac{17}{5} = 3\frac{3}{5}$

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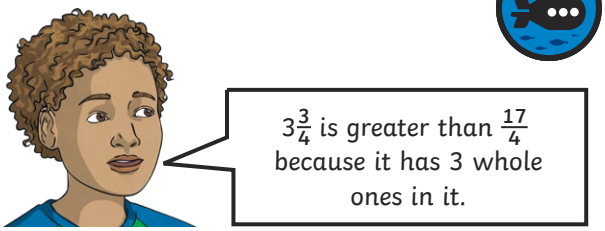
1) Henri says,



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a) $\frac{14}{6} = 1\frac{8}{6}$

b) $\frac{11}{3} = 4$

c) $\frac{17}{5} = 3\frac{3}{5}$

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1) What could be the values of A and B? Find all possibilities.

$\frac{A}{3} = 2\frac{B}{3}$

2) What could be the values of A and B now? Find 3 possibilities.

$\frac{A}{3} = B\frac{1}{3}$

3) Franco has created improper fractions and equivalent mixed numbers using number tiles, but he has knocked some of the tiles and can't remember where to put them. Can you place the following numbers in the correct places to complete the mathematical statements? (Each tile can only be used once.)

1	2	3	4	5

6	13	28	18

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

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

c) $\frac{\square}{2} = \square\frac{\square}{2}$

1) What could be the values of A and B? Find all possibilities.

$\frac{A}{3} = 2\frac{B}{3}$

2) What could be the values of A and B now? Find 3 possibilities.

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3) Franco has created improper fractions and equivalent mixed numbers using number tiles, but he has knocked some of the tiles and can't remember where to put them. Can you place the following numbers in the correct places to complete the mathematical statements? (Each tile can only be used once.)

1	2	3	4	5

6	13	28	18

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

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

c) $\frac{\square}{2} = \square\frac{\square}{2}$