Unit and non-unit fractions

1 Write fractions to complete the sentences.

○ ● ●

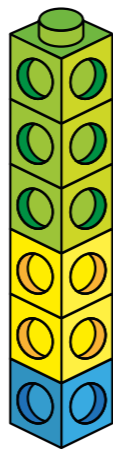**a)** [ ] of the counters are yellow.

b) [ ] of the counters are red.

2 Write fractions to complete the sentences.

a) [ ] of the tower is green.
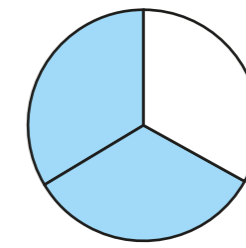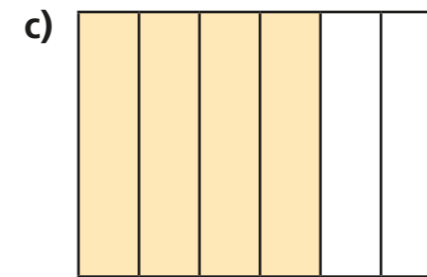
b) [ ] of the tower is yellow.

c) [ ] of the tower is blue.

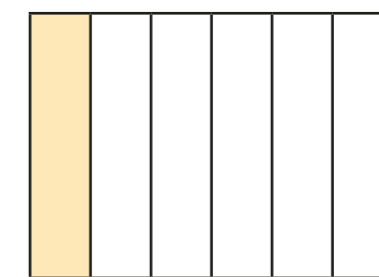**3** What fraction of each shape is shaded?

a) [ ]   [ ]

b) [ ]   [ ]

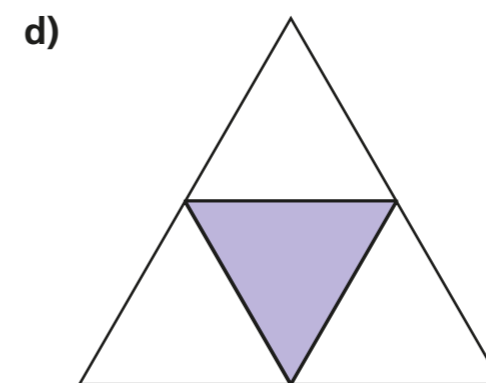**c)** [ ]   [ ]

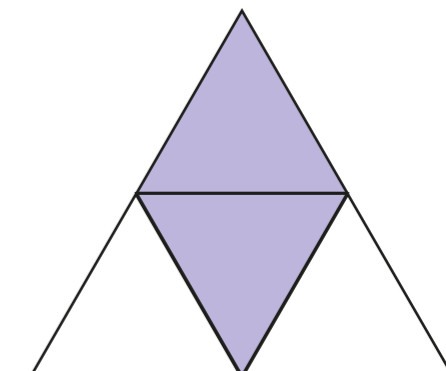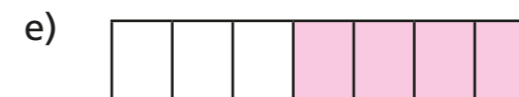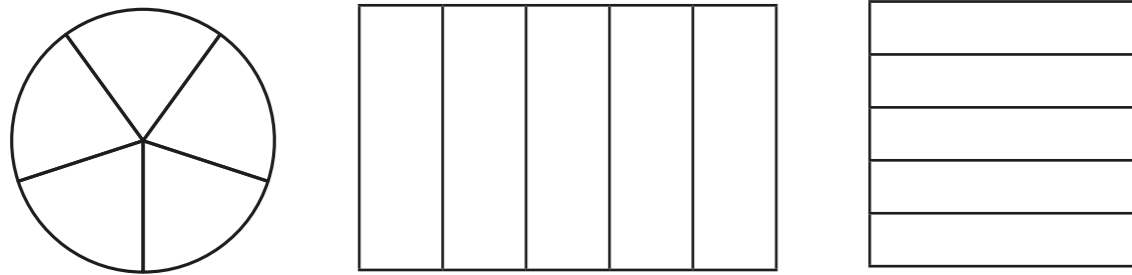**d)** [ ]   [ ]

e) [ ]   [ ]
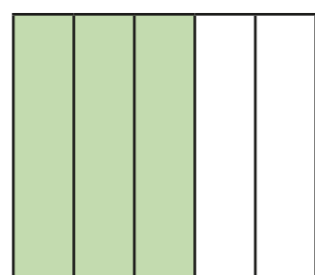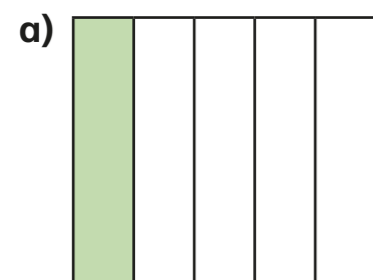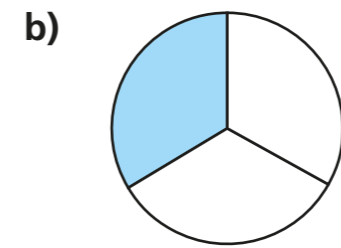
Tick the unit fraction in each pair of shapes.
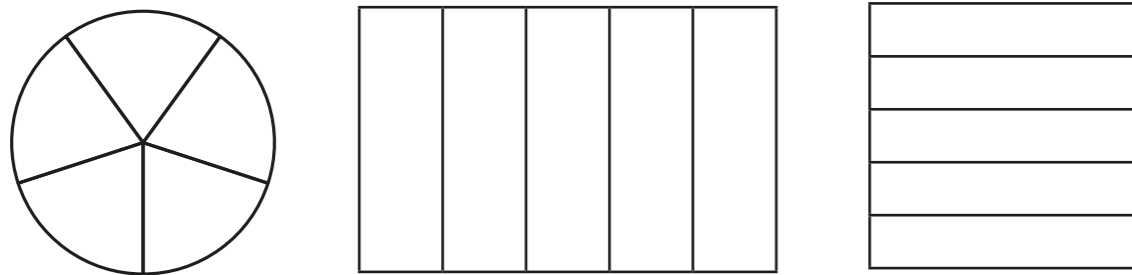
How did you know which was the unit fraction?

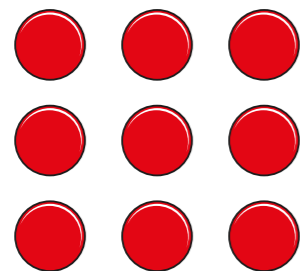**4** **a)** Colour $\frac{1}{5}$ of each shape.

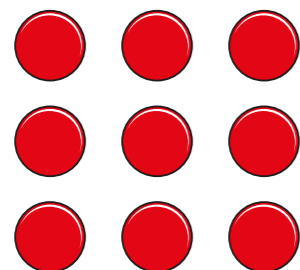**b)** Colour $\frac{3}{5}$ of each shape.

What is the same and what is different about your answers?

5 **a)** Circle $\frac{1}{3}$ of the counters.

b) Circle $\frac{2}{3}$ of the counters.

What is the same and what is different about your answers?

6 Write the fractions in the table.

| $\frac{1}{6}$ | $\frac{2}{3}$ | $\frac{3}{4}$ | $\frac{1}{10}$ | $\frac{1}{8}$ |

| $\frac{3}{5}$ | $\frac{1}{4}$ | $\frac{1}{99}$ | $\frac{6}{1}$ | $\frac{1}{250}$ |

Unit fractions	Non-unit fractions

Write two more examples of your own in each column.

7 **a)** What is a unit fraction? What is a non-unit fraction?

Talk about it with a partner.

b) Complete the sentences.

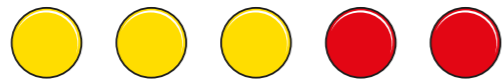An example of a unit fraction is ☐

The numerator is always ☐

An example of a non-unit fraction is ☐

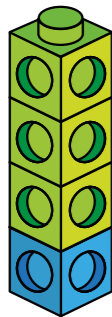The numerator is always greater than ☐

1 Here are some counters.

a) What fraction of the counters are yellow?

b) What fraction of the counters are red?

c) Complete the number sentence.   □ + □ = □

2 Here is a tower of cubes.

a) What fraction of the tower is green?

b) What fraction of the tower is blue?

c) Complete the number sentence.   □ + □ = □

3 What fraction of each shape is shaded?

Which fraction represents a whole?

Fill in the missing fractions.

a)

    □ = one whole

b)
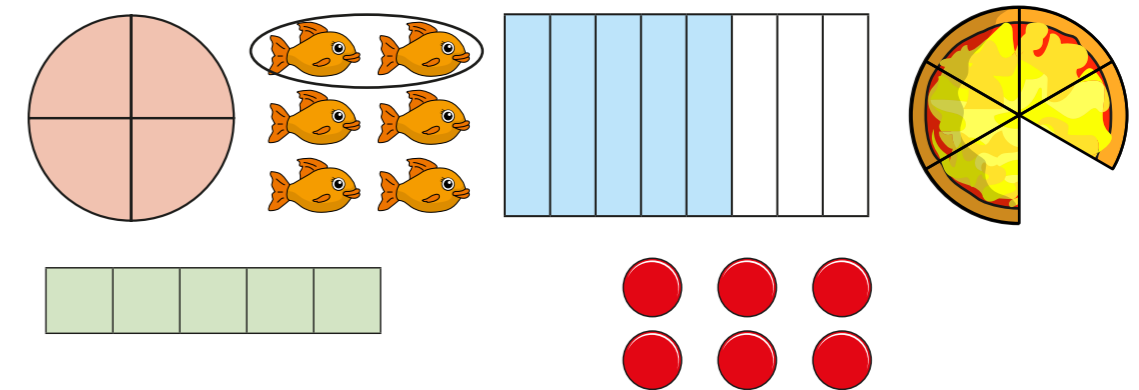
    □ = one whole

4 Here are some pictures.

Use the pictures to help you answer the questions.

a) Write three fractions that are less than one whole.

□ □ □

b) Write three fractions that are equal to one whole.

What do you notice? Talk about it with a partner.

5 Choose a phrase to complete the sentences.

greater than	less than	equal to

When the numerator is _____ the denominator, the fraction is less than one whole.

When the numerator is _____ the denominator, the fraction is equal to one whole.

6 Circle the fractions that are equivalent to one whole

$\frac{3}{5}$ $\frac{4}{4}$ $\frac{6}{10}$ $\frac{2}{2}$

$\frac{10}{10}$ $\frac{8}{9}$ $\frac{3}{3}$ $\frac{5}{5}$

7 Here are $\frac{1}{3}$ of Jack's marbles.

Draw the rest of Jack's marbles in the bar model.

8 $\frac{2}{7}$ of a group of children are girls.

What fraction are boys?

$\boxed{}$ are boys.

9 Each bar model is worth one whole.

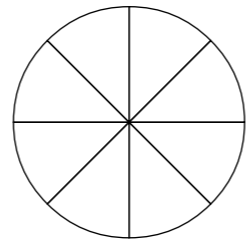Split the bar model and label the missing fractions.

$\frac{1}{4}$	

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

$\frac{7}{10}$	

10 Complete the number sentences.

a) $\frac{3}{5} + \boxed{} = 1$

c) $\boxed{} = \frac{2}{7} + \frac{5}{7}$

b) $\boxed{} + \frac{4}{10} = 1$

d) $\frac{9}{9} = \boxed{} + \frac{5}{9}$

Tenths

1 Tick the pictures that show tenths.
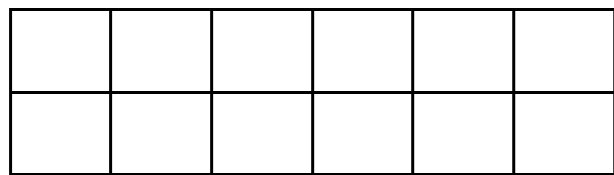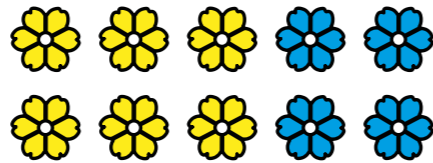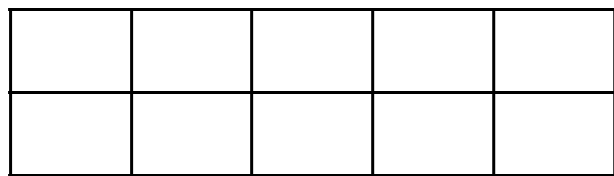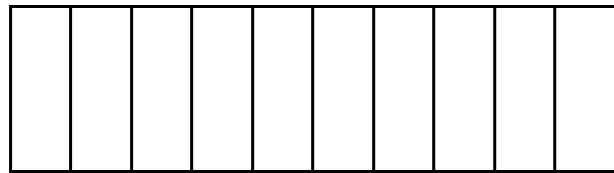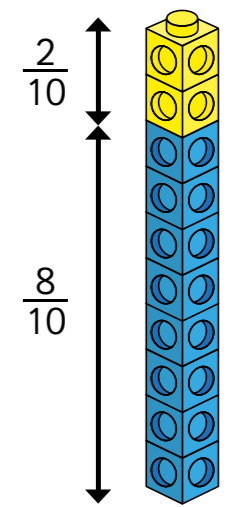
2 Write fractions to complete the sentences.
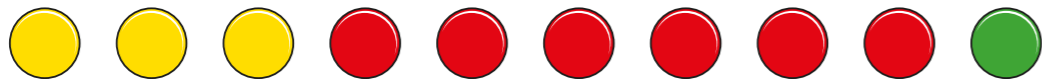
a) ☐ of the counters are yellow.
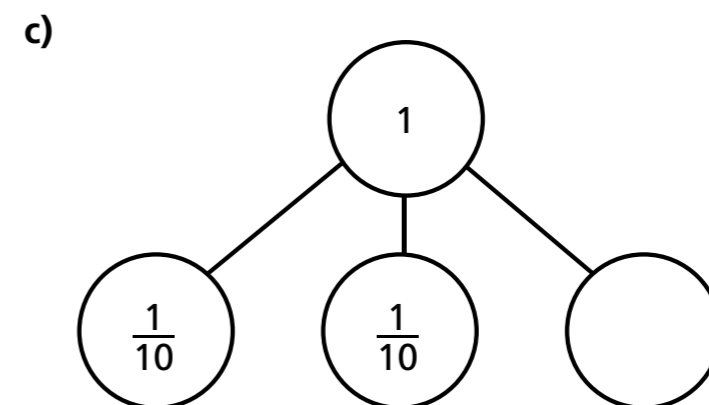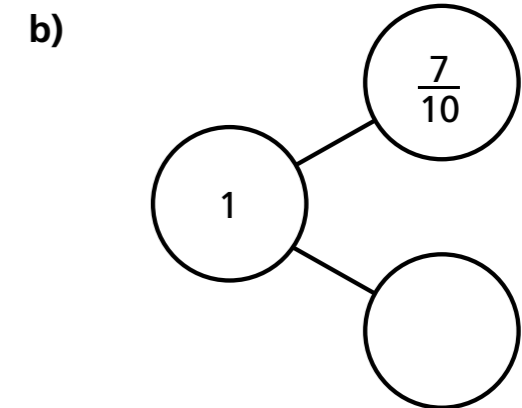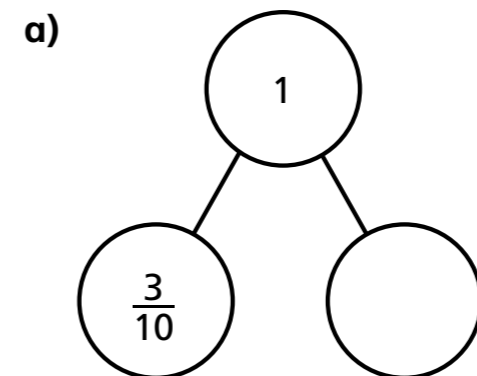
b) ☐ of the counters are red.

c) ☐ of the counters are green.

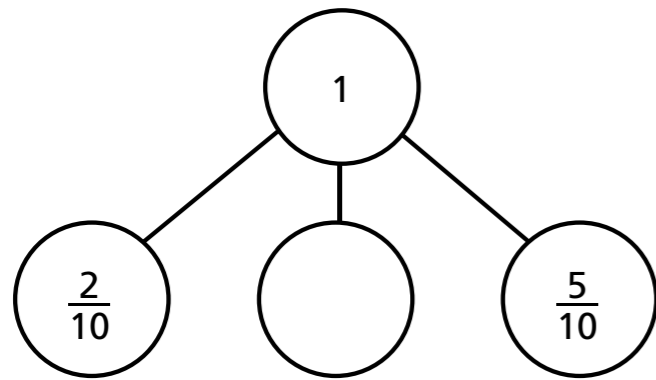**3** Amir has some blue and yellow cubes.

He makes a tower using 10 cubes.

Investigate how many different towers Amir can make with 10 cubes, if every tower has a different fraction of blue and yellow cubes.
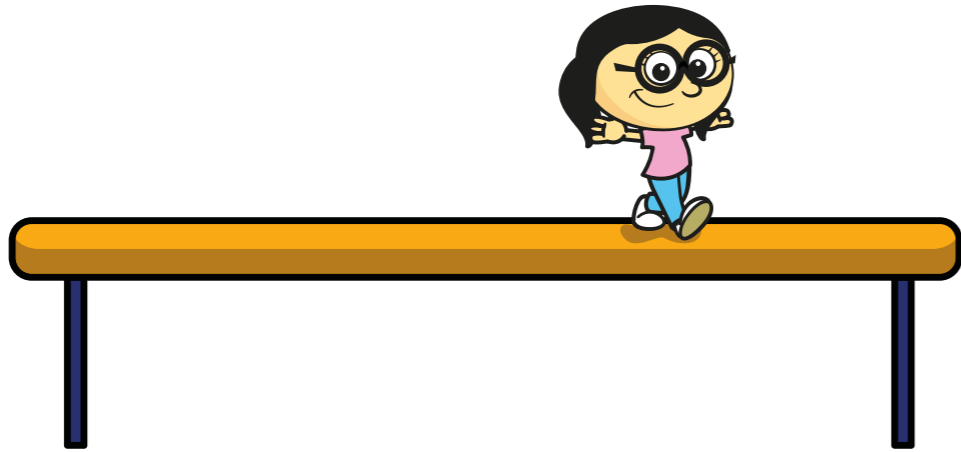
$\frac{2}{10}$

$\frac{8}{10}$

4 Complete the part-whole models.

a)
1
$\frac{3}{10}$

b)
$\frac{7}{10}$
1

c)
1
$\frac{1}{10}$ $\frac{1}{10}$

d)

```
        ( 1 )
       /  |  \
      /   |   \
  (2/10) ( ) (5/10)
```
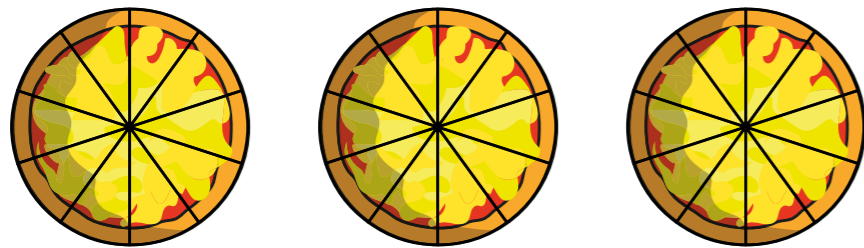
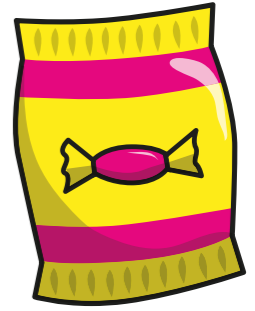**5** Annie has travelled $\frac{7}{10}$ of the way across a balance beam.

How many tenths does she have left to travel?

6 10 boys share 3 pizzas equally.

What fraction of a pizza do they each get?

7 Dani has a bag of sweets.

$\frac{1}{2}$ of the sweets are red.

$\frac{3}{10}$ of the sweets are yellow.

The rest are green.

What fraction of the sweets are green?

8 Mo also has a bag of sweets.

$\frac{4}{10}$ of his sweets are red.

The rest are green or yellow.

What fraction of Mo's sweets could be green?
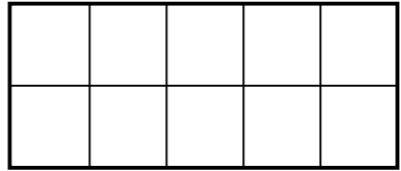
What fraction could be yellow?
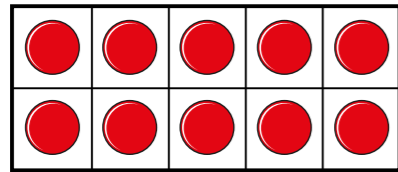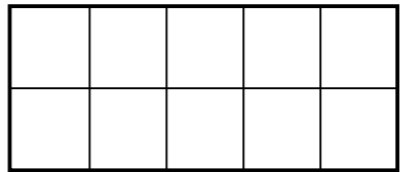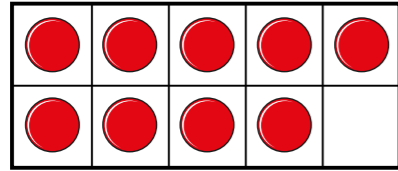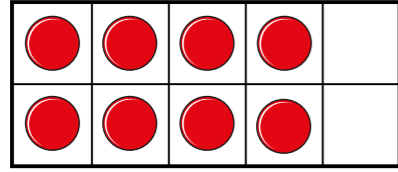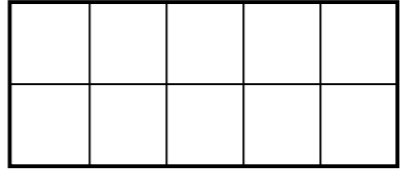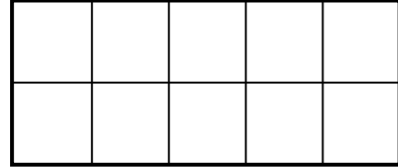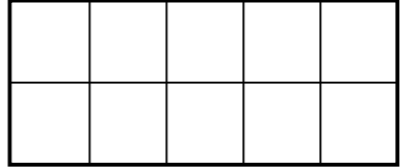
How many possible answers can you find?

_____

_____

_____

Compare answers with a partner.

Count in tenths

1 Continue the sequence.

$\frac{10}{10}$

$\frac{9}{10}$

2 Continue the sequence.

$\frac{1}{10}$

$\frac{2}{10}$
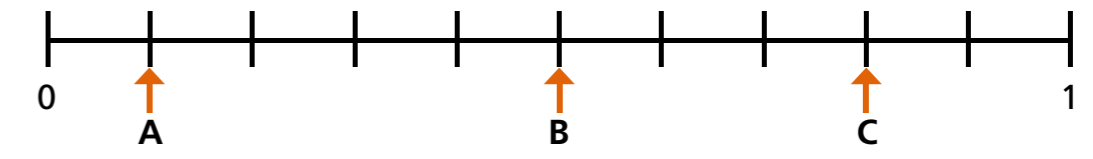
3 Write the missing fractions in each sequence.

a)

| $\frac{1}{10}$ | $\frac{2}{10}$ | | $\frac{4}{10}$ | |

| $\frac{6}{10}$ | $\frac{7}{10}$ | | $\frac{9}{10}$ | $\frac{10}{10}$ |

b)

| $\frac{10}{10}$ | $\frac{9}{10}$ | | $\frac{7}{10}$ | |

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

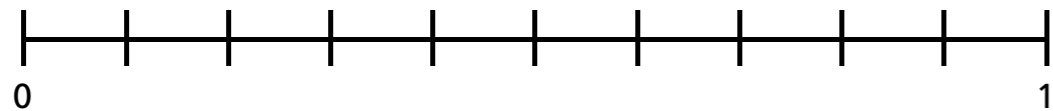**4** What fraction is each arrow pointing to?

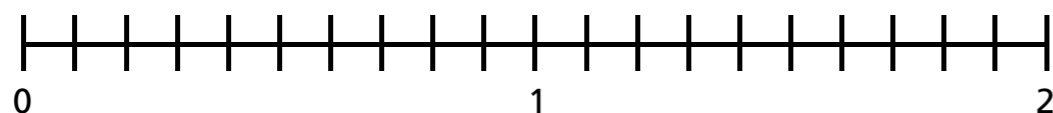0   A   B   C   1

A = ☐   B = ☐   C = ☐

5 Write the fractions in the correct places on the number lines.

a)

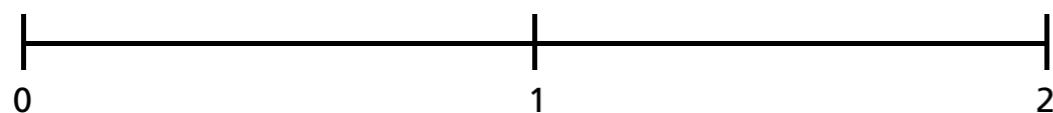$\frac{5}{10}$ $\frac{9}{10}$ $\frac{3}{10}$ $\frac{10}{10}$

0 ———————————————————— 1

b)

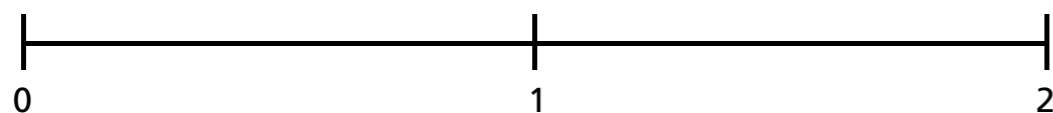$\frac{6}{10}$ $\frac{14}{10}$ $\frac{18}{10}$

0 ————————— 1 ————————— 2

6 Draw and label arrows to estimate the position of the fractions on the number lines.

a)

$\frac{5}{10}$ $\frac{15}{10}$ $\frac{20}{10}$

0 ————————— 1 ————————— 2

b)

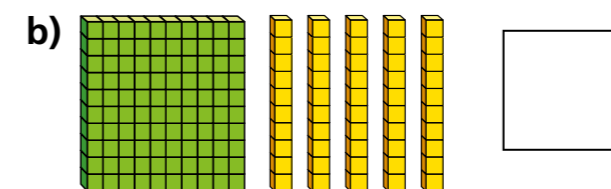$\frac{3}{10}$ $\frac{11}{10}$ $\frac{19}{10}$

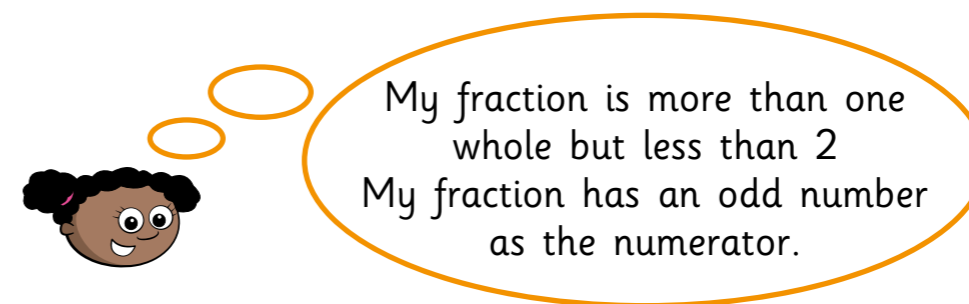0 ————————— 1 ————————— 2

7
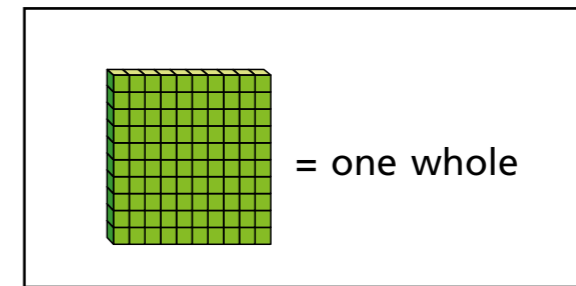
= one whole

What number is represented in each picture?

a) □

c) □

b) □
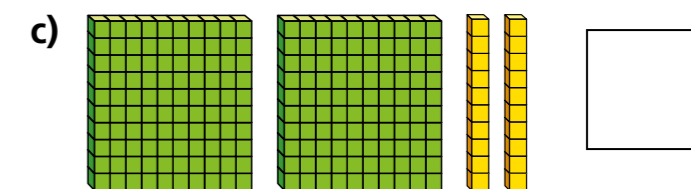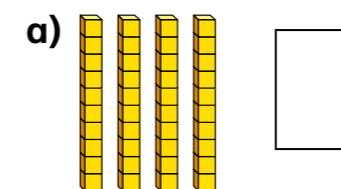
8 Whitney is thinking of a fraction.

> My fraction is more than one whole but less than 2
> My fraction has an odd number as the numerator.

What could Whitney's fraction be?

List all the possible fractions.

Compare answers with a partner.

White Rose Maths