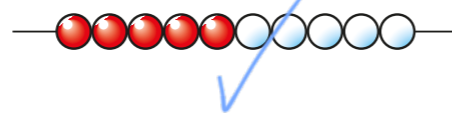
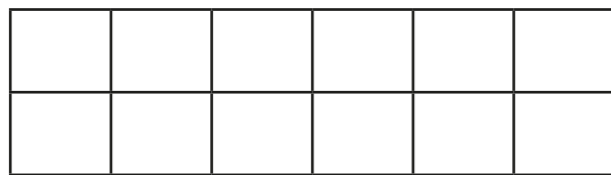
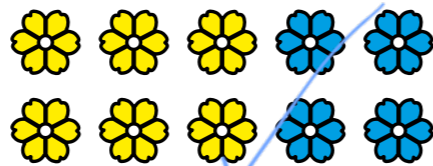
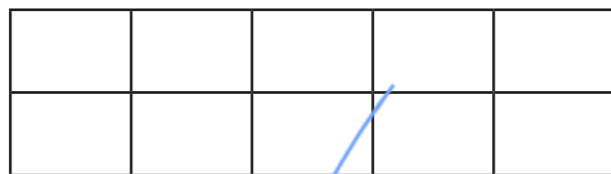
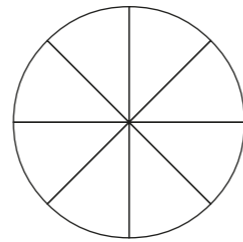


Tenths

1 Tick the pictures that show tenths.



2 Write fractions to complete the sentences.

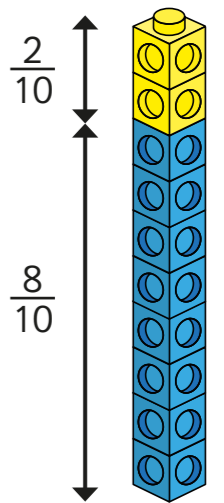


a) $\frac{3}{10}$ of the counters are yellow.

b) $\frac{6}{10}$ of the counters are red.

c) $\frac{1}{10}$ of the counters are green.

3 Amir has some blue and yellow cubes.
He makes a tower using 10 cubes.

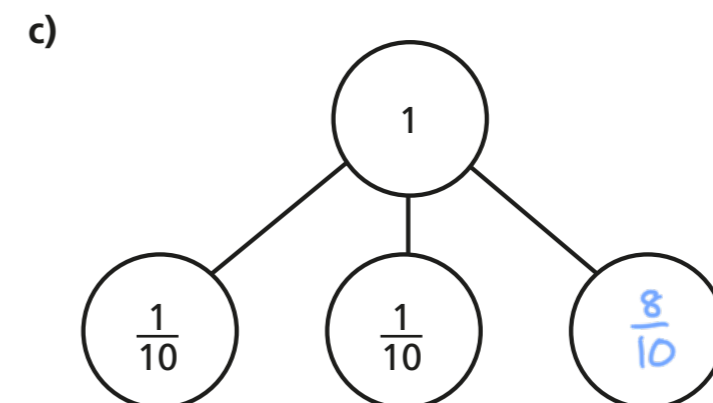
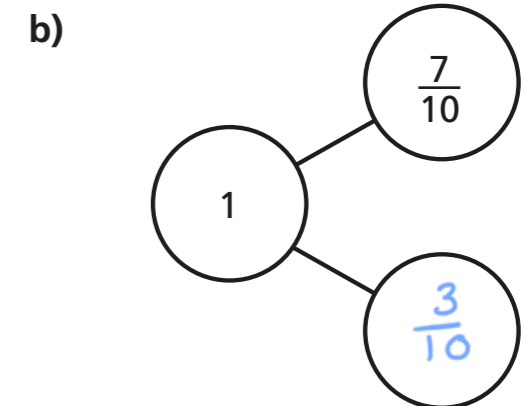
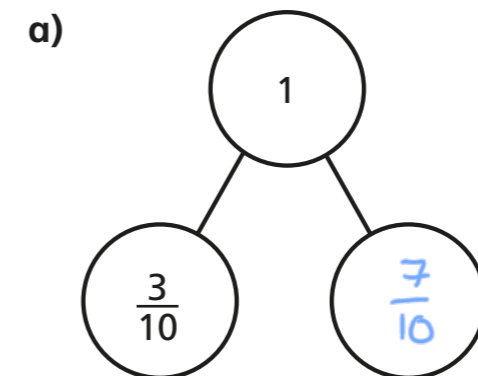


Investigate how many different towers Amir can make with 10 cubes, if every tower has a different fraction of blue and yellow cubes.

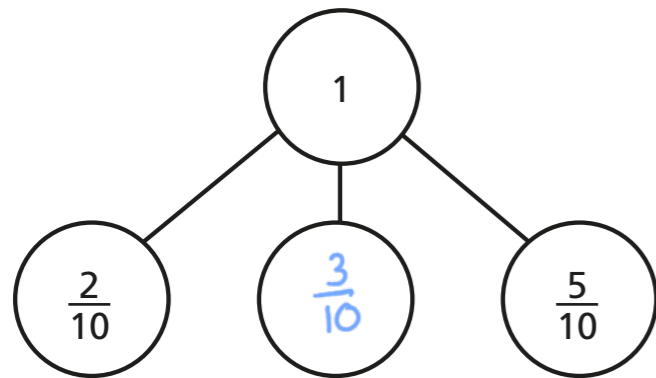
Possible answers:

Yellow $\frac{0}{10}$ $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$ $\frac{5}{10}$ $\frac{6}{10}$ $\frac{7}{10}$ $\frac{8}{10}$ $\frac{9}{10}$ $\frac{10}{10}$
Blue $\frac{10}{10}$ $\frac{9}{10}$ $\frac{8}{10}$ $\frac{7}{10}$ $\frac{6}{10}$ $\frac{5}{10}$ $\frac{4}{10}$ $\frac{3}{10}$ $\frac{2}{10}$ $\frac{1}{10}$ $\frac{0}{10}$

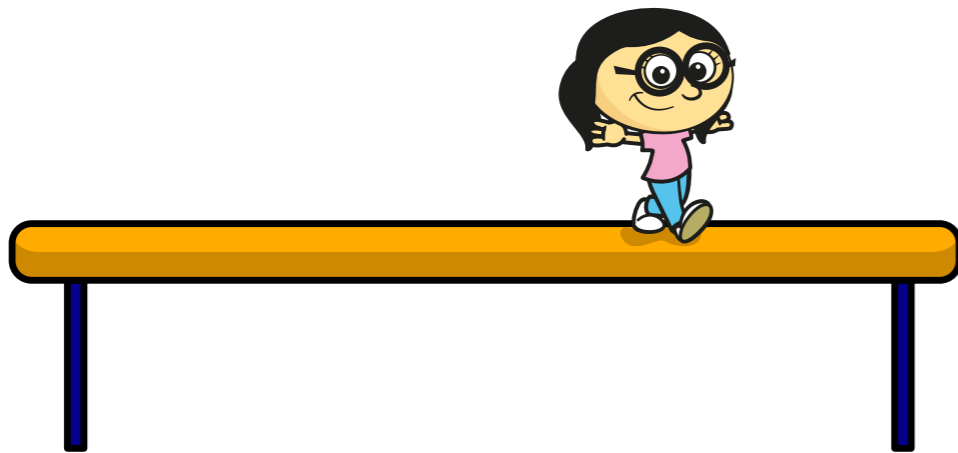
4 Complete the part-whole models.



d)



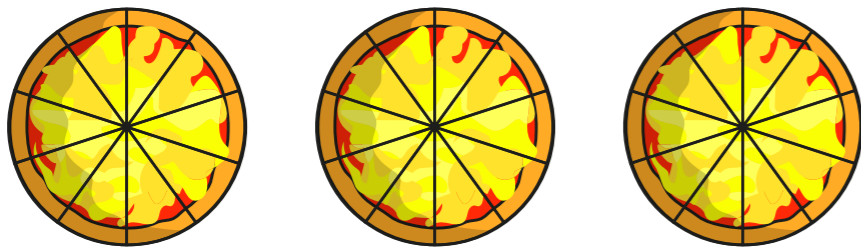
- 5 Annie has travelled $\frac{7}{10}$ of the way across a balance beam.



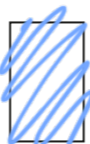
How many tenths does she have left to travel?

$\frac{3}{10}$

- 6 10 boys share 3 pizzas equally.



What fraction of a pizza do they each get?



$\frac{3}{10}$

- 7 Dani has a bag of sweets.

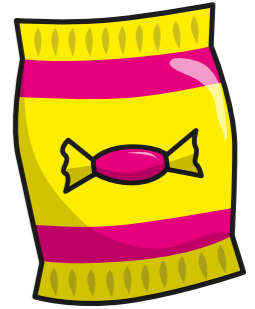
$\frac{1}{2}$ of the sweets are red.

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

The rest are green.

What fraction of the sweets are green?

$\frac{2}{10}$



- 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?

e.g.

$\frac{1}{10}$

What fraction could be yellow?

$\frac{5}{10}$

How many possible answers can you find?

Possible answers:

Green $\frac{0}{10}$ $\frac{1}{10}$ $\frac{2}{10}$ $\frac{3}{10}$ $\frac{4}{10}$ $\frac{5}{10}$ $\frac{6}{10}$

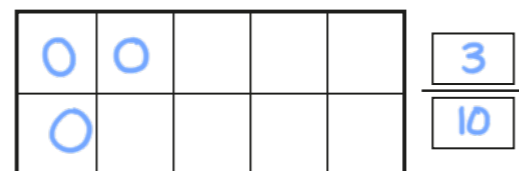
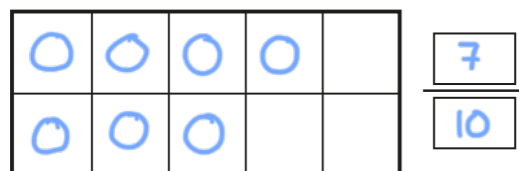
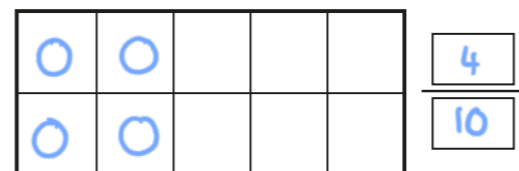
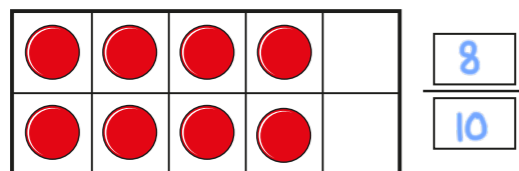
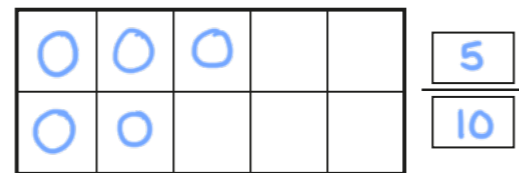
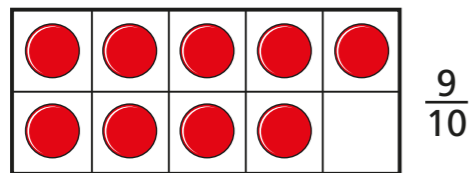
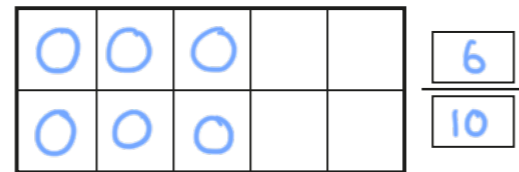
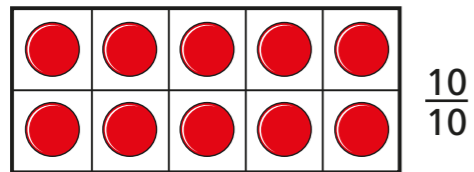
Yellow $\frac{6}{10}$ $\frac{5}{10}$ $\frac{4}{10}$ $\frac{3}{10}$ $\frac{2}{10}$ $\frac{1}{10}$ $\frac{0}{10}$

Compare answers with a partner.

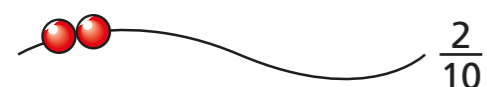
Count in tenths



1 Continue the sequence.

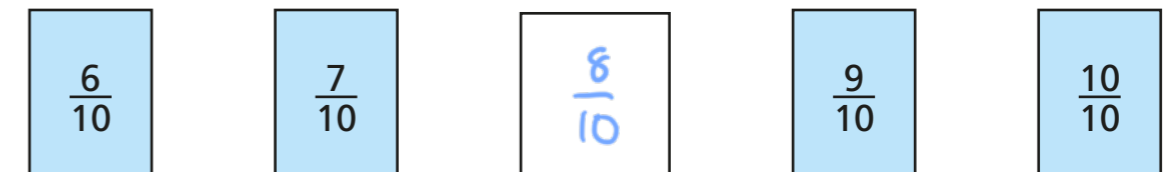
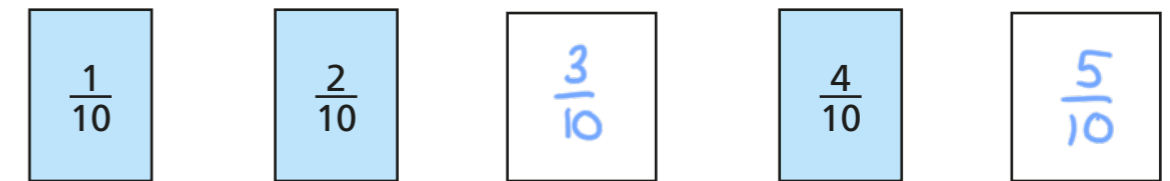


2 Continue the sequence.

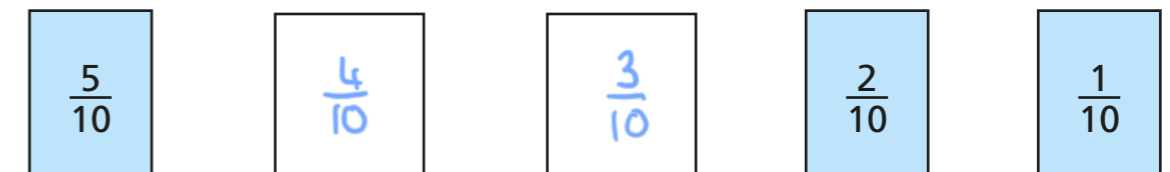
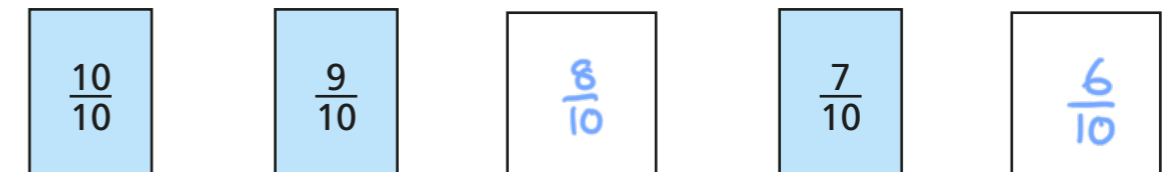


3 Write the missing fractions in each sequence.

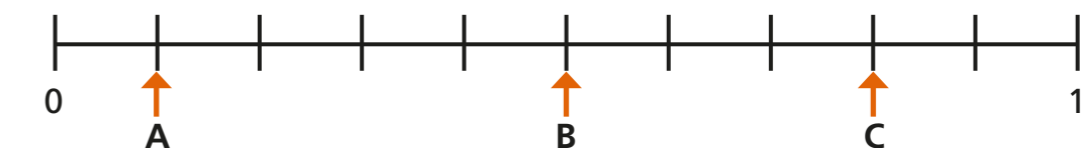
a)



b)

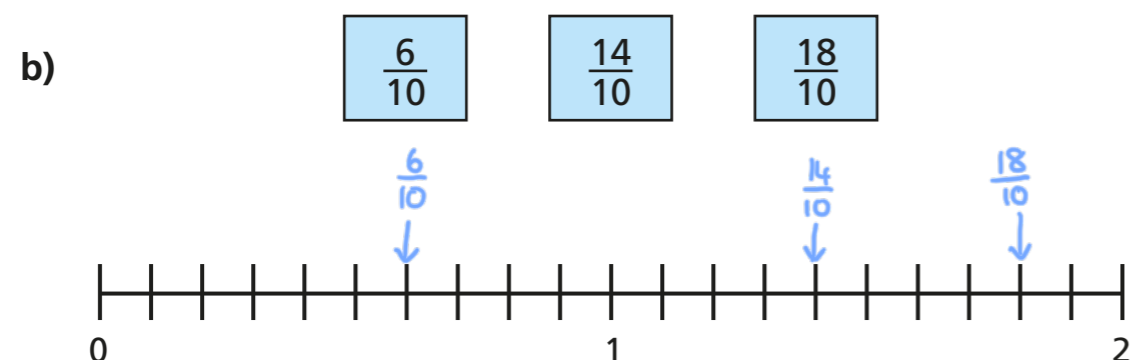
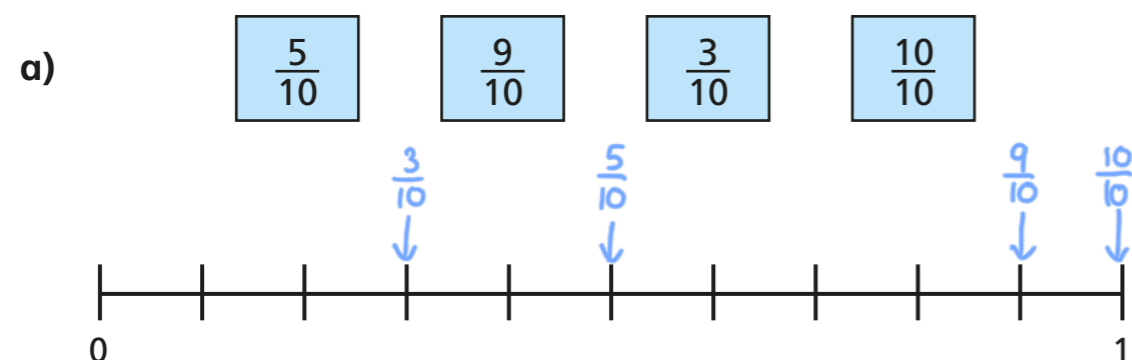


4 What fraction is each arrow pointing to?

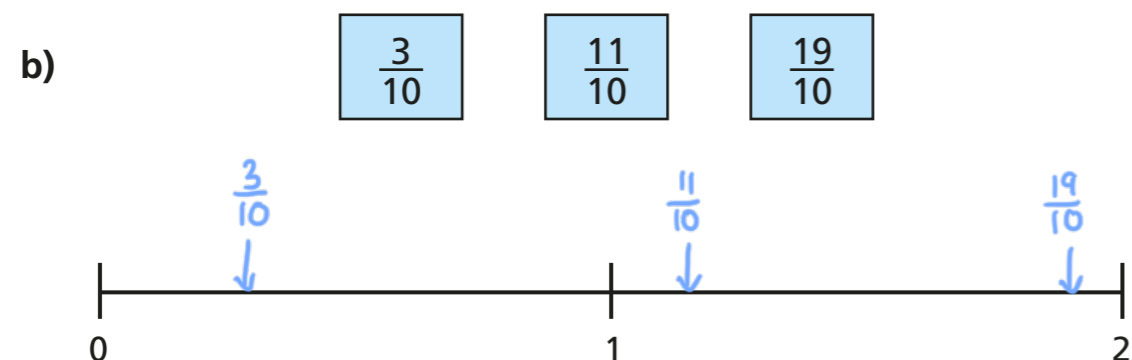
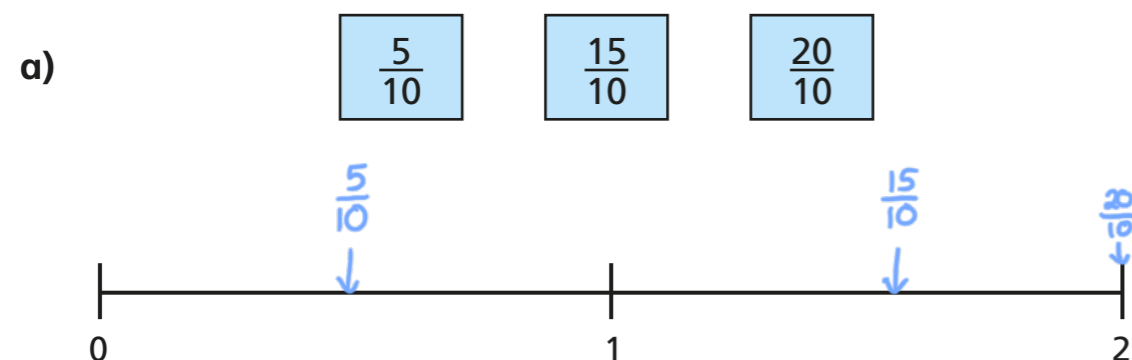


A = $\frac{1}{10}$ B = $\frac{5}{10}$ C = $\frac{8}{10}$

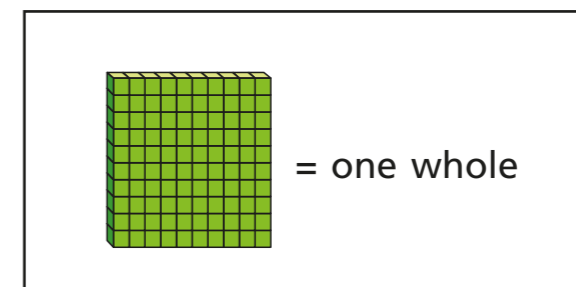
5 Write the fractions in the correct places on the number lines.



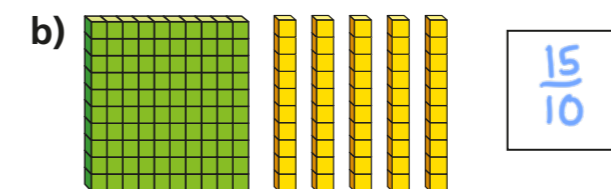
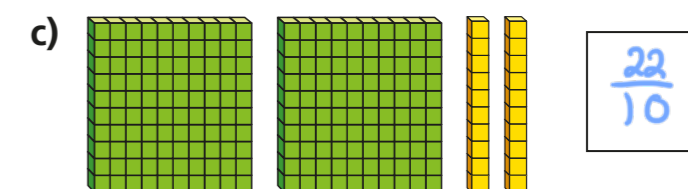
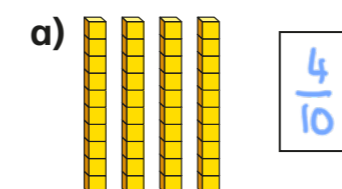
6 Draw and label arrows to estimate the position of the fractions on the number lines.



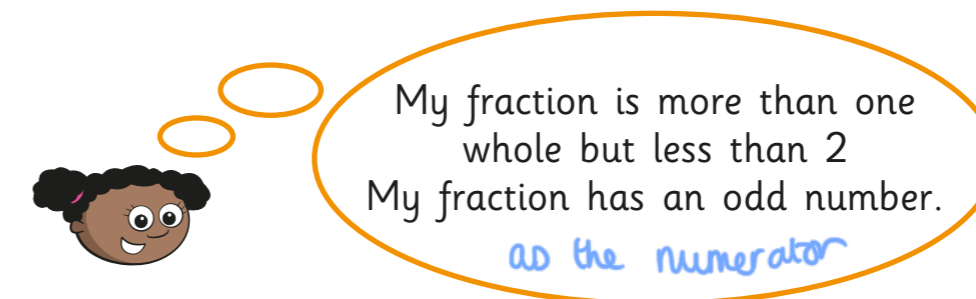
7



What number is represented in each picture?



8 Whitney is thinking of a fraction.



What could Whitney's fraction be?


List all the possible fractions.


Compare answers with a partner.


Add fractions

1 Complete the additions.

Use the bar models to help you.

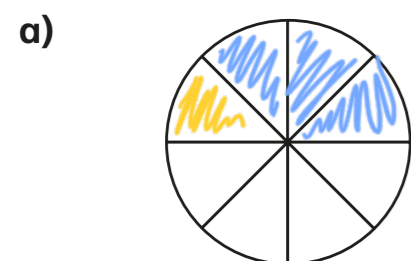
a)  $\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$

b)  $\frac{1}{5} + \frac{1}{5} = \frac{2}{5}$

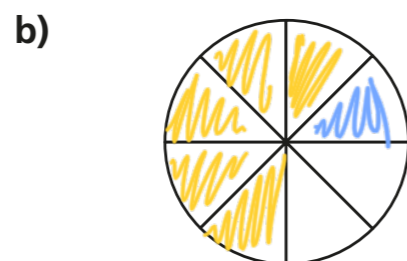
c)  $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

d)  $\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$

2 Shade the circles and complete the additions.



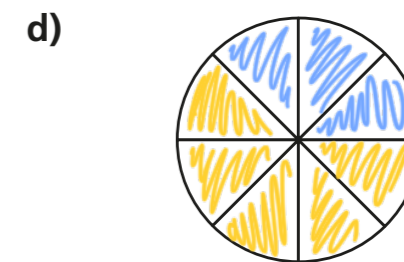
$$\frac{1}{8} + \frac{3}{8} = \frac{4}{8}$$



$$\frac{5}{8} + \frac{1}{8} = \frac{6}{8}$$

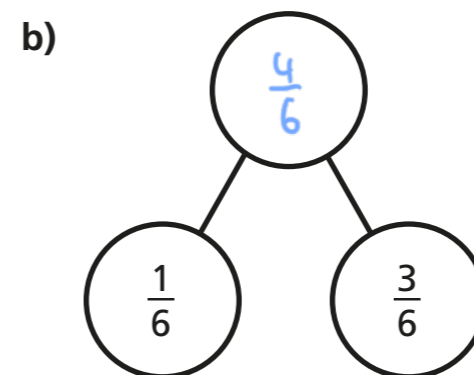
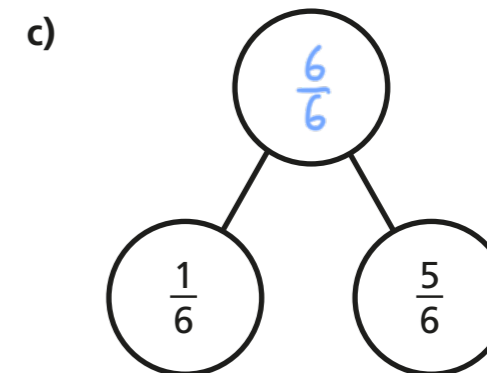
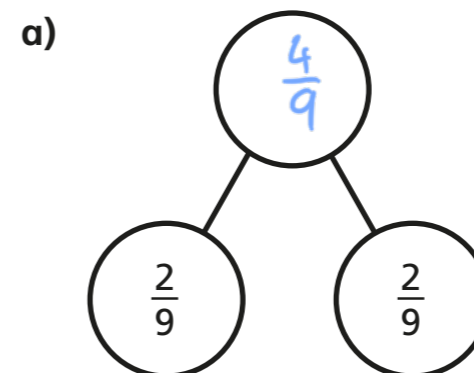


$$\frac{3}{8} + \frac{3}{8} = \frac{6}{8}$$



$$\frac{5}{8} + \frac{3}{8} = \frac{8}{8}$$

3 Complete the part-whole models.



Which part-whole model is the odd one out? various

Talk about your choice with a partner. Did they choose the same odd one out?

- 4 Alex and Huan are eating a cake.

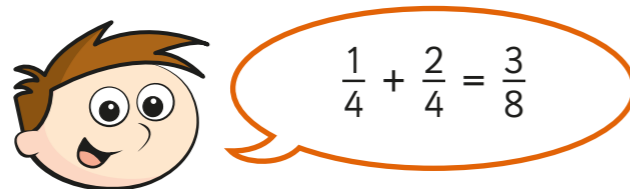
Alex eats $\frac{4}{7}$ of the cake.

Huan eats $\frac{2}{7}$ of the cake.

What fraction of the cake have they eaten altogether?

They have eaten $\frac{6}{7}$ of the cake altogether.

- 5 Teddy is adding fractions.



- a) Draw a bar model to show that Teddy is wrong.



$$\frac{1}{4} + \frac{2}{4} = \frac{3}{4} \quad \text{not} \quad \frac{3}{8}$$

- b) Complete the addition $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$

- 6 Annie has baked 12 muffins.



She puts them into 2 boxes.

What fraction of the muffins could she put in each box?

Complete the table to show four possibilities.

One has been done for you.

Box 1	Box 2
$\frac{1}{12}$	$\frac{11}{12}$
$\frac{2}{12}$	$\frac{10}{12}$
$\frac{3}{12}$	$\frac{9}{12}$
$\frac{4}{12}$	$\frac{8}{12}$
$\frac{5}{12}$	$\frac{7}{12}$
$\frac{6}{12}$	$\frac{6}{12}$

Are there any other possibilities? Talk about it with a partner.

- 7 Complete the additions.

a) $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$

d) $\frac{3}{103} + \frac{4}{103} = \frac{7}{103}$

b) $\frac{3}{9} + \frac{4}{9} = \frac{7}{9}$

e) $\frac{5}{31} + \frac{9}{31} = \frac{14}{31}$

c) $\frac{3}{29} + \frac{4}{29} = \frac{7}{29}$

f) $\frac{17}{111} + \frac{33}{111} = \frac{50}{111}$

Add 2 or more fractions



1 Complete the additions.

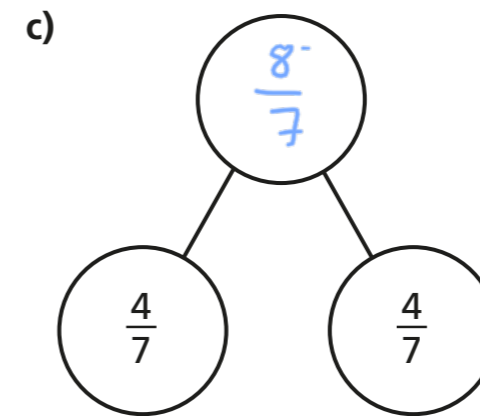
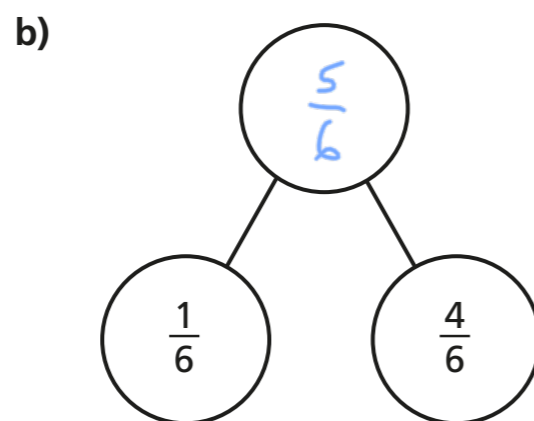
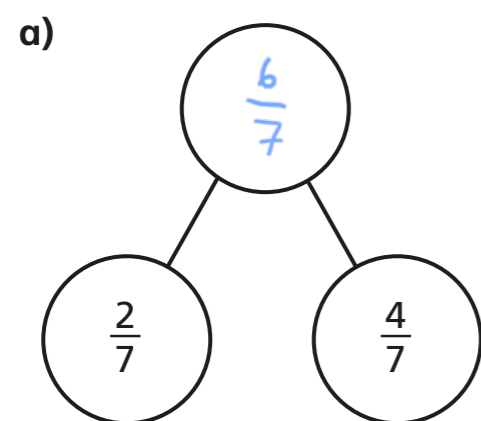
a)  $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

b)  $\frac{1}{5} + \frac{3}{5} = \frac{4}{5}$

c)  $\frac{3}{8} + \frac{3}{8} = \frac{6}{8}$

d)  $\frac{3}{8} + \frac{1}{8} = \frac{4}{8}$

2 Complete the part-whole models.



d) Which part-whole model is the odd one out?

Explain your choice to a partner.

Did you both have the same answer?

3 Complete the additions.

a) $\frac{3}{7} + \frac{3}{7} = \frac{6}{7}$

e) $\frac{8}{11} + \frac{6}{11} = \frac{14}{11} = 1\frac{3}{11}$

b) $\frac{3}{7} + \frac{4}{7} = \frac{7}{7} = 1$

f) $\frac{4}{11} + \frac{4}{11} + \frac{6}{11} = \frac{14}{11} = 1\frac{3}{11}$

c) $\frac{4}{5} + \frac{3}{5} = \frac{7}{5} = 1\frac{2}{5}$

g) $\frac{3}{11} + \frac{3}{11} + \frac{8}{11} = \frac{14}{11} = 1\frac{3}{11}$

d) $\frac{8}{5} + \frac{6}{5} = \frac{14}{5} = 2\frac{4}{5}$

h) $\frac{3}{7} + \frac{3}{7} + \frac{8}{7} = \frac{14}{7} = 2$

4

$$\frac{\square}{4} + \frac{\square}{4} = \frac{9}{4}$$

What could the missing numerators be?

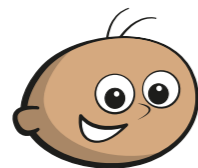
Give four different possibilities.

e.g. $\frac{1}{4} + \frac{8}{4} = \frac{9}{4}$ $\frac{3}{4} + \frac{6}{4} = \frac{9}{4}$

$$\frac{2}{4} + \frac{7}{4} = \frac{9}{4} \quad \frac{4}{4} + \frac{5}{4} = \frac{9}{4}$$

5

Tommy is adding fractions.



$$\frac{3}{4} + \frac{3}{4} = \frac{6}{8}$$

Explain why Tommy is incorrect.



He has added the denominators when he shouldn't have. Each whole is still split into quarters so

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

6

Complete the number sentences.

a) $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$

e) $\frac{4}{9} + \frac{9}{9} = \frac{13}{9} = 1\frac{4}{9}$

b) $\frac{3}{8} + \frac{5}{8} = 1$

f) $\frac{4}{9} + \frac{12}{9} = \frac{16}{9} = 1\frac{7}{9}$

c) $\frac{3}{16} + \frac{13}{16} = 1$

g) $\frac{5}{7} + \frac{4}{7} + \frac{5}{7} = 2$

d) $\frac{4}{9} + \frac{7}{9} = \frac{11}{9} = 1\frac{2}{9}$

h) $\frac{5}{7} + \frac{11}{7} + \frac{5}{7} = 3$

7

Rosie, Whitney and Teddy have each been for a walk.

Rosie walked $\frac{5}{8}$ km.

Whitney walked $\frac{7}{8}$ km.

Teddy walked $\frac{3}{8}$ km.

a) How far did they walk altogether?

$$1\frac{7}{8} \text{ km}$$

b) Jack also went for a walk.

Altogether the four children walked 3 km.

How far did Jack walk?

$$1\frac{1}{8} \text{ km}$$

