


Add 2 or more fractions



1 Complete the additions.

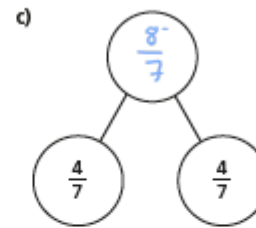
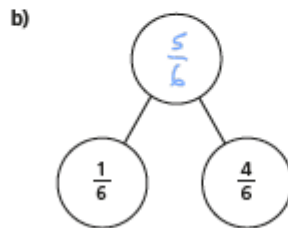
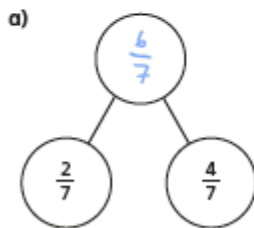
a)   $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

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?

$1\frac{5}{8}$  km

b) Jack also went for a walk.

Altogether the four children walked 3 km.

How far did Jack walk?

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



## Subtract 2 fractions

1 Complete the subtractions.



$$\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$$



$$\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$$



$$\frac{5}{7} - \frac{3}{7} = \frac{2}{7}$$



$$\frac{7}{9} - \frac{4}{9} = \frac{3}{9}$$



2 Complete the calculations.

a)  $\frac{7}{10} - \frac{3}{10} = \frac{4}{10}$

e)  $\frac{9}{11} - \frac{3}{11} = \frac{6}{11}$

b)  $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$

f)  $\frac{6}{7} - \frac{4}{7} = \frac{2}{7}$

c)  $\frac{6}{6} - \frac{6}{6} = 0$

g)  $\frac{8}{93} - \frac{2}{93} = \frac{6}{93}$

d)  $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$

h)  $\frac{10}{991} - \frac{3}{991} = \frac{7}{991}$

3 Complete the subtractions

a)  $\frac{9}{5} - \frac{6}{5} = \frac{3}{5}$

e)  $\frac{8}{3} - \frac{4}{3} = \frac{4}{3} = 1\frac{1}{3}$

b)  $\frac{9}{5} - \frac{5}{5} = \frac{4}{5}$

f)  $\frac{11}{3} - \frac{4}{3} = \frac{7}{3} = 2\frac{1}{3}$

c)  $\frac{9}{5} - \frac{4}{5} = \frac{5}{5} = 1$

g)  $\frac{14}{3} - \frac{4}{3} = \frac{10}{3} = 3\frac{1}{3}$

d)  $\frac{9}{2} - \frac{4}{2} = \frac{5}{2} = 2\frac{1}{2}$

h)  $\frac{15}{3} - \frac{5}{3} = \frac{10}{3} = 3\frac{1}{3}$

- 4 Jack has  $2\frac{1}{4}$  kg of potatoes.

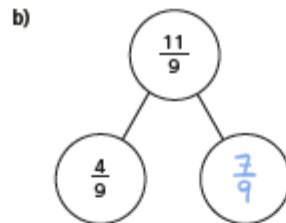
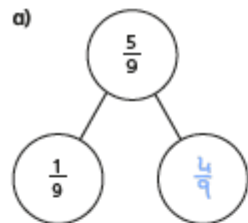
He uses  $\frac{5}{4}$  kg of potatoes.

How many kilograms does he have left?

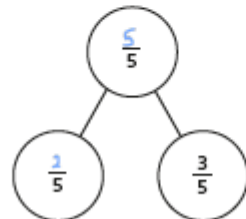
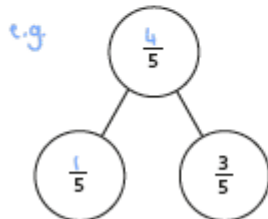


Jack has  kg left.

- 5 Complete the part-whole models.



- 6 Complete the part-whole model in two different ways.



- 7 Fill in the missing numerators.

a)  $\frac{10}{11} - \frac{\boxed{3}}{11} = \frac{7}{11}$

d)  $\frac{15}{4} - \frac{\boxed{7}}{4} = 2$

b)  $\frac{10}{11} - \frac{\boxed{7}}{11} = \frac{7}{11} - \frac{4}{11}$

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

c)  $\frac{10}{11} - \frac{4}{11} = \frac{\boxed{13}}{11} - \frac{7}{11}$

f)  $\frac{11}{4} - \frac{3}{4} = \frac{11}{3} - \frac{\boxed{5}}{3}$

- 8 Alex and Annie are taking turns playing a computer game.

Annie plays for a total of  $2\frac{1}{4}$  hours.

Annie plays for  $\frac{3}{4}$  of an hour more than Alex.

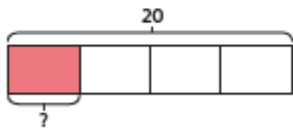
How much time do they spend in total playing on the game?

hours

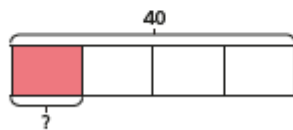
# Fractions of a quantity

1 Complete the number sentences.

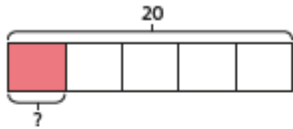
a)  $\frac{1}{4}$  of 20 =



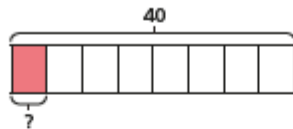
d)  $\frac{1}{4}$  of 40 =



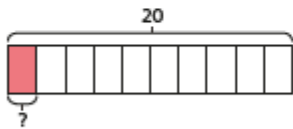
b)  $\frac{1}{5}$  of 20 =



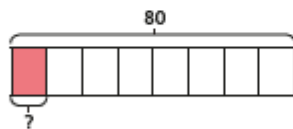
e)  $\frac{1}{8}$  of 40 =



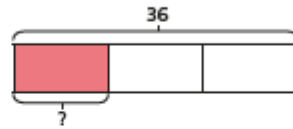
c)  $\frac{1}{10}$  of 20 =



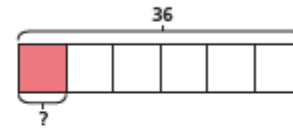
f)  $\frac{1}{8}$  of 80 =



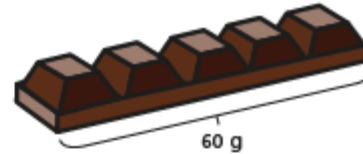
g)  $\frac{1}{3}$  of 36 =



h)  $\frac{1}{6}$  of 36 =



2 Filip has a chocolate bar with 5 equal pieces. The chocolate bar weighs 60 g.



a) What is the mass of one piece?

The mass of one piece is  g.

b) Filip eats  $\frac{3}{5}$  of the bar of chocolate. How many grams does Filip eat?

Filip eats  g of chocolate.



3 Complete the number sentences.

a)  $\frac{1}{4}$  of 24 =

c)  $\frac{1}{8}$  of 32 =

$\frac{3}{4}$  of 24 =

$\frac{5}{8}$  of 32 =

b)  $\frac{1}{7}$  of 35 =

d)  $\frac{5}{8}$  of 64 =

$\frac{3}{7}$  of 35 =

$\frac{7}{8}$  of 64 =

$\frac{5}{7}$  of 35 =

$\frac{10}{8}$  of 64 =

4 Match the calculations to the answers.

$\frac{2}{3}$ of 18	<input type="text" value="18"/>
$\frac{5}{6}$ of 18	<input type="text" value="15"/>
$\frac{9}{10}$ of 20	<input type="text" value="16"/>
$\frac{4}{5}$ of 20	<input type="text" value="12"/>



5 a) Write each calculation in the correct circle.

$\frac{1}{2}$  of 16     $\frac{1}{4}$  of 24     $\frac{2}{3}$  of 9     $\frac{3}{2}$  of 4     $\frac{1}{6}$  of 48

$\frac{1}{4}$  of 24  
 $\frac{2}{3}$  of 9  
 $\frac{3}{2}$  of 4

$\frac{1}{2}$  of 16  
 $\frac{1}{6}$  of 48

b) Write one more calculation in each circle.

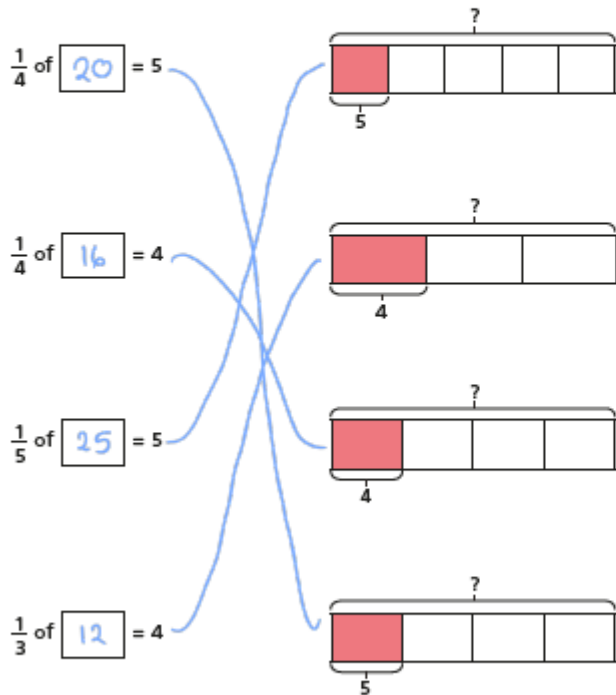
6 Write <, > or = to compare the calculations.

- a)  $\frac{2}{7}$  of 21   $\frac{2}{3}$  of 21
- b)  $\frac{3}{5}$  of 40   $\frac{2}{3}$  of 36
- c)  $\frac{6}{8}$  of 40   $\frac{3}{4}$  of 40
- d)  $\frac{6}{10}$  of 50   $\frac{3}{10}$  of 100

## Calculate quantities

1 Match the calculations to the bar models.

Work out the missing quantities.



2 Complete the sentences.

a) When one fifth is 1, the whole is  $5$

When one fifth is 10, the whole is  $50$

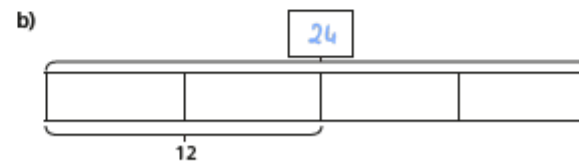
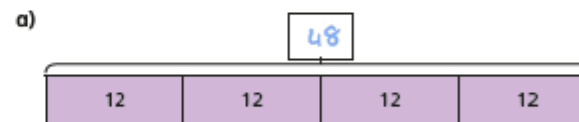
When one fifth is 20, the whole is  $100$

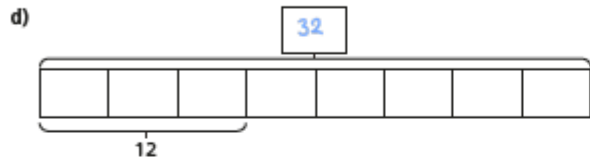
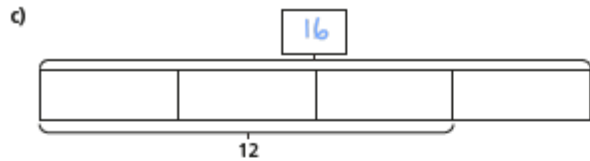
b) When  $\frac{1}{7}$  is 2, the whole is  $14$

When  $\frac{1}{7}$  is 4, the whole is  $28$

When  $\frac{1}{7}$  is 8, the whole is  $56$

3 Complete the bar models and fill in the whole.





4 Complete the calculations.

a)  $\frac{1}{2}$  of  = 30

e)  $\frac{3}{7}$  of  = 15

b)  $\frac{1}{2}$  of  = 15

f)  $\frac{5}{7}$  of  = 15

c)  $\frac{1}{4}$  of  = 15

g)  $\frac{5}{7}$  of  = 35

d)  $\frac{3}{4}$  of  = 15

h)  $\frac{7}{5}$  of  = 35

5 Dora and Mo have a full bottle of juice.

Dora drinks  $\frac{2}{5}$  of the juice.

Mo drinks  $\frac{1}{5}$  of the juice.

There is 150 ml of juice left in the bottle.

How much juice was in the full bottle?

ml

6 Rosie and Ron are collecting red and blue counters.

They have the same number of blue counters.

They have a different number of red counters.



Rosie

I have 18 counters altogether.  $\frac{2}{3}$  are blue.

$\frac{3}{4}$  of my counters are blue.



Ron

a) How many counters does Ron have altogether?

b) How many red counters do they each have?

Rosie has  red counters.

Ron has  red counters.