

# UNIT 12 Understand fractions and decimals as the result of division

## Key point

When a number is divided by another, the answer can be written as a fraction.

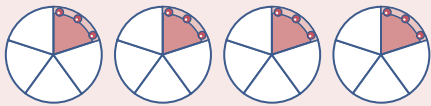
3 cakes are shared equally between 8 people. Each cake can be split into eighths.

Each person can have  $\frac{1}{8}$  of each cake, so each person has  $\frac{3}{8}$  altogether.



$$3 \div 8 = \frac{3}{8}$$

Notice the numerator and denominator.



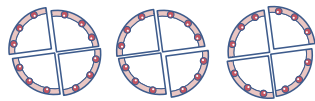
$$4 \div 5 = \frac{4}{5}$$

The number being divided becomes the numerator and the number being divided by becomes the denominator.

If dividing by 10, the answer can also be written as a decimal.  $3 \div 10 = \frac{3}{10} = 0.3$

## Get started

- 1 These three cakes are shared equally between four children.



How much does each child get? \_\_\_\_\_

- 2 Write the answer to  $1 \div 2$  as a fraction. \_\_\_\_\_

- 3 Divide 3 by 7 and give your answer as a fraction. \_\_\_\_\_

4  $4 \div 5 = \frac{4}{\quad}$

- 5 A whole number is divided by 6 to give the answer  $\frac{5}{6}$ .  
What is the whole number? \_\_\_\_\_

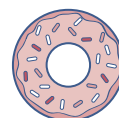
- 6 True or false?  $7 \div 10 = \frac{7}{10} = 0.7$   
True  False

- 7 Write the answer to 8 divided by 10 as a decimal. \_\_\_\_\_

- 8 A whole number divided by 10 gives the answer 0.4.  
What is the whole number? \_\_\_\_\_

## Now try these

- 9 Five doughnuts are equally shared between eight people.  
What fraction of a doughnut does each person get? \_\_\_\_\_



- 10 Two litres of juice is poured equally into nine empty cups.  
What fraction of a litre is in each cup? \_\_\_\_\_ l

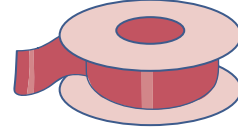
- 11 Mark the answer to  $7 \div 8$  on this line.



**12** Give the answer to  $9 \div 10$  as a fraction and as a decimal. \_\_\_\_\_ and \_\_\_\_\_

**13** Six TV adverts are all the same length of time. If they take 5 minutes in total to show on TV, what fraction of a minute is each advert? \_\_\_\_\_ min

**14** A 2m roll of ribbon is cut into 10 equal lengths. Write, as a decimal, the length of each. \_\_\_\_\_ m



**15** True or false?  $5 \div 10$  and  $1 \div 2$  have the same answer when written as a decimal.

True  False

**16** Fill in the missing numbers.  $6 \div 8 = \frac{\square}{\square} = \frac{\square}{4}$

## Challenge

**17** Peter says that £6 divided by 10 is £0.60. Is he correct?

Yes  No

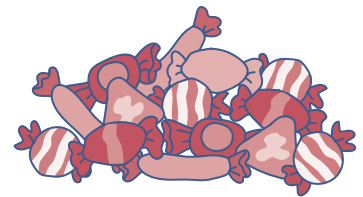
**18** Four identical display boards in a school hall are equally shared between eight classes. Write two equivalent fractions to show what fraction of a board each class has.

\_\_\_\_\_ and \_\_\_\_\_

**19** Thomas spends one-tenth of £7 on sweets.

a) What fraction of a pound does he spend? \_\_\_\_\_

b) What is this as a decimal? \_\_\_\_\_



**20** A jug holds 2 litres of water. The water is poured into 10 cups.

a) What fraction of a litre of water does each cup hold? \_\_\_\_\_ l

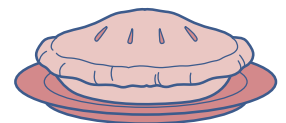
b) What is this as a decimal? \_\_\_\_\_ l

**21** What fraction of a metre is each part when a 3m plank is sawn into 10 equal parts?

Give your answer as a fraction and as a decimal. \_\_\_\_\_ m and \_\_\_\_\_ m

**22**  $7\text{m} \div 10$  equals how many centimetres? \_\_\_\_\_ cm

**23** If 3 pies shared between 7 equals  $\frac{3}{7}$ , what do 10 pies shared between 7 equal? \_\_\_\_\_



**24** What is 17 divided by 10 as a mixed number and as a decimal? \_\_\_\_\_ and \_\_\_\_\_