# TARGET To recognise and write decimal equivalents of tenths.

Examples



seven tenths

$$\frac{7}{10} = 0.7$$



one half

$$\frac{1}{2} = \frac{5}{10} = 0.5$$

# A

Write the shaded part of each shape as:

- a) a fraction
- b) a decimal fraction.



















Write as decimals.

- $\sqrt{2} \frac{8}{10}$
- $\frac{1}{2}$
- $8 \frac{3}{10}$
- $\frac{7}{10}$
- $9 \frac{6}{10}$
- $\frac{2}{10}$
- $\frac{1}{10}$
- $\frac{14}{10}$

13 Write each letter as:

- a) a fraction
- b) a decimal fraction.



Write half a metre as a decimal.

## 8

Give the value of the underlined digit.

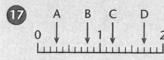
- 1 2.4
- 7 2<u>3</u>·2
- 2 0.9
- 8 0.8
- 3 1<u>5</u>.6
- 9 6.5
- <u>4</u> <u>3</u>0⋅1
- 10.9
- **5** 1.<u>7</u>
- **1** 0.1
- 6 0·<u>3</u>
- 12 48.6

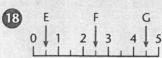
Give the next four terms in each sequence.

- **13** 0·1 0·2 0·3 0·4
- 14 0.1 0.3 0.5 0.7
- 15 1.5 1.4 1.3 1.2
- 16 4.0 3.5 3.0 2.5

Write each letter as:

- a) a fraction or mixed number
- b) a decimal.





C

- Write the shaded part of each shape as:
  - a) a fraction
  - b) a decimal fraction.



















Copy and complete.

$$\boxed{0} \ \frac{1}{10} + \frac{5}{100} = \frac{25}{100} = 0.25$$

$$\frac{7}{10} + \frac{2}{100} = \frac{\square}{100} = \square$$

$$13 \frac{\Box}{10} + \frac{\Box}{100} = \frac{49}{100} = \Box$$

$$\frac{1}{10} + \frac{1}{100} = \frac{1}{100} = 0.16$$

### **TARGET** To recognise and write decimal equivalents of tenths and hundredths.

**Examples** 



six tenths

$$\frac{6}{10} = 0.6$$



forty-seven hundredths

$$\frac{4}{10} + \frac{7}{100} = \frac{47}{100} = 0.47$$

$$\frac{1}{100} = 0.01$$

$$\frac{3}{100} = 0.03$$

$$\frac{1}{4} = \frac{25}{100} = 0.25$$

$$\frac{1}{2} = \frac{5}{10} = 0.5$$

$$\frac{3}{4} = \frac{75}{100} = 0.75$$

Write the shaded part of each shape as:

- a) a fraction
- b) a decimal fraction.

























Copy and complete.

9 
$$f(\frac{8}{10}) = f(\frac{8}{10}) = 80p$$

$$10 £ \frac{1}{2} = £ \boxed{} = \boxed{} p$$

$$1 \quad £ \frac{\Box}{10} = £ \Box = 20p$$

$$\mathbf{13} \ \mathbf{£} \frac{\Box}{10} = \mathbf{£0.60} = \Box \mathbf{p}$$

14 
$$£\frac{3}{4} = £$$
  $=$   $p$ 

Write the shaded part of each shape as:

- a) a fraction
- b) a decimal fraction.

















Copy and complete.

$$2 \frac{2}{10} + \frac{3}{100} = \frac{1}{100} = 0.23$$

$$\frac{8}{10} + \frac{85}{100} = \frac{85}{100} = 0.85$$

$$\frac{1}{100} = 0.09$$

$$\frac{1}{10} + \frac{1}{100} = \frac{78}{100} = \frac{1}{100}$$

## C

Give the value of the underlined digit.

- 0.53
- 7 0.81
- 2 0.6
- 8 0.45
- 3 0.19
- 9 0.9 10 0.24
- 4 0.72 5 0.36
- 0.07

- 6 0.08
- 12 0.69

Write as decimals.

- $\frac{33}{100}$
- $\frac{17}{100}$
- $\frac{14}{100}$
- $\frac{8}{100}$
- $\frac{53}{100}$
- $\frac{92}{100}$
- $\frac{2}{10}$
- $\frac{4}{10}$
- $\frac{5}{100}$

Write in order, smallest first.

- $\frac{25}{3}$ , 0.13, 0.3
- $\frac{1}{10}$ , 0.9, 0.11
- $27 \ 0.45, \ 0.5, \ \frac{2}{5}$
- **28** 0.4, 0.34,  $\frac{3}{4}$

Give the answer as a decimal.

- 29  $0.2 + \frac{1}{2}$
- $\frac{9}{10} 0.4$
- 31  $0.55 + \frac{17}{100}$
- $\frac{32}{4} 0.1$

### To recognise, write and know the place value of decimal **TARGET** equivalents of tenths and hundredths.

**Examples** 



$$A = 0.5$$

A = 0.5 The 5 has a value of  $\frac{5}{10}$ .

$$B = 0.43$$

B = 0.43 The 4 has a value of  $\frac{4}{10}$ .

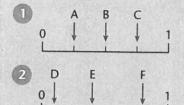
The 3 has a value of 
$$\frac{3}{100}$$
.

$$C = 0.57 = \frac{5}{10} + \frac{7}{100} = \frac{57}{100}$$



Write each of the letters as:

- a) a fraction
- b) a decimal fraction.



Write the shaded part of each shape as:

- a) a fraction
- b) a decimal.





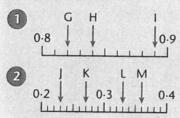


Write as decimals.

- $9\frac{4}{10}$  $\frac{2}{10}$  $10^{\frac{1}{2}}$  $\frac{7}{10}$

Write each of the letters as:

- a) a fraction
- b) a decimal fraction.



Give the value of the underlined digit.

- 3 0.4
- 9 0.12
- 4 0.75
- 10 0.5
- 5 0.39
- 0.06
- 6 0.03
- 12 0.27
- 7 0.7
- 13 0.8
- 8 0.61
- 14 0.94

Write as decimals.

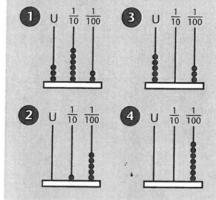
- $\frac{78}{100}$
- $\frac{29}{100}$

- 15 100
- $\frac{4}{100}$
- $\frac{6}{10}$

Which is larger?

- 23  $\frac{1}{4}$  or 0.14 25  $\frac{1}{2}$  or 0.3
- $\frac{45}{100}$  or 0.5  $\frac{3}{4}$  or 0.8

Write the decimal shown on each abacus.



Give the value of the underlined digit.

- 5 8.36
- **11** 6.42
- 6) 24.9
- 12 2.09
- 7 3.07
- 13 59·6
- 8 15·<u>23</u>
- 14 33.74
- 9 1.8
- 15 27.08
- **10** 7·<u>1</u>5
- 16 4.61

Write as decimals.

- $3\frac{28}{100}$
- $23 \ 8\frac{57}{100}$
- 18  $9\frac{1}{2}$
- 24  $1\frac{3}{4}$
- $\frac{93}{100}$
- $25 \quad 5\frac{82}{100}$
- 20  $2\frac{4}{10}$
- $\frac{7}{10}$
- $21 \ 4\frac{6}{100}$
- $22 6\frac{1}{4}$
- $\frac{28}{100}$   $9\frac{35}{100}$

#### **TARGET** To find the effect of dividing 1- and 2-digit numbers by 10 and 100.

Dividing by 10, digits move one place to the right. Dividing by 100, digits move two places to the right.

Examples

$$8 \div 10 = 0.8 \rightarrow \frac{8}{10}$$
  
 $38 \div 10 = 0.38 \rightarrow \frac{3}{10} + \frac{8}{100}$ 

$$5 \div 100 = 0.05 \rightarrow \frac{5}{100}$$
$$95 \div 100 = 0.95 \rightarrow \frac{9}{10} + \frac{5}{100}$$

4

Use a calculator. Copy and complete.

$$6 \div \boxed{} = 0.6$$

$$17 \implies 10 = 5.9$$

$$18 \quad \boxed{\phantom{0}} \div 10 = 0.3$$

$$19 \quad \boxed{\phantom{0}} \div 10 = 9.4$$

$$100 = 0.07$$

Do not use a calculator. Work out

Do not use a calculator. Work out and give the value of each digit.

Do not use a calculator. Copy and complete.

$$\div 10 = 0.8$$

$$\div 100 = 0.7$$

Use a calculator to check your answers for questions 1 to 28.

Do not use a calculator. Divide by 10.

- 1 364
- 5 407.2
- 2 12.6
- 6 848 7 90.5
- 3 1607 4 589
- 8 9213

Multiply by 10.

- 9 0.31
- 13 9.12
- 10 34.03
- 14 217.7
- 11 35.6
- 15 50.4
- 12 100.8
- 16 74.29

Divide by 100.

- 17 5195
  - 21) 704
- 18 1801
- 22 4279
- 19 567
- 23 640
- 20 2920
- 24 3068

Multiply by 100.

- 25 145.1
- 29 59.3
- 26 30.6
- 30 631.9
- 27 2.42
- 31 2.82
- 28 70.07
- 32 36-25

Copy and complete.

- 33 8 mm = cm
- 34 71 cm = m
- 35 2.63 m = cm
- $36 \ 4.7 \, \text{cm} =$ mm

### TARGET To use decimals in the contexts of money and measures.

Decimals are a way of expressing fractions. The decimal point separates the whole number from the fractions.

## Examples

$$\frac{1}{10} = 0.1$$

$$\frac{1}{10} = 0.1$$
  $1\frac{1}{2} = 1\frac{5}{10} = 1.5$ 

$$\frac{1}{100} = 0.0$$

$$\frac{1}{100} = 0.01$$
  $\frac{1}{4} = \frac{25}{100} = 0.25$ 

$$2\frac{6}{10} = 2.6$$

$$\frac{3}{4} = \frac{75}{100} = 0.75$$

$$3\frac{17}{100} = 3.17$$

$$3\frac{17}{100} = 3.17$$
  $9\frac{1}{4} = 9\frac{25}{100} = 9.25$ 

Decimals are used to show amounts of money. **Examples** 

$$1p = £0.01$$

$$152p = £1.52$$

$$3p = £0.03$$

$$415p = £4.15$$

$$80p = £0.80$$

$$283p = £2.83$$

$$69p = £0.69$$

$$626p = £6.26$$

Decimals are used to show metric measures.

## **Examples**

$$8 \, \text{mm} = 0.8 \, \text{cm}$$

$$1 \text{ cm} = 0.01 \text{ m}$$

$$25 \, \text{mm} = 2.5 \, \text{cm}$$

$$46 \, \text{cm} = 0.46 \, \text{m}$$

$$174 \, \text{mm} = 17.4 \, \text{cm} \quad 130 \, \text{cm} = 1.3 \, \text{m}$$

$$50 \, \text{mm} = 5.0 \, \text{cm}$$

$$50 \text{ mm} = 5.0 \text{ cm}$$
  $208 \text{ cm} = 2.08 \text{ m}$ 

The value of a digit depends upon its position in the number.

### Examples

$$U \cdot \frac{1}{10} \frac{1}{100}$$

£7 · 
$$\frac{9}{10}$$
 2 £  $\frac{9}{10}$  = 90p

$$£\frac{4}{100} = 4p$$

$$0 \cdot 8 7 \text{ m} = 80 \text{ cm}$$

$$3 \cdot 1 \quad \underline{6} \, \text{m} \qquad \frac{6}{100} \, \text{m} = 6 \, \text{cm}$$

# 4

Copy and complete.

10p = £ 
$$\frac{1}{10}$$
 = £0.10

2 
$$20p = £ = £0.20$$

$$\boxed{3} \boxed{} = £\frac{3}{10} = £\boxed{}$$

$$50p = £ = £0.50$$

6 60p = 
$$f = f$$

8 80p = 
$$f_{\frac{8}{10}} = f$$

9 90p = 
$$\mathcal{E}$$
 =  $\mathcal{E}$ 

$$\boxed{0} \boxed{} = £ \boxed{} = £1.00$$

Change these amounts to pounds and pence.

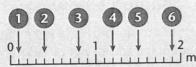
Change these measurements to centimetres.

Change these measurements to metres.

## B

Write the measurements shown by the arrows in:

- a) centimetres
- b) metres.



Give the value of the underlined figure in each of these numbers.

- 7 £5.42
- 13 2.9 m
- 8 £13.80
- 14 0.52 m
- 9 £27.65
- 15 15·3 m
- 10 £0.92
- 16 <u>3</u>0.48 m
- £8.04
- **1** 6⋅<u>7</u>1 m
- 12 £16·<u>1</u>7
- 18 2<u>1</u>.07 m

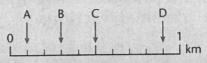
Give the next four terms in each of these sequences.

- 19 £0.10 £0.20 £0.30 £0.40
- 20 0.1 m 0.3 m 0.5 m 0.7 m
- 21 £0.20 £0.40 £0.60 £0.80
- 22 0.05 m 0.1 m 0.15 m 0.2 m
- 23 £0.04 £0.08 £0.12 £0.16
- 24 0.5 m 1.0 m 1.5 m 2.0 m

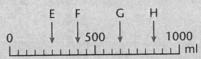
Write the answers only.

- 25 0.2 m + 0.3 m
- 33 £0.30 + £0.40
- 26 0.5 m + 0.4 m
- 34 £0.60 + £0.25
- 27 1-3 m + 0-3 m
- 35 £1.20 + £0.50
- 28 1.1 m + 0.5 m
- 36 £1.40 + £0.45
- 29 0.8 m 0.6 m
- 37 £0.70 £0.10
- 30 0.9 m 0.4 m
- 38 £0.80 £0.15
- 31 1.6 m 0.3 m
- 39 £1.50 £0.40
- 32 1.7 m 0.6 m
- 40 £1.95 £0.70

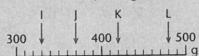
- C
- 1 Write the measurement shown by each letter as:
  - a) kilometres
- b) metres.



- 2 Write the measurement shown by each letter as:
  - a) millilitres
- b) litres.



- 3 Write the measurement shown by each letter as:
  - a) grams
- b) kilograms.



Give the value of the red digit.

- 4 3.15 km
- 10 60-4 litres
- 5 0.62 km
- 11 71.89 litres
- 6 15.9 km
- 12 4.03 kg
- 7 0.07 km
- 13 0.28 kg
- 8 7.5 litres
- 14 52.8 kg
- 9 29.04 litres
- 15 8.76 kg

Copy and complete.

- 16 1860 m = km
- 22 4·31 km = \_\_\_n
- 17 92 300 m = km
  - 23 0.97 km = \_\_\_\_m
- 18 240 g = kg
- 24  $18.4 \text{ kg} = \boxed{g}$
- 19 7500 g = kg
- $\mathbf{25} \ \ 0.6 \, \mathrm{kg} = \mathbf{g}$
- 20 60 190 ml = litres .26 36.05 litres =
- 21) 700 ml = litres
- 27 2.8 litres = m

#### TARGET To practise counting forwards and backwards using decimal fractions.

### **Examples**

Count on 6 steps of  $\frac{1}{100}$  from 0.27. 0.28 0.29 0.3 0.31 0.32 0.33

Count back 6 steps of  $\frac{1}{10}$  from 1.45. 1.45 1.35 1.25 1.15 1.05 0.95 0.85



Write out each sequence.

- Start at 0. Count on 5 tenths.
- 2 Start at 0.4. Count on 6 tenths.
- 3 Start at 2.3. Count on 4 tenths.
- 4 Start at 3.8. Count on 5 tenths.
- 5 Start at 1. Count on 6 tenths.
- 6 Start at 5.6. Count on 7 tenths.

Write out each sequence.

- Start at 1. Count back 5 tenths.
- 8 Start at 3.7. Count back 6 tenths.
- Start at 5. Count back 4 tenths.
- 10 Start at 2.4. Count back 7 tenths.
- 11 Start at 10. Count back 4 tenths.
- 12 Start at 5.1. Count back 6 tenths.

D)	10 C 10 C	
8		

Write out each sequence. Count on:

- five hundredths from 0
- 2 six tenths from 0.79
- 3 eight hundredths from 0.62
- 4 five tenths from 0.14
- 5 four hundredths from 0.5
- 6 seven hundredths from 1.35

Write out each sequence. Count back:

- seven tenths from 5.43
- 8 five hundredths from 0.72
- six hundredths from 1
- three tenths from 2.25
- nine hundredths from 2.13
- 12 four hundredths from 0.9

Complete each sequence.

- 1 0.5 2.5 3
- 2 1.8 1.85
- 3 2.62 2.66 2.7
- 5.15

Write the first six numbers in each sequence.

- 7 Start at 3.3. Count back in steps of 0.2.
- 8 Start at 0.72. Count on in steps of 0.09.
- Start at 5.1. Count back in steps of 0.04.
- 10 Start at 0.4. Count on in steps of 0.15.
- 11 Start at 1.81. Count back in steps of 0.3.
- 12 Start at 2.18. Count on in steps of 0.06.

#### **TARGET** To round decimals with one decimal place to the nearest whole number.

To round a decimal fraction to the nearest whole number look at the tenths column. If the number in the tenths column is less than 5, round down. If the number in the tenths column is 5 or more than 5, round up.

### **Examples**

8.7 rounds to 9	£2.60 rounds to £3	8⋅3 m rounds to 8 m
16.2 rounds to 16	£4.90 rounds to £5	7.5 m rounds to 8 m
0.54 rounds to 1	£9.37 rounds to £9	12.81 m rounds to 13 m

## 1

Round to the nearest:

- 10
- 100
- 73
- 257
- 2 29
- 7 649
- 3 62
- 4 37
- 8 726 9 483
- 5 84
- 10 514
- 10
- 100
- 11 546
- 16 1170
- 12 491
- 17 2832
- 13 118
- 18 9460
- 14 875
- 19 3191
- 15 253
- 20 7905

Approximate by rounding to the nearest 10.

- 21) 37 + 82
- 22 74 + 55
- 23 93 46
- 24 127 68
- 25 19 × 8
- 26 48 × 4
- 27 32 × 5
- 28 86 × 3

# 吕

Round to the nearest whole one.

- 1 5.3
- 6 18.2
- 2 12.9
- 28.8
- 3 9.1
- 8 3.6
- 4 7.5
- 9 151.4
- 5 34.7
- 10 99.9

Round to the nearest pound.

- 11) £2.80
- 16 £36·10
- 12 £18.30
- £124.90
- 13 £54.50
- 18 £81.60
- 14 £9.70
- 19 £165.40
- 15 £73.20
- 20 £47.80

Approximate by rounding to the nearest whole one.

- 21) 24.3 + 8.5
- 22 36.4 + 29.7
- 23 17.9 5.6
- 24 65.2 37.4
- 25 6.8 × 9.1
- $26 12.7 \times 6.2$
- 27 31.6 ÷ 4.1
- 28 53.52 ÷ 8.9

## C

Round to the nearest:

- a) whole one
- b) tenth.
- 1 3.57
- 6 85.92
- 2 9.29
- 7 138-31
- 3 17.45

20.83

- 8 10.74 9 92.15
- 5 4.68
- 10 326.56

Round to the nearest:

- a) metre
- b) 10 cm.
- 11 4·36 m
- 16 33.88 m
- 12 6.51 m
- 17 7·13 m
- 13 9.09 m
- 18 18.95 m
- 14 13.27 m 19 22.48 m
- 15 5.62 m
- 20 49.74 m

Approximate by rounding to the nearest whole one.

- 21 78.61 + 38.27
- 22 95.16 + 44.64
- 23 103.73 68.52
- 24 267.39 29.45
- 25  $12.92 \times 5.28$
- $268.07 \times 8.73$
- 27 139.54 ÷ 19.82
- 28 63.71 ÷ 8.09

# TARGET To compare and order decimals.

Examples

Arrange these decimals in order, smallest first.

Look at the highest value digits first.

If these are the same look at the next highest.

The correct order is 0.35, 0.36, 0.56, 0.63

0.63	0.35	0.36	0.56
$\frac{6}{10}$	$\frac{3}{10}$	$\frac{3}{10}$	5
1	1	1	1
0.63	0.35	0.36	0.56
	1	1	
	5	$\frac{6}{100}$	
	100	100	

A

Write the larger of each pair of decimals.

- 1 14 1.4
- 6 17 7.0
- 2 5.2 25
- 7 4.0 3.4
- 3 3.6 6.0
- 8 6.7 7.6
- 4 9.0 0.9
- 9 4.8 8.1
- 5 2.0 2.2
- 10 5.3 3.5

Opy the number line. Put each number from the box on the line.

1.1 0.4 1.9 1.0 0.7 1.3

0 2

B

Write the larger of each pair of decimals.

- 1 5.42 5.27
- 5 4.06 4.13
- 2 1.18 0.81
- 6 12.19 11.92
- 3 1.35 1.53
- 7 0.87 1.05
- 4 1.09 0.99
- 8 2.55 2.49

Arrange these decimals in order. Write the smallest first.

- 9 4.0, 4.4, 3.3, 3.4, 4.3
- 10 2.15, 1.22, 1.52, 2.51, 1.25
- 1 6.69, 9.06, 9.09, 6.66, 6.99
- 12 8.17, 7.88, 7.78, 8.07, 7.77
- 13 Copy the line and locate the numbers.

1.09 0.97 1.03 0.92 1.0 1.05

0.9

C

Arrange these decimals in order. Write the smallest first.

- 1 6.6, 6.02, 6.26, 2.66, 6.2
- 2 5.08, 5.8, 0.85, 5.5, 5.55
- 3 1.11, 1.01, 1.1, 1.4, 1.04
- 4 3.7, 3.07, 3.71, 3.17, 0.73

What number lies half way between:

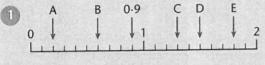
- 5 2 and 3
- 9 3.5 and 4
- 6 1 and 4
- 10 6.9 and 7.3
- 7 5 and 5.4
- 11 9.9 and 10
- 8 7.0 and 7.1
- 12 0.7 and 2?
- 13 Draw a number line from 0.9 to 1.0 with 20 divisions. Put these numbers on your line.

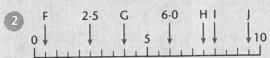
0.95 0.98 0.915 0.995 0.93 0.965

# TARGET To locate decimals on a number line.

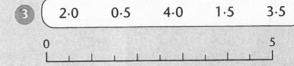
A

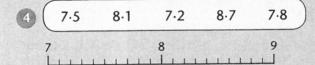
Write each number shown by the letters as a decimal fraction.





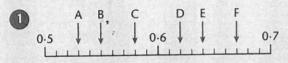
Copy the line and locate the numbers.

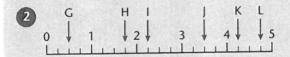


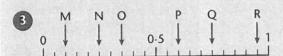


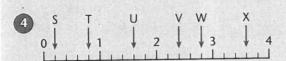
0

Write each number shown by the letters as a decimal fraction.

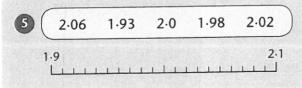


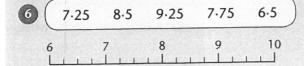






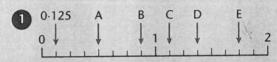
Copy the line and locate the numbers.

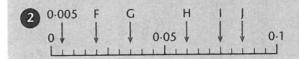


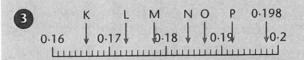


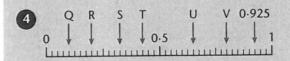
C

Write each number shown by the letters as a decimal fraction.









Copy the line and locate the numbers.

