

## Finding unit fractions of amounts

Find these fractions.

1  $\frac{1}{3}$  of 24 =

7  $\frac{1}{5}$  of 60 =

2  $\frac{1}{2}$  of 52 =

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

3  $\frac{1}{10}$  of 40 =

9  $\frac{1}{9}$  of 63 =

4  $\frac{1}{5}$  of 35 =

10  $\frac{1}{6}$  of 36 =

5  $\frac{1}{4}$  of 48 =

11  $\frac{1}{9}$  of 99 =

6  $\frac{1}{3}$  of 27 =

12  $\frac{1}{8}$  of 56 =

- 13 Obi had £500. He gave  $\frac{1}{10}$  of this money to charity. How much did he give?



Copy and complete, writing one of these signs:  $>$ ,  $<$  or  $=$  between each pair.

14  $\frac{1}{3}$  of 9

$\frac{1}{4}$  of 8



16  $\frac{1}{2}$  of 24

$\frac{1}{5}$  of 55

15  $\frac{1}{3}$  of 18

$\frac{1}{4}$  of 24

17  $\frac{1}{10}$  of 60

$\frac{1}{6}$  of 54



Make up two more of your own like this.



I am confident with finding unit fractions of amounts.

### Find these fractions.

1  $\frac{1}{6}$  of 42 =

2  $\frac{1}{8}$  of 48 =

3  $\frac{1}{9}$  of 36 =

4  $\frac{1}{8}$  of 88 =

5  $\frac{1}{4}$  of 32 =

6  $\frac{1}{3}$  of 36 =

7  $\frac{1}{9}$  of 54 =

8  $\frac{1}{8}$  of 64 =

9  $\frac{1}{6}$  of 72 =

10  $\frac{1}{4}$  of 400 =

11  $\frac{1}{9}$  of 108 =

12  $\frac{1}{8}$  of 96 =

### Copy and complete the patterns.

The first answer helps with the second answer in each pair.

13  $\frac{1}{5}$  of 60 =

$\frac{2}{5}$  of 60 =

15  $\frac{1}{8}$  of 64 =

$\frac{3}{8}$  of 64 =

14  $\frac{1}{3}$  of 21 =

$\frac{2}{3}$  of 21 =

16  $\frac{1}{9}$  of 81 =

$\frac{5}{9}$  of 81 =

**THINK**

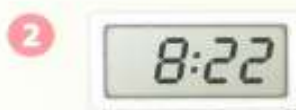
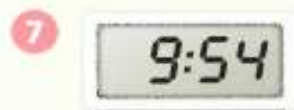
Make up some similar patterns of your own.



I am confident with finding unit and non-unit fractions of amounts.

## Telling the time to the minute

Draw hands onto analogue clock faces to show these times.



Draw each of these as a digital time.



16 Choose two of the analogue times and write them in words.

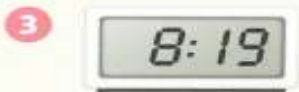
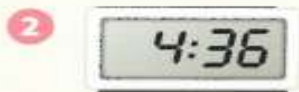


Look at clock 7. What will the time be in 7 minutes?



I am confident with telling and writing analogue and digital times.

Write how many minutes until the next o'clock time and what time that will be.



Do the same for these times.



**THINK**

Continue this pattern and write each as a digital time. one minute to 1, two minutes to 2, three minutes to 3, four minutes to 4...up to twelve minutes to 12.



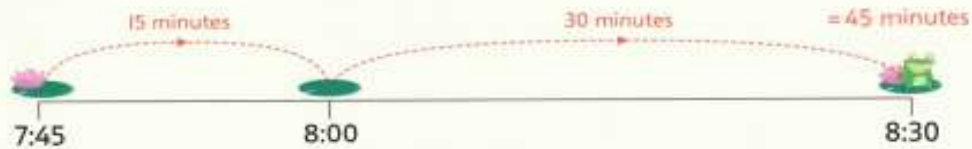
I am confident with telling the time and working out the next o'clock time.

# Calculating time intervals

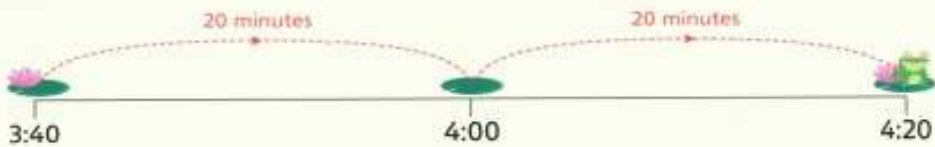


## How long is each programme?

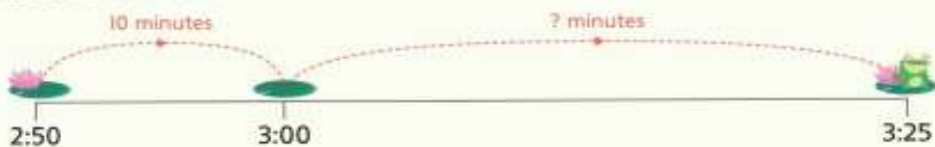
Smart Art shows from 7:45 to 8:30.



- 1 *Tea with Me* shows from 3:40 to 4:20.



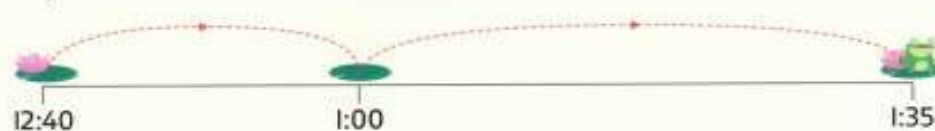
- 2 *Chatterbox* shows from 2:50 to 3:25.



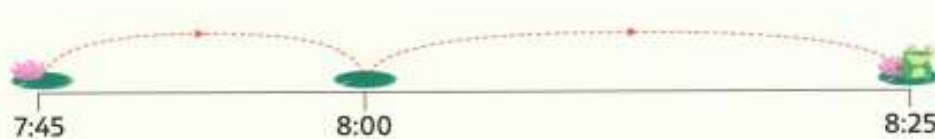
- 3 *Sport News* shows from 10:30 to 11:10.



- 4 *Funny Facts* shows from 12:40 to 1:35.



- 5 *Cassie* shows from 7:45 to 8:25.



- 6 *Scary Stan* shows from 3:35 to 4:15.



I am confident with working out time intervals within 1 hour.

Copy and convert these lengths.

1  $3 \text{ cm} = \square \text{ mm}$

2  $\square \text{ cm} = 40 \text{ mm}$

3  $6 \text{ cm } 4 \text{ mm} = \square \text{ mm}$

4  $9 \text{ cm } 3 \text{ mm} = \square \text{ mm}$

5  $\square \text{ cm } \square \text{ mm} = 39 \text{ mm}$

6  $7.2 \text{ cm} = \square \text{ mm}$

7  $\square \cdot \square \text{ cm} = 39 \text{ mm}$

8  $10 \text{ cm } 4 \text{ mm} = \square \text{ mm}$

9  $\square \text{ cm} = 600 \text{ mm}$

10  $\square \cdot \square \text{ cm} = 124 \text{ mm}$

11  $\square \text{ cm } \square \text{ mm} = 203 \text{ mm}$

12  $10.2 \text{ cm} = \square \text{ mm}$

13  $19.4 \text{ cm} = \square \text{ cm } \square \text{ mm}$

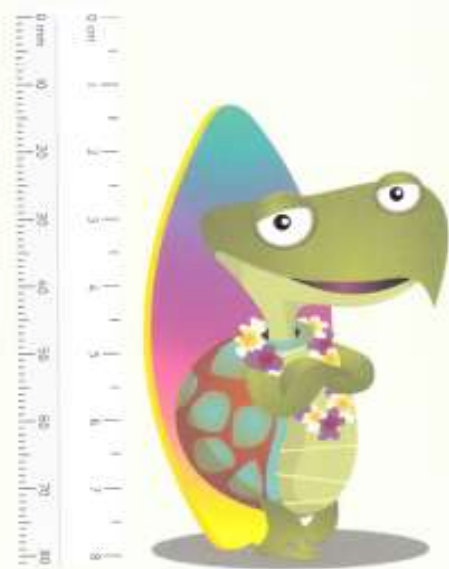
14  $23 \text{ cm } 2 \text{ mm} = \square \cdot \square \text{ cm}$

15  $20 \text{ cm } 6 \text{ mm} = \square \cdot \square \text{ cm}$

16  $28.9 \text{ cm} = \square \text{ cm } \square \text{ mm}$

17  $16 \text{ cm } 1 \text{ mm} = \square \cdot \square \text{ cm}$

18  $25.3 \text{ cm} = \square \text{ cm } \square \text{ mm}$



Write these lengths in order, starting with the smallest.

240 mm

23 cm 2 mm

2.5 cm

22.9 cm

30 mm



- 1 Choose a number from each set and find the total.  
Do this six times.

Set 1

384  
583  
494  
835

Set 2

255  
841  
809  
352

Set 3

473  
265  
792  
407

Find the total for each addition.

2 
$$\begin{array}{r} 284 \\ 413 \\ + 361 \\ \hline \end{array}$$

5 
$$\begin{array}{r} 534 \\ 832 \\ + 935 \\ \hline \end{array}$$

8 
$$\begin{array}{r} 978 \\ 165 \\ + 477 \\ \hline \end{array}$$

3 
$$\begin{array}{r} 573 \\ 656 \\ + 573 \\ \hline \end{array}$$

6 
$$\begin{array}{r} 364 \\ 188 \\ + 385 \\ \hline \end{array}$$

9 
$$\begin{array}{r} 725 \\ 833 \\ + 927 \\ \hline \end{array}$$

4 
$$\begin{array}{r} 730 \\ 687 \\ + 356 \\ \hline \end{array}$$

7 
$$\begin{array}{r} 368 \\ 319 \\ + 317 \\ \hline \end{array}$$

10 
$$\begin{array}{r} 123 \\ 456 \\ + 789 \\ \hline \end{array}$$



Find the totals of these and describe the patterns.

$1234 + 4321$

$2345 + 5432$

$3456 + 6543$

$4567 + 7654$

$5678 + 8765$

$6789 + 9876$



I am confident with adding 3-digit numbers using column addition.

# Expanded column subtraction

**GRAB!**

Base 10 equipment

$$\begin{array}{r} 849 \\ - 584 \\ \hline \end{array}$$

$$\begin{array}{r} 700 \quad 140 \\ \cancel{800} \quad \cancel{40} \quad 9 \\ - 500 \quad 80 \quad 4 \\ \hline 200 \quad 60 \quad 5 = 265 \end{array}$$



Use this method to answer these subtractions.

1 
$$\begin{array}{r} 726 \\ - 392 \\ \hline \end{array}$$

$$\begin{array}{r} 700 \quad 20 \quad 6 \\ - 300 \quad 90 \quad 2 \\ \hline \end{array}$$

2 
$$\begin{array}{r} 964 \\ - 283 \\ \hline \end{array}$$

$$\begin{array}{r} 900 \quad 60 \quad 4 \\ - 200 \quad 80 \quad 3 \\ \hline \end{array}$$

3 
$$\begin{array}{r} 987 \\ - 565 \\ \hline \end{array}$$

6 
$$\begin{array}{r} 554 \\ - 363 \\ \hline \end{array}$$

9 
$$\begin{array}{r} 776 \\ - 194 \\ \hline \end{array}$$

4 
$$\begin{array}{r} 573 \\ - 381 \\ \hline \end{array}$$

7 
$$\begin{array}{r} 376 \\ - 263 \\ \hline \end{array}$$

10 
$$\begin{array}{r} 803 \\ - 662 \\ \hline \end{array}$$

5 
$$\begin{array}{r} 417 \\ - 265 \\ \hline \end{array}$$

8 
$$\begin{array}{r} 829 \\ - 567 \\ \hline \end{array}$$

11 
$$\begin{array}{r} 678 \\ - 485 \\ \hline \end{array}$$



I am confident with column subtraction of 3-digit numbers using the expanded method.

## Doubling 3-digit numbers

Double 324 is 648.



Double these numbers.

1 123

2 421

3 314

4 234

5 136

6 248

7 319

8 237

9 361

10 482

11 154

12 293

13 478

14 396



**THINK**

Make as many different 3-digit numbers as you can using the digits 2, 4 and 7. Put the numbers in order and double each of the numbers.



I am confident with doubling 3-digit numbers.

## Double these numbers.

1 126

2 473

3 328

4 164

5 413

6 249

7 375

8 347

9 253

10 466

11 268

12 387

13 489

14 442

15 184

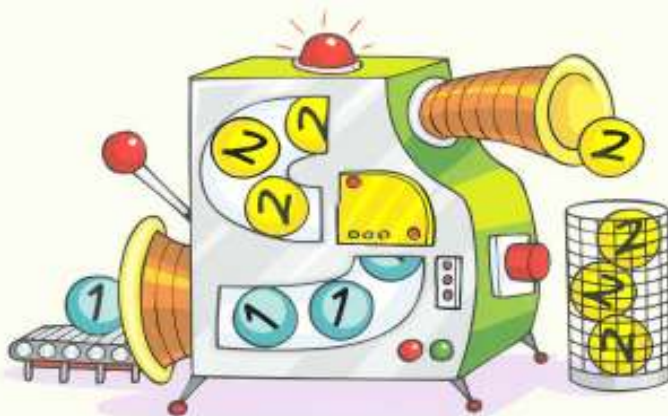
16 277

17 356

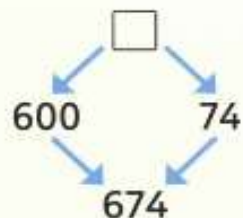
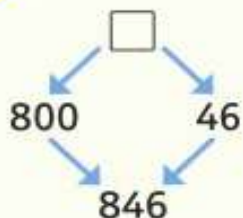
18 843

19 738

20 926



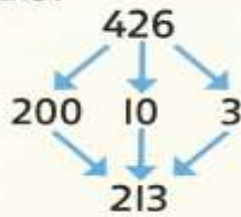
Find which numbers have been doubled.



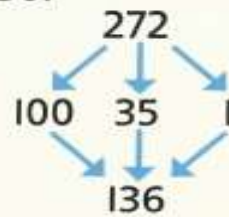
I am confident with doubling 3-digit numbers.

## Halving 3-digit even numbers

Half of 426 is 213.



Half of 272 is 136.



### Halve these numbers.

1 84

2 46

3 446

4 824

5 288

6 264

7 74

8 278

9 56

10 652

11 342

12 566



13 A TV that cost £296 is now half price. How much is it now?

**THINK**

Jai thought of a number and halved it to get an answer of 231. What was the number?



I am confident with halving 3-digit even numbers.

# Unit fractions and equivalence

Copy these pairs of fractions and write  $>$  or  $<$  between them.

1  $\frac{1}{5}$   $\frac{1}{7}$

2  $\frac{1}{9}$   $\frac{1}{4}$

3  $\frac{1}{3}$   $\frac{1}{6}$

4  $\frac{1}{10}$   $\frac{1}{9}$

5  $\frac{1}{10}$   $\frac{1}{3}$

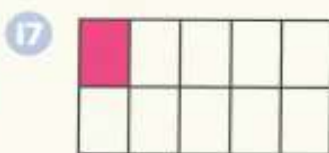
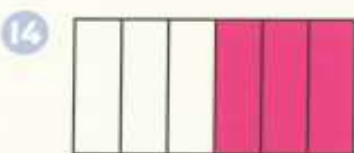
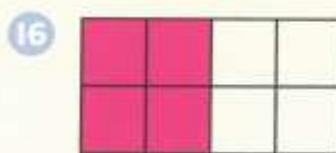
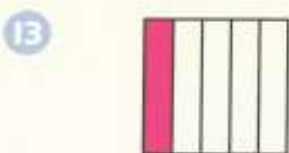
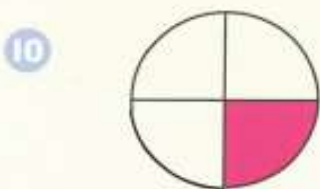
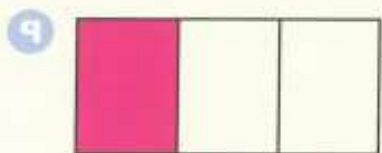
6  $\frac{1}{4}$   $\frac{1}{5}$

7  $\frac{1}{7}$   $\frac{1}{9}$

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



What fraction of each shape is shaded?

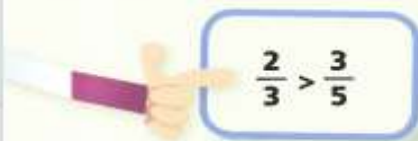


Can you write any of the fractions above using smaller numbers?



I am confident with ordering unit fractions and recognising fractions of a shape.

Copy these pairs of fractions and write  $>$  or  $<$  between them.



1

$\frac{1}{6}$

$\frac{1}{9}$

5

$\frac{2}{5}$

$\frac{7}{8}$

2

$\frac{1}{10}$

$\frac{1}{12}$

6

$\frac{3}{4}$

$\frac{7}{7}$

3

$\frac{1}{5}$

$\frac{1}{12}$

7

$\frac{2}{7}$

$\frac{5}{8}$

4

$\frac{1}{10}$

$\frac{1}{8}$

8

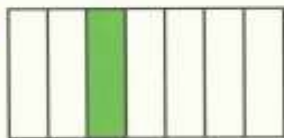
$\frac{4}{7}$

$\frac{3}{9}$

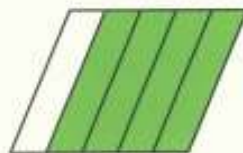


What fraction of each shape is shaded?

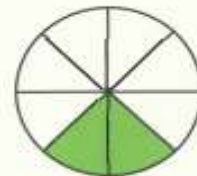
9



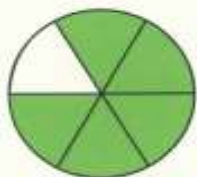
12



15



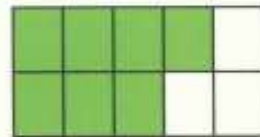
10



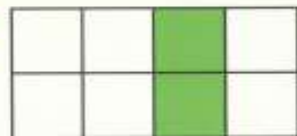
13



16



11



14



17

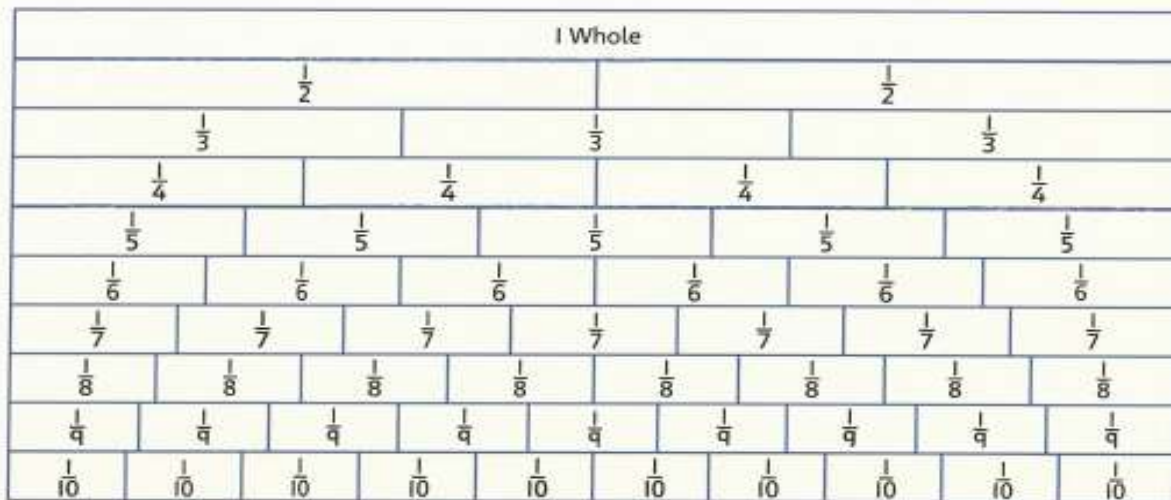


**THINK**

Can you write any of the fractions above using smaller numbers?



Use the fraction wall to help you with the questions below.



Complete the equivalent fraction pairs.

1  $\frac{3}{6} = \frac{1}{\square}$

5  $\frac{2}{6} = \frac{1}{\square}$

2  $\frac{3}{4} = \frac{\square}{8}$

6  $\frac{4}{\square} = \frac{8}{10}$

3  $\frac{1}{5} = \frac{\square}{10}$

7  $\frac{4}{6} = \frac{\square}{3}$

4  $\frac{\square}{4} = \frac{2}{8}$

8  $\frac{4}{8} = \frac{\square}{6}$

Simplify these fractions.

9  $\frac{6}{8}$

11  $\frac{4}{10}$

13  $\frac{3}{6}$

15  $\frac{2}{8}$

10  $\frac{2}{4}$

12  $\frac{2}{6}$

14  $\frac{8}{10}$

16  $\frac{6}{10}$



I am confident with finding equivalent fractions and simplifying fractions.

## Complete the equivalent fraction pairs.

1  $\frac{6}{9} = \frac{2}{\square}$

2  $\frac{3}{12} = \frac{\square}{4}$

3  $\frac{4}{5} = \frac{\square}{10}$

4  $\frac{\square}{4} = \frac{9}{12}$

5  $\frac{15}{20} = \frac{3}{\square}$

6  $\frac{2}{\square} = \frac{8}{20}$

7  $\frac{2}{3} = \frac{\square}{15}$

8  $\frac{8}{12} = \frac{\square}{3}$

## Simplify these fractions.

9  $\frac{6}{15}$

10  $\frac{3}{18}$

11  $\frac{6}{14}$

12  $\frac{14}{21}$

13  $\frac{5}{20}$

$\frac{10}{20}$

$\frac{15}{20}$

Can the top and bottom number be divided by the same number?

14  $\frac{2}{16}$

$\frac{4}{16}$

$\frac{8}{16}$

$\frac{12}{16}$

15  $\frac{2}{24}$

$\frac{3}{24}$

$\frac{4}{24}$

$\frac{6}{24}$

$\frac{8}{24}$

$\frac{12}{24}$



Is it possible to have a fraction equivalent to  $\frac{1}{4}$  that has an odd denominator?

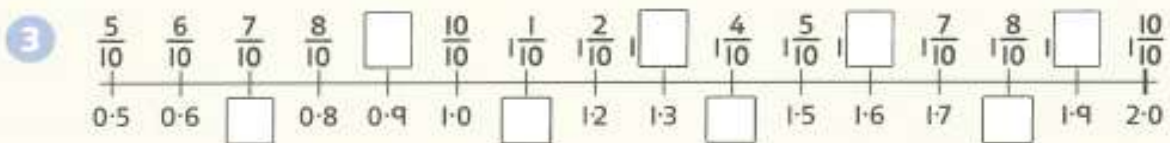
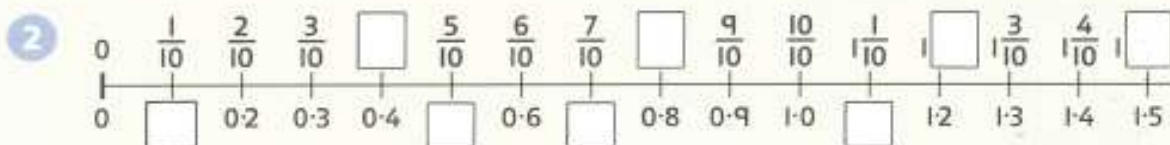
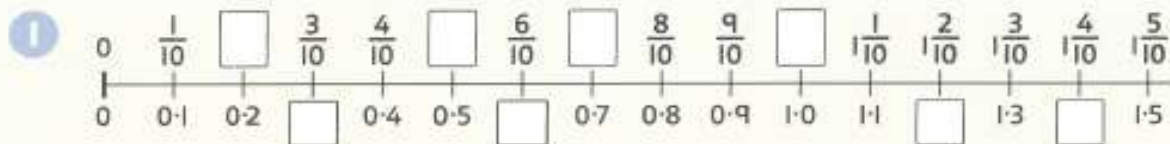


# Decimals

**GRAB!**

Completed 0–2 tenths number line

Write the missing fractions and decimals.



Solve these divisions.

4  $34 \div 10 = \square$

5  $56 \div 10 = \square$

6  $4.2 \times 10 = \square$

7  $85 \div 10 = \square$

8  $1.3 \times 10 = \square$



9  $5.6 \times 10 = \square$

10  $44 \div 10 = \square$

11  $8.1 \times 10 = \square$

12  $99 \div 10 = \square$



I am confident with tenths as fractions and decimals.

Write each decimal as a fraction.

1 0.7

2 0.2

3 0.8

4 0.6

5 0.9

6 0.3

Write each fraction as a decimal.

7  $\frac{4}{10}$

8  $\frac{9}{10}$

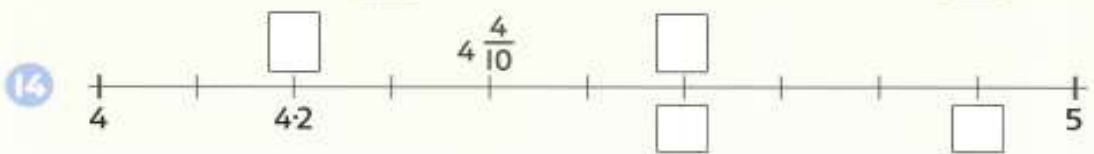
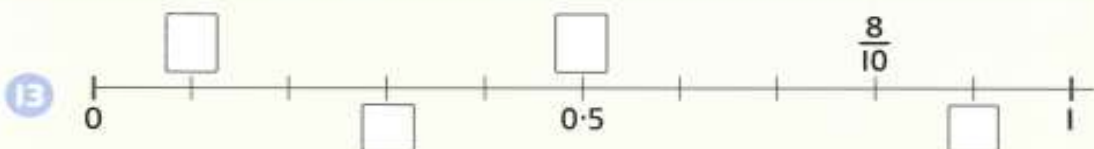
9  $\frac{1}{10}$

10  $\frac{7}{10}$

11  $\frac{5}{10}$  or  $\frac{1}{2}$

12  $\frac{2}{10}$  or  $\frac{1}{5}$

Copy each line and write the box numbers.



Answer these questions.

15  $\square \times 10 = 34$

16  $\square \div 10 = 5.5$

17  $\square \div 10 = 4.2$

18  $\square \times 10 = 29$



I am confident with tenths as fractions and decimals.

Write each decimal as a fraction and then mark them on a number line.

1  $0.2$

3  $1.1$

5  $2.7$

2  $0.6$

4  $1.4$

6  $4.8$

Write each fraction as a decimal. Write them in order, smallest to largest.

7  $1\frac{4}{10}$

9  $2\frac{6}{10}$

11  $2\frac{3}{10}$

8  $2\frac{1}{10}$

10  $1\frac{9}{10}$

12  $1\frac{1}{2}$  or  $1\frac{5}{10}$

Copy this place value grid and write the answers to these questions on it.



13  $2.2 \times 10 = \square$

16  $0.7 \times 10 = \square$

14  $31 \div 10 = \square$

17  $140 \div 10 = \square$

15  $53.8 \times 10 = \square$

18  $111 \div 10 = \square$



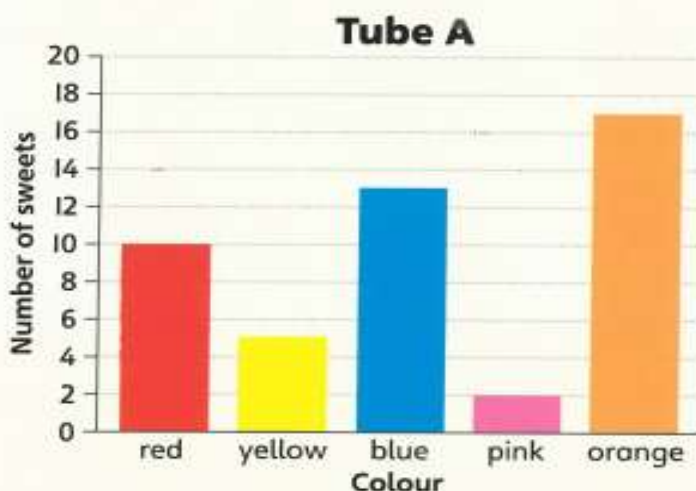
I am confident with writing and ordering tenths as fractions and decimals.

## Using bar graphs

The graphs below show the number of different coloured sweets in two large tubes of sweets.

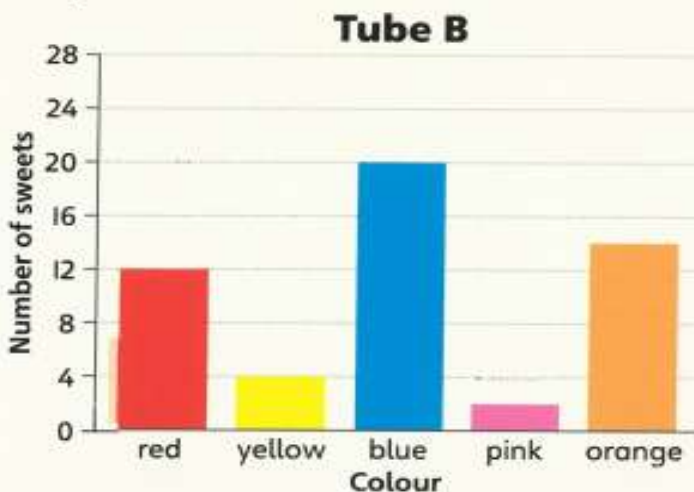
**For tube A write how many more sweets are:**

- 1 red than pink
- 2 blue than yellow
- 3 orange than red
- 4 orange than blue
- 5 yellow than pink.



**For tube B write how many more sweets are:**

- 6 blue than yellow
- 7 orange than pink
- 8 blue than red
- 9 red than yellow
- 10 blue than orange.



Which tube held more sweets altogether?



I am confident with interpreting information given in bar graphs.

Write each amount using a different unit.



$0.4 \text{ l} = \square \text{ ml}$



$600 \text{ ml} = \square \text{ l}$



3  $0.7 \text{ l} = \square \text{ ml}$

8  $900 \text{ ml} = \square \text{ l}$

4  $500 \text{ ml} = \square \text{ l}$

9  $2300 \text{ ml} = \square \text{ l}$

5  $3 \text{ l} = \square \text{ ml}$

10  $3.9 \text{ l} = \square \text{ ml}$

6  $2000 \text{ l} = \square \text{ l}$

11  $1100 \text{ ml} = \square \text{ l}$

7  $0.8 \text{ l} = \square \text{ ml}$

12  $2.7 \text{ l} = \square \text{ ml}$

Solve these problems.

- 13 One shampoo bottle contains 400 ml and another contains 0.3 l. Which holds more and by how much?
- 14 Sam puts 0.6 l of juice and 200 ml of water into a jug. How many millilitres of drink is in the jug now?
- 15 A cola bottle holds 800 ml. Roo drinks 0.4 l of it before lunch and 200 ml after lunch. How much does she have left?



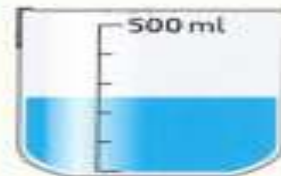
I am confident with comparing litre and millilitre capacities.

Write how much is in each container using the units shown on it.

1



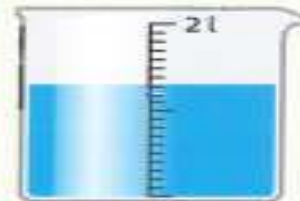
6



2



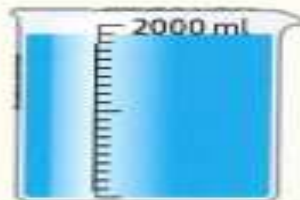
7



3



8



4



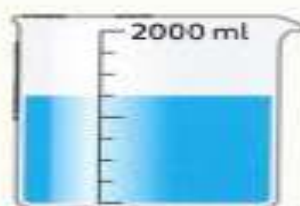
9



5



10



I am confident with reading and recording capacities in litres and millilitre capacities.



Round each number to the nearest 10, 100 and 1000.

1 1287

6 4302

11 9440

2 3623

7 3608

12 5781

3 2535

8 5937

13 3514

4 6729

9 6851

14 8535

5 4572

10 7777

15 8448

Write a number to match each description.

16 It rounds to 2570 to the nearest 10.

19 It rounds to 4000 to the nearest 1000 and to 3500 to the nearest 100.

17 It rounds to 8300 to the nearest 100.

20 It rounds to 3500 to the nearest 100 and to 3000 to the nearest 1000.

18 It is less than 3600 but rounds to 4000 when rounded to the nearest 1000.



I am confident with rounding 4-digit numbers.

# Subtracting 3-digit numbers

**GRAB!**

Base 10 equipment

Use this method to answer the subtractions.



$438 - 276 =$

$$\begin{array}{r} 300 \quad 130 \\ \cancel{400} \quad \cancel{30} \quad 8 \\ - 200 \quad 70 \quad 6 \\ \hline 100 \quad 60 \quad 2 = 162 \end{array}$$

1  $673 - 348 =$

$$\begin{array}{r} 60 \quad 13 \\ 600 \quad \cancel{70} \quad \cancel{3} \\ - 300 \quad 40 \quad 8 \\ \hline 300 \quad 20 \quad 5 = \square \end{array}$$

2  $781 - 577 =$

$$\begin{array}{r} 70 \quad 11 \\ 700 \quad \cancel{80} \quad \cancel{1} \\ - 500 \quad 70 \quad 7 \\ \hline = \square \end{array}$$

3  $456 - 391 = \square$

6  $638 - 276 = \square$

4  $537 - 318 = \square$

7  $850 - 527 = \square$

5  $764 - 527 = \square$

8  $914 - 751 = \square$



I am confident with subtracting 3-digit numbers using the expanded method.

Use this method to answer these subtractions.

$$426 - 268 =$$



$$\begin{array}{r}
 300 \quad 110 \\
 \cancel{400} \quad \cancel{10} \quad 16 \\
 - \cancel{200} \quad \cancel{20} \quad \cancel{6} \\
 \hline
 100 \quad 60 \quad 8 \\
 100 \quad 50 \quad 8 = 158
 \end{array}$$



$$\begin{array}{r}
 1 \quad 721 \\
 - 392 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 5 \quad 436 \\
 - 269 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 9 \quad 770 \\
 - 194 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 2 \quad 932 \\
 - 283 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 6 \quad 554 \\
 - 377 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 10 \quad 863 \\
 - 667 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 3 \quad 914 \\
 - 565 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 7 \quad 376 \\
 - 293 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 11 \quad 670 \\
 - 485 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 4 \quad 569 \\
 - 381 \\
 \hline
 \end{array}$$

$$\begin{array}{r}
 8 \quad 881 \\
 - 587 \\
 \hline
 \end{array}$$



Choose two subtractions and check your answers using addition.



I am confident with subtracting 3-digit numbers using the expanded method.