Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

# Sheet 31            **Probability**

**1**  Describe the probability of these events.

A.  The sun will rise in the afternoon.                    <u>impossible</u> . . . . . . . . . .

B.  You spin a coin and get a head.                    . . . . . . . . . . . . . . . . . . . . . .

C.  You will see a seagull on the way home from school.    . . . . . . . . . . . . . . . . . . . . . .

D.  You will go to Australia next year.                    . . . . . . . . . . . . . . . . . . . . . .

E.  You will be one year older next year.                  . . . . . . . . . . . . . . . . . . . . . .

F.  The next baby born in a hospital will be a boy.        . . . . . . . . . . . . . . . . . . . . . .

G.  You roll a dice and do not get a 6.                    . . . . . . . . . . . . . . . . . . . . . .

H.  This year will end at midnight on 31st December.       . . . . . . . . . . . . . . . . . . . . . .

I.  You roll an ordinary dice and get a 7.                 . . . . . . . . . . . . . . . . . . . . . .

J.  It will rain every day next week.                      . . . . . . . . . . . . . . . . . . . . . .

**2**  Place the probabilities of the above events on this scale.

A

| | | |
|---|---|---|
| Impossible | Unlikely | Evens | Likely | Certain |
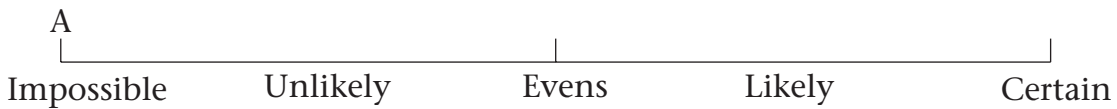
**3**  Six numbered balls are placed in a bag.
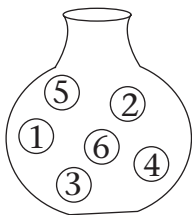
What is the probability that the first ball chosen will be:

a) odd       . . . . . . . . . . . . . .       d) even       . . . . . . . . . . . . . .

b) 1          . . . . . . . . . . . . . .       e) 4          . . . . . . . . . . . . . .

c) under 1  . . . . . . . . . . . . . .       f) under 4?  . . . . . . . . . . . . . .

**4**  The first ball chosen is ②. What is the probability that the next ball chosen will be:

a) odd  . . . . . . . . . . . . . . . . . . . . . .          d) 4          . . . . . . . . . . . . . . . . . . . . . .

b) even  . . . . . . . . . . . . . . . . . . . . .          e) under 4  . . . . . . . . . . . . . . . . . . . . . .

c) 2      . . . . . . . . . . . . . . . . . . . . . .          f) over 4?  . . . . . . . . . . . . . . . . . . . . . .

**Y5** D2

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**Sheet 32**          **Weight**

| **Examples**: | 1000 g = 1 kg | 500 g = 0.5 kg | 100 kg = 0.1 kg |

Complete by writing the missing number.

1  2000 g = ☐ kg

2  9500 g = ☐ kg

3  1.6 kg = ☐ g

4  5 kg = ☐ g

5  6300 g = ☐ kg

6  700 g = ☐ kg

7  3.5 kg = ☐ g

8  8.7 kg = ☐ g

9  200 g = ☐ kg

10  4900 g = ☐ kg

11  7.4 kg = ☐ g

12  0.3 kg = ☐ g

13  One tin of pears weighs 400 g.
What is the weight of 50 tins?     ☐ kg

14  Indira weighs 36.8 kg. Charlotte weighs 730 g more.
What is Charlotte's weight?     ☐ kg

15  A packet of cereal weighs half a kilogram. Three quarters
of the packet is used. How much cereal is left?     ☐ g

16  A cake weighs 1.5 kg. It is cut into 10 equal slices.
What is the weight of each slice?     ☐ g

17  One parcel weighs 1.3 kg. Another weighs 820 g.
What is their combined weight?     ☐ kg

18  One hundred copies of a book weigh 20 kg.
What is the weight of one book?     ☐ g

## Sheet 33    Written Method (+/−)

| **Examples** | 6 2 9 5 <br> + 1 4 8 7 <br> ⎯⎯⎯⎯ <br> 7 7 8 2 <br> <sub>1 1</sub> | 1 8 . 7 9 <br> + 3 . 4 5 <br> ⎯⎯⎯⎯ <br> 2 2 . 2 4 <br> <sub>1 1 1</sub> | <sup>2 14 6 12</sup> <br> 3̶ 4̶ 7̶ 2̶ <br> − 1 7 6 9 <br> ⎯⎯⎯⎯ <br> 1 7 0 3 | <sup>4 14 6 13</sup> <br> 5̶ 4 . 7̶ 3̶ <br> − 1 6 . 2 8 <br> ⎯⎯⎯⎯ <br> 3 8 . 4 5 |

## Work out

**1**     1 7 4 9
   + 1 7 3 6
   ⎯⎯⎯⎯⎯

**7**     2 7 1 . 4
   +   6 9 . 3
   ⎯⎯⎯⎯⎯

**13**     2 3 6 3
   − 1 1 8 8
   ⎯⎯⎯⎯⎯

**19**     4 6 0 . 8
   − 1 2 3 . 7
   ⎯⎯⎯⎯⎯

**2**     2 8 5 7
   + 1 1 9 4
   ⎯⎯⎯⎯⎯

**8**     3 0 . 5 3
   + 2 3 . 7 4
   ⎯⎯⎯⎯⎯

**14**     4 7 2 1
   − 2 3 4 9
   ⎯⎯⎯⎯⎯

**20**     6 0 . 5 1
   − 2 3 . 4 3
   ⎯⎯⎯⎯⎯

**3**     4 3 8 5
   + 1 5 1 4
   ⎯⎯⎯⎯⎯

**9**     4 5 7 . 5
   + 2 3 6 . 2
   ⎯⎯⎯⎯⎯

**15**     5 0 8 5
   − 3 1 6 7
   ⎯⎯⎯⎯⎯

**21**     9 6 3 . 4
   − 7 4 7 . 5
   ⎯⎯⎯⎯⎯

**4**     2 5 9 4
   + 2 6 8 6
   ⎯⎯⎯⎯⎯

**10**     3 4 . 3 6
   + 1 2 . 8 7
   ⎯⎯⎯⎯⎯

**16**     8 1 4 9
   − 3 2 9 4
   ⎯⎯⎯⎯⎯

**22**     7 2 . 5 2
   − 5 9 . 4 6
   ⎯⎯⎯⎯⎯

**5**     3 9 8 4
   + 1 4 6 7
   ⎯⎯⎯⎯⎯

**11**     2 6 9 . 9
   + 1 6 3 . 5
   ⎯⎯⎯⎯⎯

**17**     7 5 7 4
   − 2 3 5 5
   ⎯⎯⎯⎯⎯

**23**     5 3 3 . 6
   − 1 8 4 . 1
   ⎯⎯⎯⎯⎯

**6**     5 3 6 5
   + 2 7 8 2
   ⎯⎯⎯⎯⎯

**12**     3 8 . 7 6
   + 2 5 . 8 9
   ⎯⎯⎯⎯⎯

**18**     9 5 2 2
   − 4 2 7 9
   ⎯⎯⎯⎯⎯

**24**     8 7 . 3 6
   − 5 1 . 2 8
   ⎯⎯⎯⎯⎯

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

## Sheet 34          Written Method (×/÷)

Some problems have been completed as examples.

**1**    259
    × ___8
    <u>1672</u>
    <sub>1 4 7</sub>

**3**    265
    × ___7
    ____

**5**    458
    × ___3
    ____

**7**    428
    × ___7
    ____

**2**    648
    × ___2
    ____

**4**    337
    × ___6
    ____

**6**    126
    × ___9
    ____

**8**    259
    × ___5
    ____

Show your working. Write the answer in the box.

**9**  $4.6 \times 7$ ☐     **10**  $9.5 \times 4$ ☐     **11**  $8.2 \times 8$ ☐     **12**  $5.9 \times 5$ ☐

Work out. Write the answer in the box.

**13**    $260 \div 8 =$ | 32 r 4 |
    260
    − <u>240</u> (8 × 30)
     20
    − <u>16</u> (8 × 2)
    ...<u>4</u>.

**15**    $338 \div 5 =$ ☐
    338
    − ___ (          )
    − ___ (          )
    .......

**17**    $201 \div 7 =$ ☐
    201
    − ___ (          )
    ___ (          )
    .......
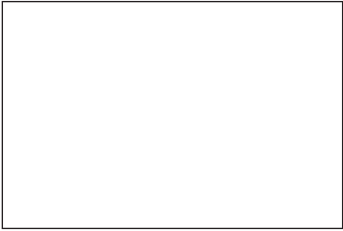
**14**    $140 \div 3 =$ ☐
    140
    − ___ (3 ×      )
    − ___ (3 ×      )
    .......

**16**    $205 \div 6 =$ ☐
    205
    − ___ (          )
    ___ (          )
    .......

**18**    $306 \div 4 =$ ☐
    306
    − ___ (          )
    ___ (          )
    .......

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**Sheet 35**          **Area and Perimeter**

| **Example** | Area = (6 × 4) cm² | Perimeter = 2 × (6 + 4) cm |
|---|---|---|

6 cm

4 cm

Area = (6 × 4) cm²
 = 24 cm²

Perimeter = 2 × (6 + 4) cm
 = 2 × 10 cm
 = 20 cm

Measure each rectangle and fill in the boxes.

**1**

Area [    ] cm²

Perimeter [    ] cm

**2**
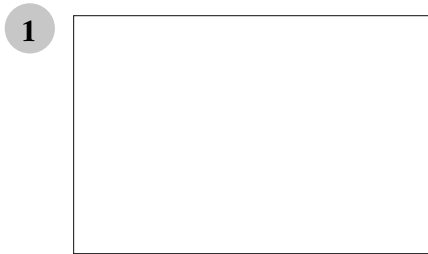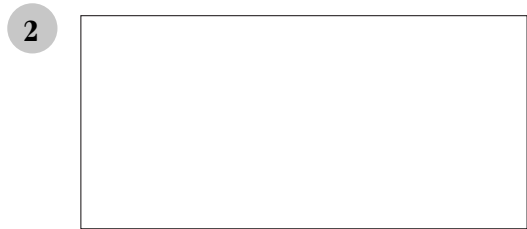
Area [    ] cm²

Perimeter [    ] cm

**3**  Complete the table showing the measurements of rectangles.

| Length | 8 cm | 7 cm | 9 cm | | | |
|---|---|---|---|---|---|---|
| Breadth | 2 cm | | | 6 cm | 4 cm | 5 cm |
| Perimeter | | | 24 cm | | 28 cm | |
| Area | | 35 cm² | | 48 cm² | | 60 cm² |

Write the perimeter of each shape. All lengths are in centimetres.

**4**

7

8

3

12

[    ]

**5**

9

3

7

3

[    ]
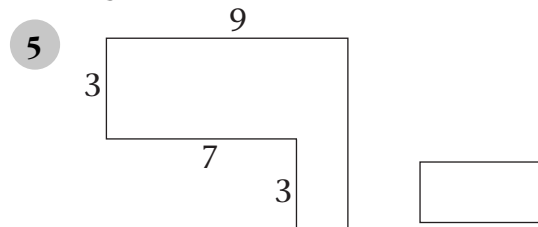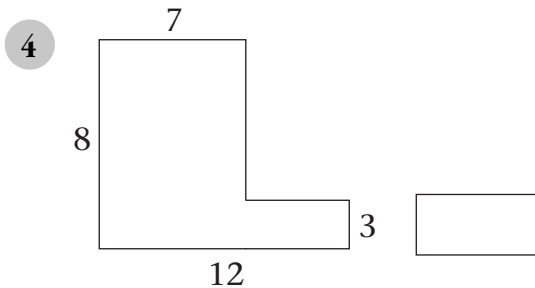
**6**  A square field has an area of 10 000 m².
What is its perimeter?          [    ] m

**7**  A square garden has a perimeter of 80 metres.
What is its area?          [    ] m²

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

# Sheet 36          Angles

**Examples**

AÔE = 45°

AÔL = 155°
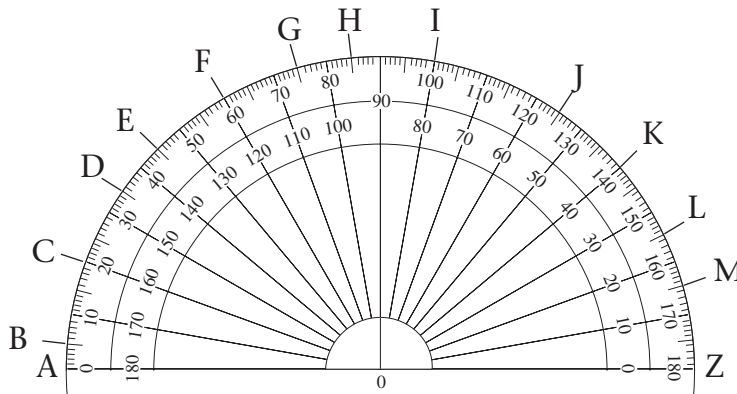
**Examples**

ZÔI = 80°

ZÔD = 145°

Give the measurement of each angle to the nearest 5°.

**1** AÔD ..........

**5** AÔH ..........

**9** ZÔL ..........

**13** ZÔM ..........

**2** AÔK ..........

**6** AÔJ ..........

**10** ZÔE ..........

**14** ZÔF ..........

**3** AÔF ..........

**7** AÔB ..........

**11** ZÔJ ..........

**15** ZÔK ..........

**4** AÔM ..........

**8** AÔI ..........

**12** ZÔB ..........

**16** ZÔG ..........

Write the angles of each quadrilateral in order of size, smallest first.

**17**

The order is ..............

**18**
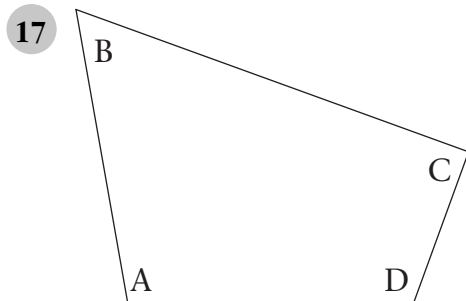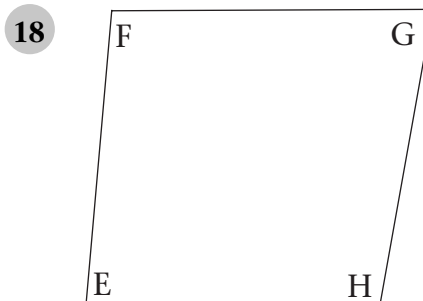
The order is ..............

Estimate each angle to the nearest 5°.

**19**

J ..........

K ..........

L ..........

**20**

P ..........

Q ..........

R ..........

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
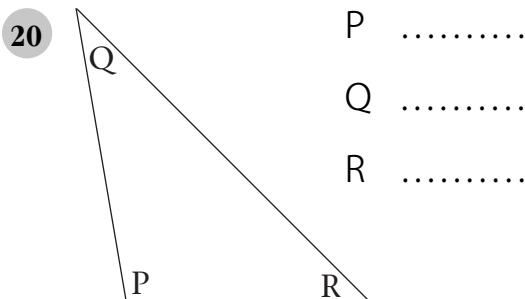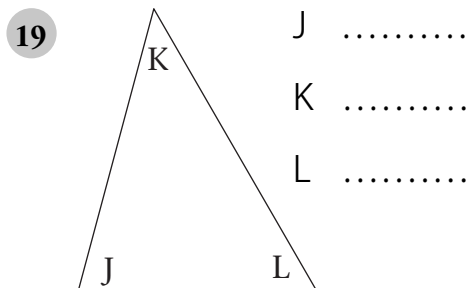
**Sheet 37**   **Doubling and Halving Decimals**

| **Examples** | $3.8 \times 2 = (3 + 0.8) \times 2$ | $0.92 \div 2 = (0.9 + 0.02) \div 2$ |
|---|---|---|
| | $= 6 + 1.6$ | $= 0.45 + 0.01$ |
| | $= 7.6$ | $= 0.46$ |

Fill in the boxes

**1**  $3.7 \times 2 = \left( \boxed{\phantom{xx}} + \boxed{\phantom{xx}} \right) \times 2$

$\phantom{3.7 \times 2} = \boxed{\phantom{xx}} + \boxed{\phantom{xx}}$

$\phantom{3.7 \times 2} = \boxed{\phantom{xx}}$

**4**  $7.2 \div 2 = \left( \boxed{\phantom{xx}} + \boxed{\phantom{xx}} \right) \div 2$

$\phantom{7.2 \div 2} = \boxed{\phantom{xx}} + \boxed{\phantom{xx}}$

$\phantom{7.2 \div 2} = \boxed{\phantom{xx}}$

**2**  $0.68 \times 2 = \left( \boxed{\phantom{xx}} + \boxed{\phantom{xx}} \right) \times 2$

$\phantom{0.68 \times 2} = \boxed{\phantom{xx}} + \boxed{\phantom{xx}}$

$\phantom{0.68 \times 2} = \boxed{\phantom{xx}}$

**5**  $0.16 \div 2 = \left( \boxed{\phantom{xx}} + \boxed{\phantom{xx}} \right) \div 2$

$\phantom{0.16 \div 2} = \boxed{\phantom{xx}} + \boxed{\phantom{xx}}$

$\phantom{0.16 \div 2} = \boxed{\phantom{xx}}$

**3**  $4.9 \times 2 = \left( \boxed{\phantom{xx}} + \boxed{\phantom{xx}} \right) \times 2$

$\phantom{4.9 \times 2} = \boxed{\phantom{xx}} + \boxed{\phantom{xx}}$

$\phantom{4.9 \times 2} = \boxed{\phantom{xx}}$

**6**  $4.8 \div 2 = \left( \boxed{\phantom{xx}} + \boxed{\phantom{xx}} \right) \div 2$

$\phantom{4.8 \div 2} = \boxed{\phantom{xx}} + \boxed{\phantom{xx}}$

$\phantom{4.8 \div 2} = \boxed{\phantom{xx}}$

Double these numbers.

**7**  0.16 . . . . . . . . .

**8**  7.4 . . . . . . . . .

**9**  0.52 . . . . . . . . .

**10**  5.7 . . . . . . . . .

**11**  2.5 . . . . . . . . .

**12**  0.91 . . . . . . . . .

**13**  6.3 . . . . . . . . .

**14**  0.89 . . . . . . . . .

Halve these numbers.

**15**  0.64 . . . . . . . . .

**16**  8.6 . . . . . . . . .

**17**  0.38 . . . . . . . . .

**18**  1.4 . . . . . . . . .

**19**  0.58 . . . . . . . . .

**20**  9.2 . . . . . . . . .

**21**  0.74 . . . . . . . . .

**22**  3.6 . . . . . . . . .

Find the number half way between each pair of numbers.
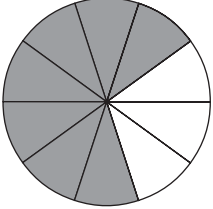
**23**  8 and 7.6 . . . . . . . . .

**24**  2.22 and 2.3 . . . . . . . . .

**25**  0.1 and 0.2 . . . . . . . . .

**26**  0.25 and 0.45 . . . . . . . . .

**27**  7.8 and 8.6 . . . . . . . . .

**28**  3.1 and 2.8 . . . . . . . . .

**29**  5.3 and 5.8 . . . . . . . . .

**30**  6.7 and 7 . . . . . . . . .

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

## Sheet 38     Fractions, Decimals, Percentages

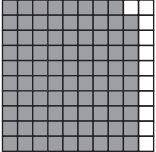Write each shaded shape as a
fraction, a decimal and a percentage.
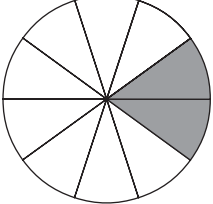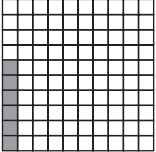
**1**

⬜/⬜   0.⬜   ⬜%

**2**

⬜/⬜   0.⬜   ⬜%

**3**

⬜/⬜   0.⬜   ⬜%

**4**

⬜/⬜   0.⬜   ⬜%

**5** Complete the table.

| Fractions | Decimals | Percentages |
|---|---|---|
| $\frac{29}{100}$ | 0.29 | 29% |
| $\frac{1}{4}$ | | |
| | | 20% |
| | 0.75 | |
| | 0.4 | |
| $\frac{93}{100}$ | | |
| | 0.1 | |
| | | 50% |
| $\frac{3}{5}$ | | |
| | | 80% |
| | 0.03 | |
| | | 1% |
| $\frac{1}{20}$ | | |

Fill in the boxes.

**6** One quarter of the children

at a football club are girls.

⬜ % are boys.

**7** Seven tenths of the Earth's

surface is covered with water.

⬜ % is land.

**8** Petra scored 83 out of 100 in

her Science Test. ⬜ % of her

answers were wrong.

**9** There are 50 children in Year 5.

one is absent.

⬜ % are at school.

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**Sheet 39**          **Fractions, Percentages of Amounts**

Examples  $\frac{3}{5}$ of 90p          10% of 60          30% of 90p $= \frac{3}{10}$ of 90p

$\left(\frac{1}{5}\text{ of 90p}\right) \times 3$          $\frac{1}{10}$ of 60          $\left(\frac{1}{10}\text{ of 90p}\right) \times 3$

18p $\times$ 3          6          9p $\times$ 3

54p                    27p

Work out

**1** $\frac{1}{10}$ of 110 . . . . . . . . .

**5** $\frac{3}{10}$ of 80 . . . . . . . . .

**9** $\frac{3}{5}$ of £1 . . . . . . . . .p

**2** $\frac{7}{10}$ of 60 . . . . . . . . .

**6** $\frac{1}{10}$ of 230 . . . . . . . . .

**10** $\frac{5}{8}$ of 40 cm . . . . . . . . .cm

**3** $\frac{3}{4}$ of 60 . . . . . . . . .

**7** $\frac{1}{6}$ of 90 p . . . . . . . . .p

**11** $\frac{3}{4}$ of 1 m . . . . . . . . .cm

**4** $\frac{2}{5}$ of 45 . . . . . . . . .

**8** $\frac{83}{100}$ of £1 . . . . . . . . .p

**12** $\frac{9}{10}$ of 1m . . . . . . . . .cm

Work out

**13** 10% of 60 . . . . . . . . .

**17** 30% of 250 . . . . . . . . .

**21** 10% of £2.50 . . . . . . . . .

**14** 20% of 55 . . . . . . . . .

**18** 75% of 1000 . . . . . . . . .

**22** 25% of £1.20 . . . . . . . . .

**15** 50 % of 150 . . . . . . . . .

**19** 50 % of £9 . . . . . . . . .

**23** 70% of £3.50 . . . . . . . . .

**16** 25% of 60 . . . . . . . . .

**20** 40% of 60p . . . . . . . . .

**24** 90% of £2.00 . . . . . . . . .

**25** 40 biscuits in a packet.

Five eighths are eaten.

☐ biscuits are left.

**27** City scored 70 goals.

40% were headers.

☐ goals were headers.

**26** 28 children in a class.

Four sevenths are boys.

☐ are girls.

**28** A dress costs £30.

There is 25% off in a sale.

The new price is £ ☐.

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**Sheet 40**          **Scaling**

Fill in the boxes.

A necklace is made using this pattern of beads.

● ● ● ○ ○ ○ ○ ○
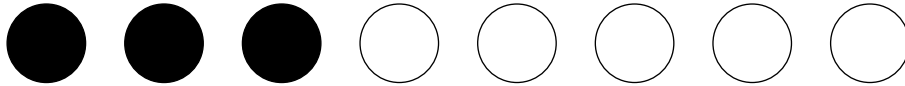
**1** How many white beads are there if there are:

a) 6 black beads ☐          b) 40 beads altogether? ☐

**2** How many black beads are there for every:

a) 20 white beads ☐          b) 35 white beads? ☐

**3** How many white beads are there in every:

a) 24 beads ☐          b) 64 beads? ☐

**4** There are two adults for every nine children on a trip.

There are 8 adults and ☐ children on the trip.

**5** Five customers in a supermarket spent £20 or more for every two who spent less than £20. 250 customers spent £20 or more. ☐ spent less than £20.

**6** Peter has three fiction books for every four non-fiction. He has 60 fiction and ☐ non-fiction books.

**7** In April it rained on 3 days for every 2 dry days. It rained on 18 days and was dry on ☐ days.

**8** In Year 5 there are 6 boys for every 5 girls. There are 30 boys in the Year and ☐ girls.

**9** Four cars passing a school had no passengers for every three with at least one passenger. Altogether 56 cars passed the school. ☐ had no passengers. ☐ had at least one passenger.

**10** Eighty members of a football club vote for their new club captain. Seven in ten members vote for Lionel. Lionel wins ☐ votes. ☐ people vote for other candidates.

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

## Sheet 41          Ordering and Rounding Decimals

Draw a circle around the larger of each pair of numbers.

**1**  2.5      2.45          **3**  7.99      9.7          **5**  1.1      1.07

**2**  4.35    3.54          **4**  6.75      7.56         **6**  3.38    3.8

**7**  Locate the numbers on the line.

| 1.03  0.99  0.92  1.0  1.07  0.96 |

0.9 |————————————————————————| 1.1

Arrange the decimals in order.  Start with the smallest.

**8**  22.8   8.2   8.02   28.2   2.8   ................................................

**9**  4   0.4   4.3   0.34   3.4   ...................................................

**10**  3.7   7.3   7.37   3.77   3.37   ...........................................

**11**  6.61   8.6   6.81   8.16   8.61   .......................................

**12**  2.12   1.21   2.1   1.22   1.2   ...........................................

Round to the nearest:
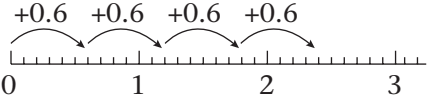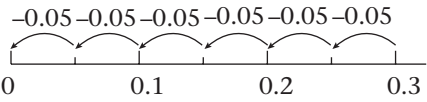
pound                          whole number              metre

**13**  £2.48   ...£2....      **19**  18.27  ..........      **25**  3.37 m   ..........

**14**  £15.61  ..........     **20**  5.72   ..........      **26**  24.7 m   ..........

**15**  £8.27   ..........     **21**  35.9   ..........      **27**  12.05 m  ..........

**16**  £29.70  ..........     **22**  1.08   ..........      **28**  39.51 m  ..........

**17**  £11.39  ..........     **23**  27.54  ..........      **29**  7.18 m   ..........

**18**  £4.52   ..........     **24**  9.6    ..........      **30**  53.49 m  ..........

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**Sheet 42**          **Counting in Decimal Steps**

| Examples | | |
|---|---|---|
| Count on 4 steps of 0.6 | +0.6  +0.6  +0.6  +0.6 [number line 0 to 3] | $0.6 \times 4 = 2.4$ |
| Count back in steps of 0.05 from 0.3 | −0.05 −0.05 −0.05 −0.05 −0.05 −0.05 [number line 0 to 0.3] | $0.3 \div 0.05 = 6$ |

**1** Start at 0.  Count on 6 steps of 0.3.  . . . . . . . . . .

**2** Start at 0.  Count on 5 steps of 0.7.  . . . . . . . . . .

**3** Start at 0.  Count on 9 steps of 0.02.  . . . . . . . . . .

**4** Start at 0.  Count on 4 steps of 0.9  . . . . . . . . . .

**5** Start at 0.  Count on 7 steps of 0.06.  . . . . . . . . . .

**6** How many steps of 0.4 are needed to reach 2.0?  . . . . . . . . . .

**7** How many steps of 0.08 are needed to reach 0.24?  . . . . . . . . . .

**8** How many steps of 0.5 are needed to reach 4.5?  . . . . . . . . . .

**9** How many steps of 0.03 are needed to reach 0.21?  . . . . . . . . . .

**10** How many steps of 0.07 are needed to reach 0.56?  . . . . . . . . . .

Work out

**11** $0.2 \times 7$  . . . . . . . . . .     **16** $6.4 \div 0.8$  . . . . . . . . . .

**12** $0.05 \times 5$  . . . . . . . . . .     **17** $0.12 \div 0.02$  . . . . . . . . . .

**13** $0.09 \times 8$  . . . . . . . . . .     **18** $6.3 \div 0.9$  . . . . . . . . . .

**14** $0.6 \times 9$  . . . . . . . . . .     **19** $0.3 \div 0.06$  . . . . . . . . . .

**15** $0.04 \times 7$  . . . . . . . . . .     **20** $4.2 \div 0.7$  . . . . . . . . . .

**Sheet 43**

**Written Method (TU × TU)**

Work out

**1**
```
      36
×     14
```
.....300 (30 × 10)
.....120 (30 × 4)
......60 (6 × 10)
_____24 (6 × 4)
_____

**2**
```
      64
×     23
```
....... (60 × 20)
....... (60 × 3)
....... (4 × 20)
_____ (4 × 3)
_____

**3**
```
      75
×     18
```
....... (70 × 10)
....... (70 × 8)
....... (5 × 10)
_____ (5 × 8)
_____

**4**
```
      48
×     32
```
....... (40 × 30)
....... (40 × 2)
....... (8 × 30)
_____ (8 × 2)
_____

**5**
```
      86
×     17
```
....... (80 × 10)
....... (80 × 7)
....... (6 × 10)
_____ (6 × 7)
_____

**6**
```
      59
×     25
```
....... (50 × 20)
....... (50 × 5)
....... (9 × 20)
_____ (9 × 5)
_____

**7**
```
      67
×     56
```
....... (60 × 50)
....... (60 × 6)
....... (7 × 50)
_____ (7 × 6)
_____

**8**
```
      53
×     39
```
....... (50 × 30)
....... (50 × 9)
....... (3 × 30)
_____ (3 × 9)
_____

**9**
```
      74
×     26
```
....... (          )
....... (          )
....... (          )
_____ (          )
_____

**10**
```
      92
×     19
```
....... (          )
....... (          )
....... (          )
_____ (          )
_____

**11**
```
      48
×     43
```
....... (          )
....... (          )
....... (          )
_____ (          )
_____

**12**
```
      69
×     24
```
....... (          )
....... (          )
....... (          )
_____ (          )
_____

**Sheet 44**　　**Written Method For Division**

Work out and write the answer in the box. The first problem has been completed as an example.

**1**　$266 \div 8 = \boxed{33 \text{ r } 2}$

$\quad$ 266
$-\underline{240}$ (8 × 30)
$\quad$ ..26.
$-\underline{24}$ (8 × 3)
$\quad$ ....2

**2**　$140 \div 3 = \boxed{\phantom{xxx}}$

$\quad$ 140
$-\underline{\phantom{xx}}$ (3 × 40)
$\quad$ ......
$-\underline{\phantom{xx}}$ (3 × 6)
$\quad$ ......

**3**　$338 \div 5 = \boxed{\phantom{xxx}}$

$\quad$ 338
$\underline{\phantom{xx}}$ (5 × 60)
$\quad$ ......
$\underline{\phantom{xx}}$ (5 × 7)
$\quad$ ......

**4**　$205 \div 6 = \boxed{\phantom{xxx}}$

$\quad$ 205
$-\underline{\phantom{xx}}$ (6 × 30)
$\quad$ ......
$\underline{\phantom{xx}}$ (6 × 4)
$\quad$ ......

**5**　$201 \div 7 = \boxed{\phantom{xxx}}$

$\quad$ 201
$-\underline{\phantom{xx}}$ (7 ×　)
$\quad$ ......
$-\underline{\phantom{xx}}$ (7 ×　)
$\quad$ ......

**6**　$306 \div 4 = \boxed{\phantom{xxx}}$

$\quad$ 306
$-\underline{\phantom{xx}}$ (4 ×　)
$\quad$ ......
$-\underline{\phantom{xx}}$ (4 ×　)
$\quad$ ......

**7**　$351 \div 9 = \boxed{\phantom{xxx}}$

$\quad$ 351
$-\underline{\phantom{xx}}$ (9 ×　)
$\quad$ ......
$-\underline{\phantom{xx}}$ (9 ×　)
$\quad$ ......

**8**　$435 \div 8 = \boxed{\phantom{xxx}}$

$\quad$ 435
$-\underline{\phantom{xx}}$ (8 ×　)
$\quad$ ......
$-\underline{\phantom{xx}}$ (8 ×　)
$\quad$ ......

**9**　$375 \div 6 = \boxed{\phantom{xxx}}$

$\quad$ 375
$-\underline{\phantom{xx}}$ (　　)
$\quad$ ......
$-\underline{\phantom{xx}}$ (　　)
$\quad$ ......

**10**　$399 \div 7 = \boxed{\phantom{xxx}}$

$\quad$ 399
$-\underline{\phantom{xx}}$ (　　)
$\quad$ ......
$-\underline{\phantom{xx}}$ (　　)
$\quad$ ......

**11**　$292 \div 8 = \boxed{\phantom{xxx}}$

$\quad$ 292
$-\underline{\phantom{xx}}$ (　　)
$\quad$ ......
$-\underline{\phantom{xx}}$ (　　)
$\quad$ ......

**12**　$668 \div 9 = \boxed{\phantom{xxx}}$

$\quad$ 668
$-\underline{\phantom{xx}}$ (　　)
$\quad$ ......
$-\underline{\phantom{xx}}$ (　　)
$\quad$ ......

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**Sheet 45**                **Factors**

---

It is often useful to think of factors as pairs of numbers whose product is the target number.

**Example**   The factors of 12:

$1 \times 12$    $2 \times 6$    $3 \times 4$

Factors of 12: 1, 2, 3, 4, 6, 12

---

Write down all the factors of the following numbers.

**1**   9 ..1.. ..3.. ..9..

**2**   10 ..1.. ..2.. .... ....

**3**   17 ..1.. ....

**4**   22 .... .... .... ....

**5**   24 .... .... .... ....

....  .... .... ....

**6**   28 .... .... .... .... .... ....

**7**   35 .... .... .... ....

**8**   42 .... .... .... .... .... .... .... ....

**9**   44 .... .... .... .... .... ....

**10**   56 .... .... .... .... .... .... .... ....

**11**   81 .... .... .... .... ....

**12**   60 .... .... .... .... .... ....

.... .... .... .... .... ....

**13**   Which of the above numbers have an odd number of factors? ..................

**14**   Find 3 other numbers which have an odd number of factors. ..................

**15**   14 has a factor of 2 and a factor of 7.
Find 2 other numbers which have a factor of 2 and of 7. ..................

**16**   Find 3 numbers which have a factor of 3 and of 10 ..................

**17**   Erica is brilliant at Maths. She is 6. She realises that her father's age is a multiple of 6. She also realises that next year, when she will be 7, her father's age will be a multiple of 7. How old is Erica's father?

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

## Sheet 46          **Multiples**

Whole numbers are multiples of:

2  if the number is even                    10 if the last digit is 0

5  if the last digit is 0 or 5            100 if the last two digits are 00.

Complete the first 8 multiples of the number in the first box.

**1** | 2 | 4 | 6 | | | | | |

**2** | 5 | | | | | | | |

**3** | 10 | | | | | | | |

**4** | 100 | | | | | | | |

Write Yes or No.

**5**  Is 63 a multiple of 2?        . . . . . . . . . . .      **13**  Is 89 a multiple of 2?        . . . . . . . . . . .

**6**  Is 115 a multiple of 5?      . . . . . . . . . . .      **14**  Is 57 a multiple of 5?        . . . . . . . . . . .

**7**  Is 90 a multiple of 10?     . . . . . . . . . . .      **15**  Is 460 a multiple of 10?    . . . . . . . . . . .

**8**  Is 250 a multiple of 100?  . . . . . . . . . . .      **16**  Is 1500 a multiple of 100? . . . . . . . . . . .

**9**  Is 78 a multiple of 2?        . . . . . . . . . . .      **17**  Is 390  a multiple of 2?      . . . . . . . . . . .

**10**  Is 180 a multiple of 5?    . . . . . . . . . . .      **18**  Is 204 a multiple of 5?      . . . . . . . . . . .

**11**  Is  75 a multiple of 10?   . . . . . . . . . . .      **19**  Is 906 a multiple of 10?    . . . . . . . . . . .

**12**  Is 4001 a multiple of 100? . . . . . . . . . . .    **20**  Is 2200 a multiple of 100? . . . . . . . . . . .

Draw a circle around the numbers which are multiples of:

**21** | 2 |  127   66   245   754       **23** | 10 |  150   235   270   602

**22** | 5 |  218   135   351   630       **24** | 100 |  2000   350   7070   1300

**25**  A number is divisible by 4 if the last 2 digits are divisible by 4. Circle the numbers which are divisible by 4.

1418          1724          1886          1976          2362

3148          3292          5554          3000

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

## Sheet 47        **Number Problems**

Write the missing number in the box.

**1**  $4.8 + \boxed{\phantom{xxx}} = 7.13$

**3**  $9.65 - \boxed{\phantom{xxx}} = 3.8$

**2**  $\boxed{\phantom{xxx}} \times 8 = 5.6$

**4**  $\boxed{\phantom{xxx}} \div 6 = 1.3$

Find the number that lies halfway between each pair of numbers.

**5**  0.4 and 2 $\boxed{\phantom{xxx}}$

**7**  1.58 and 1.88 $\boxed{\phantom{xxx}}$

**6**  2.7 and 6 $\boxed{\phantom{xxx}}$

**8**  0.3 and 0.46 $\boxed{\phantom{xxx}}$

**9**  I think of a number
I add 0.8.
I multiply by 7.
The answer is 63

My number is $\boxed{\phantom{xxx}}$ .

**11**  I think of number.
I double it.
I take 13.
The answer is 19.6.

My number is $\boxed{\phantom{xxx}}$ .

**10**  I think of a number.
I divide by 5.
I subtract 0.45.
The answer is 1.05.

My number is $\boxed{\phantom{xxx}}$ .

**12**  I think of a number.
I add 2.75.
I divide by 4.
The answer is 1.25.

My number is $\boxed{\phantom{xxx}}$ .

Use a calculator.  Fill in the boxes.

**13**  $5\boxed{\phantom{x}} \times \boxed{\phantom{x}}6 = 1508$

**15**  $\left(\boxed{\phantom{xxx}} \div 6\right) - 0.25 = 0.3$

**14**  $3055 \div \boxed{\phantom{x}}7 = 6\boxed{\phantom{x}}$

**16**  $\left(\boxed{\phantom{xxx}} \times 9\right) + 34.3 = 100$

Find 2 consecutive numbers with a product of:

**17**  3906 $\boxed{\phantom{xxx}}$ and $\boxed{\phantom{xxx}}$

**18**  7832 $\boxed{\phantom{xxx}}$ and $\boxed{\phantom{xxx}}$

**Y5**  B3

# Sheet 48          Nets

**1**  This is a net for a closed cube. Draw 3 different nets for a closed cube.
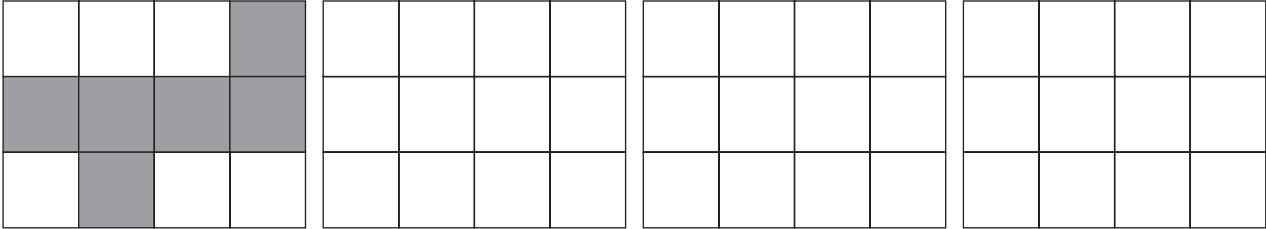
**2**  Draw a net for this cuboid.

3 cm

2 cm

4 cm
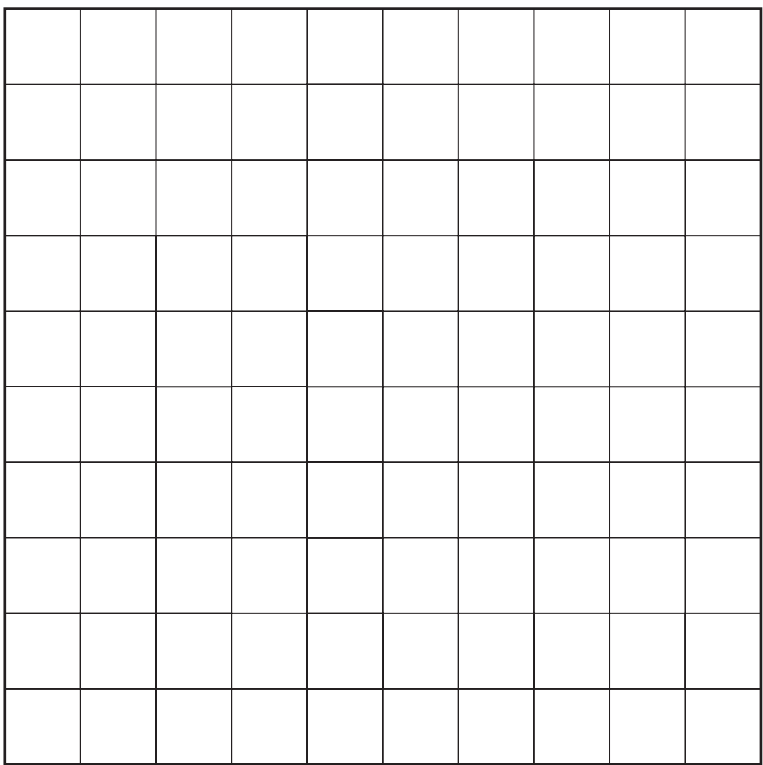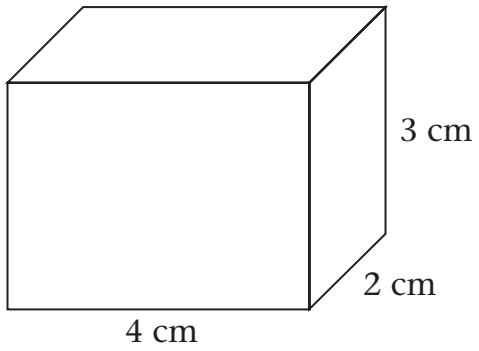
**3**  Decide which of these nets will make a tetrahedron.
Write Yes or No in each box.

a)          b)          c)          d)

**Y5**  C3

## Sheet 49          **Line Graphs**

**1** This line graph shows the heart rate of an athlete during a 60 minute training session.

Heart rate (beats per minute)
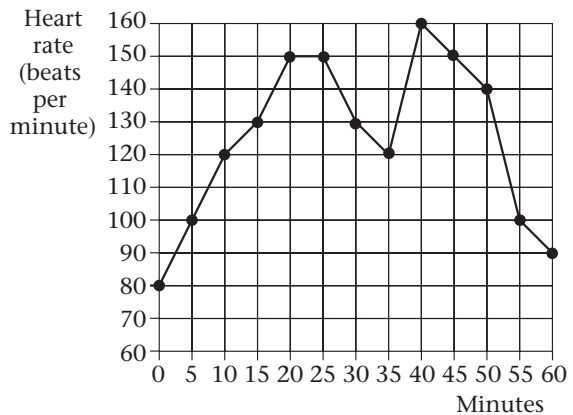


Minutes

(a) What was the athlete's heart rate:

   i) at the beginning of the session? ☐ bpm (beats per minute)

   ii) at the end of the session? ☐ bpm

(b) What was her highest heart rate? ☐ bpm

(c) For how long was her heart rate above 100 beats per minute? ☐ minutes

(d) In which five minute period did her heart rate rise most steeply?

   between ☐ minutes and ☐ minutes

(e) What was the largest fall in heart rate in any five minute period? ☐ bpm

**2** Use the table to draw a line graph showing the average daily temperature in New York during one year.

Temperature (°C)



J F M A M J J A S O N D
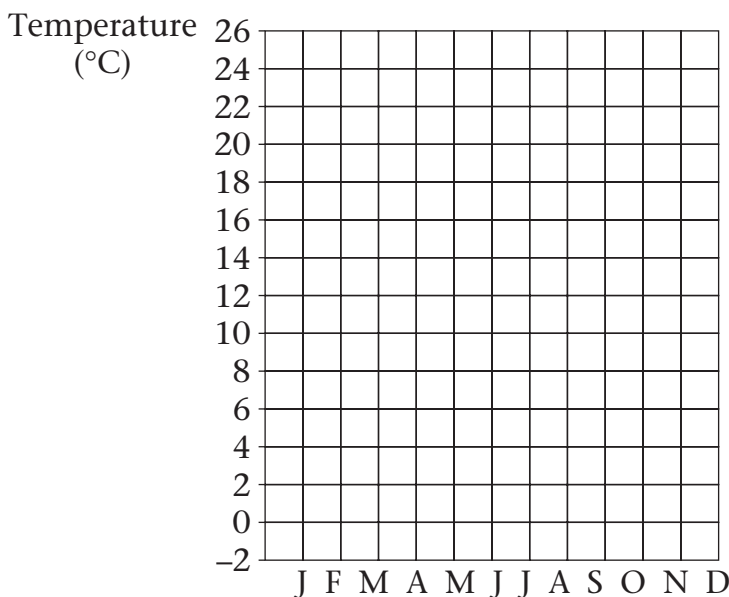
| Month | Temperature (°C) |
|---|---|
| January | 0 |
| February | −1 |
| March | 3 |
| April | 9 |
| May | 17 |
| June | 21 |
| July | 24 |
| August | 25 |
| September | 22 |
| October | 15 |
| November | 9 |
| December | 3 |

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

## Sheet 50          **Length**

| Examples | 10 mm = 1cm | 100 cm = 1m | 1000 m = 1km |
|---|---|---|---|
| | 5 mm = 0.5 cm | 20 cm = 0.2 m | 700 m = 0.7 km |
| | 68 mm = 6.8 cm | 240 cm = 2.4 m | 4300 m = 4.3 km |

Write the missing number in the box.

**1**  49 mm = ☐ cm

**2**  7 mm = ☐ cm

**3**  1.3 cm = ☐ mm

**4**  0.6 cm = ☐ mm

**5**  50 cm = ☐ m

**6**  120 cm = ☐ m

**7**  0.8 m = ☐ cm

**8**  6.2 m = ☐ cm

**9**  200 m = ☐ km

**10**  4500 m = ☐ km

**11**  0.8 km = ☐ m

**12**  3.7 km = ☐ m

Read the measurement shown by each arrow. Write the measurement using the required units.

**13**  ☐ mm  ☐ cm  ☐ mm  ☐ cm  ☐ mm

0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15  cm

**14**  ☐ m  ☐ m  ☐ m  ☐ m  ☐ m

0  10  20  30  40  50  60  70  80  90  100  cm

**15**  ☐ m  ☐ m  ☐ m  ☐ m  ☐ m

0  1  2  3  4  5  m

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
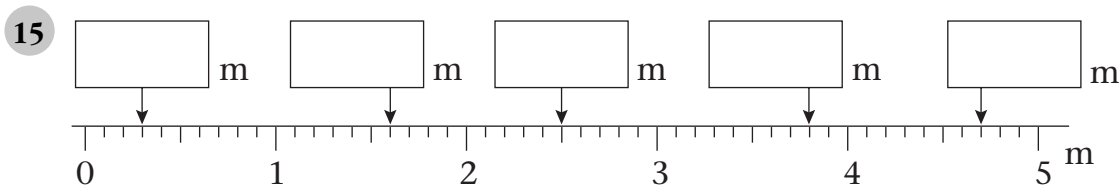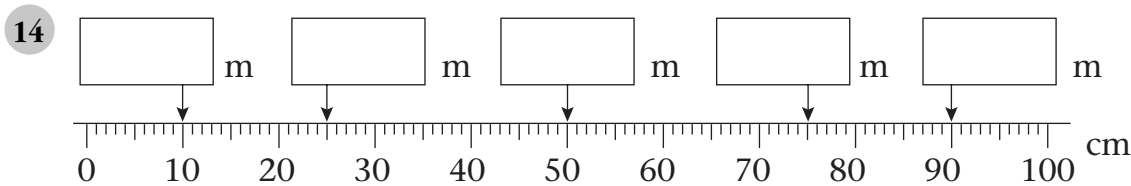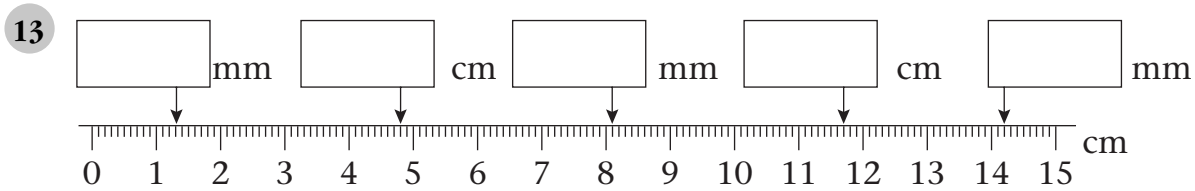
## Sheet 51                Probability

**1**  Use a pack of 52 playing cards. Remove the jokers .
Shuffle the cards or ask someone to do this for you.

**2**  Turn over the top card. Record the suit on the tally chart below.
Turn over the next card. Record the suit on the tally chart.
Repeat this until you have turned over 10 cards.
Put the 10 cards back in the pack and shuffle the cards well.

| Suit | Tally | Total |
|---|---|---|
| Hearts | | |
| Clubs | | |
| Diamonds | | |
| Spades | | |

**3**  Now fill in the Expected Frequency column of the table below for turning over 100 cards.

| Suit | Expected Frequency | Actual Frequency |
|---|---|---|
| Hearts | _____ | _____ |
| Clubs | _____ | _____ |
| Diamonds | _____ | _____ |
| Spades | _____ | _____ |

**4**  Continue turning over the top card of your pack and recording the card on the tally chart. Remember to replace the cards and shuffle after turning over 10 cards. Continue until you have turned over and recorded 100 cards.

**5**  Work out the totals on your tally chart. Record the totals in the Actual Frequency column of the above table.

**6**  Use the language of probability to describe the probability of turning over a card and it is:

a)  a heart . . . . . . . . . . . . . . . . .

b)  red . . . . . . . . . . . . . . . . .

c)  a spade or diamond . . . . . . . . . . . . . . . . .

d)  red or black . . . . . . . . . . . . . . . . .

e)  not a heart . . . . . . . . . . . . . . . . .

f)  not red . . . . . . . . . . . . . . . . .

g)  not red or black . . . . . . . . . . . . . . . . . .

h)  an ace . . . . . . . . . . . . . . . . .

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**Sheet 52**        **Capacity**

| **Examples:** | 1000 ml = 1 litre | 500 ml = 0.5 litres | 100 ml = 0.1 litres |

Complete by writing the missing number.

**1**  40000 ml = ⟨40⟩ litres

**2**  8600 ml = ⟨ ⟩ litres

**3**  5.29 litres = ⟨ ⟩ ml

**4**  0.3 litres = ⟨ ⟩ ml

**5**  6120 ml = ⟨ ⟩ litres

**6**  900 ml = ⟨ ⟩ litres

**7**  2.5 litres = ⟨ ⟩ ml

**8**  9.34 litres = ⟨ ⟩ ml

**9**  3900 ml = ⟨ ⟩ litres

**10**  40 ml = ⟨ ⟩ litres

**11**  7.05 litres = ⟨ ⟩ ml

**12**  0.81 litres = ⟨ ⟩ ml

**13**  Romeo mixes 1.8 litres of white paint with 600 ml of black paint. How much grey paint has he made ?   ⟨ ⟩ litres

**14**  How many 150 ml glasses can be filled from six litres of orange juice?   ⟨ ⟩

**15**  Every day Lucy drinks three 200 ml cups of tea. How much tea does she drink in June?   ⟨ ⟩ litres

**16**  A bottle of lemonade contains 2 litres. 720 ml is drunk. How much lemonade is left?   ⟨ ⟩ litres

**17**  A car uses 150 ml of petrol every minute. How much does it use in one hour?   ⟨ ⟩ litres

**18**  Eight 200 ml glasses are filled from a jug holding 2.5 litres of water. How much water is left?   ⟨ ⟩ ml

**Y5**  D3

## Sheet 53        Timetables

**1** Complete the table showing the times of coaches from London to towns and cities throughout Britain.

| DESTINATION | DEPART | ARRIVE | LENGTH OF JOURNEY |
|---|---|---|---|
| Aberdeen | 09:30 | 21:00 | 11 h 30 mins. |
| Birmingham | 19:30 | | 2 h 40 mins. |
| Blackpool | | 17:45 | 6 h 35 mins. |
| Cambridge | 07:15 | 09:10 | |
| Derby | 16:50 | | 3 h 35 mins. |
| Dundee | 08:40 | 19:10 | |
| Glasgow | 22:00 | | 8 h 40 mins. |
| Hull | | 18:15 | 5 h 50 mins. |
| Leicester | 18:20 | | 2 h 45 mins. |
| Manchester | 10:30 | 15:20 | |
| Newcastle | | 06:10 | 6 h 40 mins. |
| Reading | 19:55 | | 1 h 25 mins. |
| Sheffield | | 13:00 | 3 h 30 mins. |
| Sunderland | 13:35 | 20:30 | |

**2** Return journeys take the same time as outward journeys.
Write the time you would expect each coach to reach London.

10:40 from Sheffield …………          14:50 from Blackpool …………

20:00 from Aberdeen …………          12:20 from Leicester …………

17:15 from Manchester ………….          21:45 from Reading …………
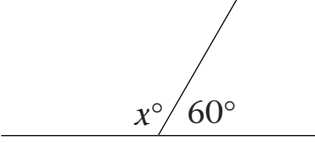
08:20 from Newcastle …………          22:30 from Dundee …………

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**Sheet 54**          **Angles on a Straight Line**

| Example | X + 60° = 180° |
|---|---|
| | X = 120° |
| $x°$  60° | |

Write the missing angle on the line.

**1**  80°  ------ °

**7**  135°  ------ °

**13**  65°  ------ °

**2**  ------ °  40°

**8**  ------ °  95°

**14**  118°  ------ °

**3**  160°  ------ °

**9**  ------ °  29°

**15**  ------ °  51°

**4**  ------ °  120°

**10**  106°  ------ °

**16**  16°  ------ °

**5**  ------ °  55°

**11**  73°  ------ °

**17**  ------ °  84°

**6**  35°  ------ °

**12**  ------ °  142°

**18**  ------ °  127°

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
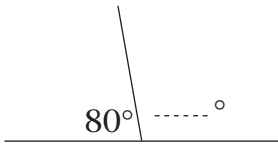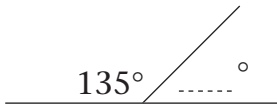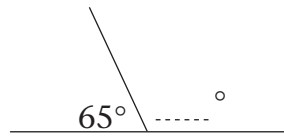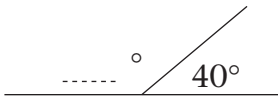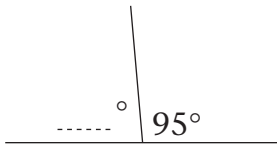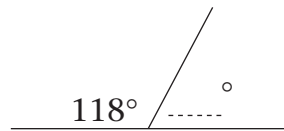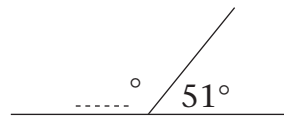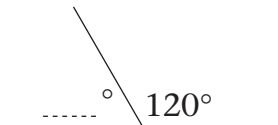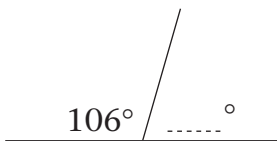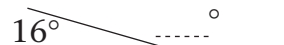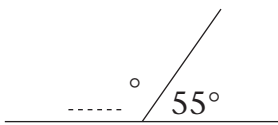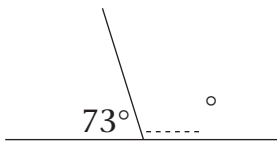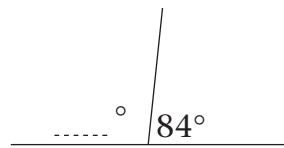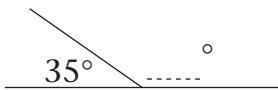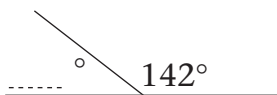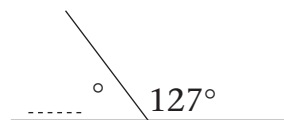
**Sheet 55**                    **Constructing Shapes**

Use a set square and a ruler to construct the shapes. Draw and measure a diagonal.
Write the measurement neatly by the diagonal.

**1**   rectangle, sides 6.5 cm and 4.3 cm

**3**   square, sides 4.6 cm

**2**   rectangle, sides 7.2 cm and 3.7 cm
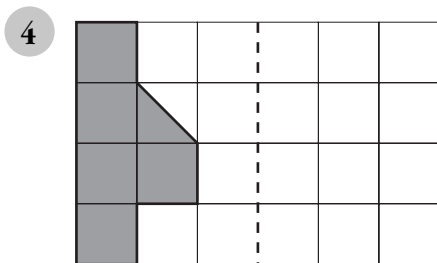
**4**   square, perimeter of 14 cm

Construct the right-angled triangle shown. Write the length of the longest side.

**5**

2.9 cm

5.8 cm

**6**

3.9 cm

3.9 cm

**Y5**  D3
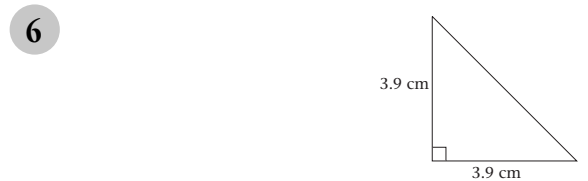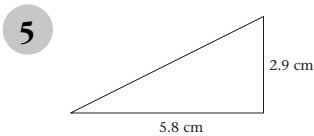
# Sheet 56              **Reflections**

Shade the reflection of each shape in the mirror line.

**1**

**6**

**2**

**7**

**3**

**8**

**4**

**9**

**5**

**10**

Name: . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
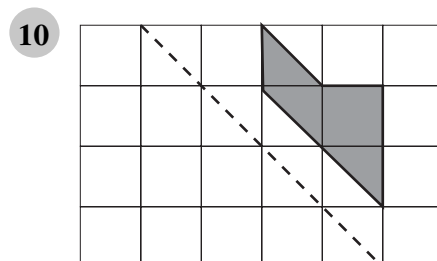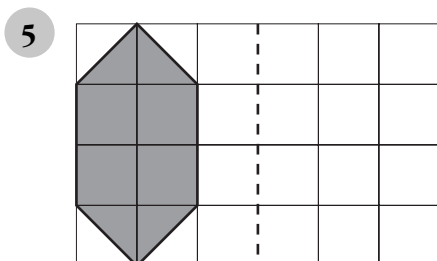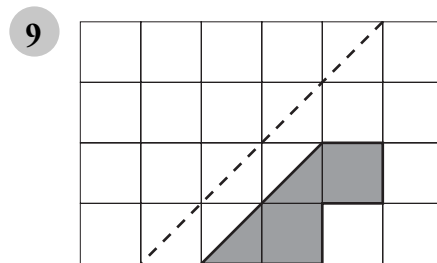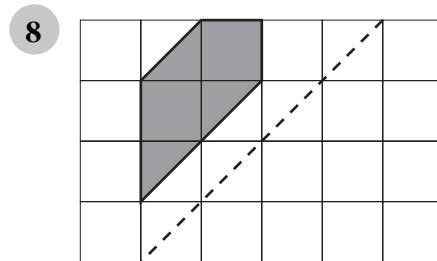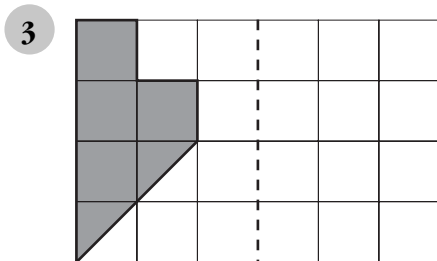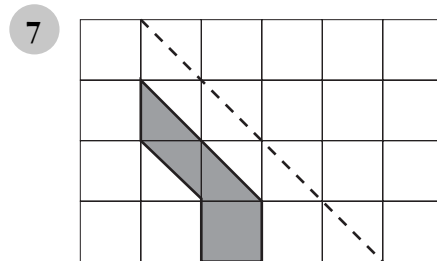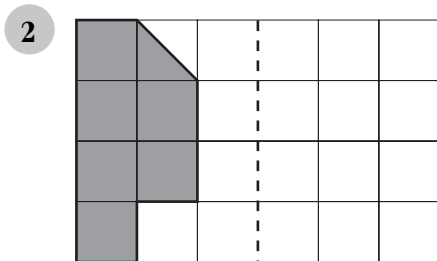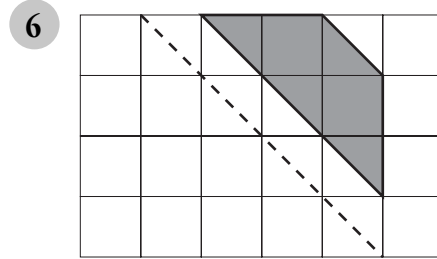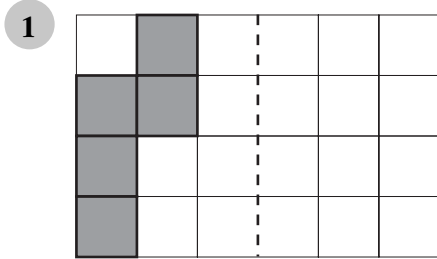
## Sheet 57          **Ratio and Proportion**

**1** Rewrite the recipe for 1 person.

BANANA SHAKE

4 bananas
1 litre of milk
60 g almonds
Serves 4

**2** Rewrite the recipe for 8 people

---

Complete the patterns by shading squares.

**3** 1 in every 3 squares is shaded.

**4** 1 shaded square for every 1 unshaded.

**5** 1 in every 6 squares is shaded.

**6** 1 shaded squares for every 3 unshaded.

**7** 1 in every 4 squares is shaded.

**8** 1 shaded square for every 2 unshaded.

**9** In a display of 100 flowers there are 2 roses for every 3 carnations.
How many roses are there?

**10** A necklace has 50 beads. 3 in every 10 are green.
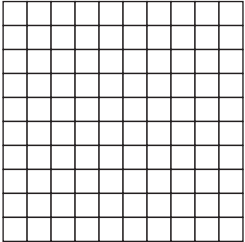How many of the beads are not green?

**11** There are 120 passengers on a train. 3 in every 8 are adults.
How many of the passengers are adults?

**12** An orchard has 5 apple trees for every 2 pear trees.
There are 350 trees in the orchard altogether.
How many are apple trees?

**Y5**  E3

## Sheet 58  **Fractions, Decimals, Percentages**

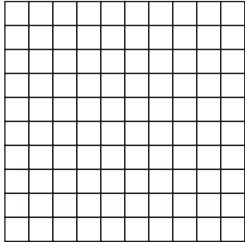Shade the fraction shown. Write as a decimal fraction and as a percentage.
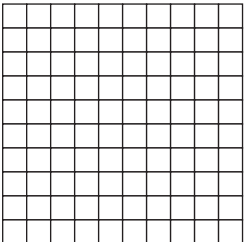
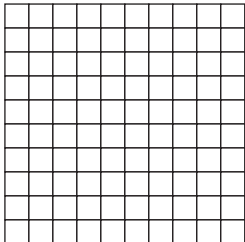**1**  $\frac{3}{4}$  0.[____]  [____] %

**3**  $\frac{4}{10}$  0.[____]  [____] %

**2**  $\frac{43}{100}$  0.[____]  [____] %

**4**  $\frac{4}{100}$  0.[____]  [____] %

**5**  Complete the table.

| Fractions | Decimals | Percentages |
|---|---|---|
| $\frac{28}{100}$ | | |
| | 0.9 | |
| | | 50% |
| | 0.07 | |
| $\frac{1}{10}$ | | |
| | 0.25 | |
| | | 30% |
| | | 52% |
| $\frac{9}{100}$ | | |
| | | 75% |
| $\frac{2}{5}$ | | |
| | 0.65 | |

Give the answer as a decimal.

**6**  $0.9 - \frac{4}{10}$ . . . . . . . . . .

**7**  $\frac{1}{4} + 0.36$ . . . . . . . . . .

**8**  $0.57 + \frac{3}{10}$ . . . . . . . . . .

**9**  $\frac{1}{2} - 0.2$ . . . . . . . . . .

**10**  $0.99 - \frac{38}{100}$ . . . . . . . . . .

**11**  $\frac{5}{100} + 0.5$ . . . . . . . . . .

Give the answer as a percentage.

**12**  $70\% - \frac{4}{10}$ . . . . . . . . . .

**13**  $0.14 + 44\%$ . . . . . . . . . .

**14**  $66\% - 0.1$ . . . . . . . . . .

**15**  $\frac{3}{4} + 7\%$ . . . . . . . . . .

**16**  $0.8 - \frac{49}{100}$ . . . . . . . . . .

**17**  $\frac{1}{5} + 0.15$ . . . . . . . . . .

**18**  Josh has £5. He spends one quarter of his money on a pen and

70% on a book. How much does he have left? £ [____]

**Y5**   E3

## Sheet 59                 Fractions/Percentages of Amounts

| Examples | $\frac{3}{5}$ of 90p | 10% of 60 | 30% of 90p $= \frac{3}{10}$ of 90p |
|---|---|---|---|
| | $(\frac{1}{5}$ of 90p$) \times 3$ | $\frac{1}{10}$ of 60 | $= (\frac{1}{10}$ of 90p$) \times 3$ |
| | 18p $\times$ 3 | 6 | $= 9p \times 3$ |
| | 54p | | $= 27p$ |

Work out

**1** $\frac{1}{3}$ of 12   . . . . . . . . . . .

**2** $\frac{1}{5}$ of 35   . . . . . . . . . . .

**3** $\frac{1}{8}$ of 40p   . . . . . . . . . . .

**4** $\frac{1}{6}$ of £48   . . . . . . . . . . .

**5** $\frac{3}{4}$ of 24 m   . . . . . . . . . . .

**6** $\frac{7}{10}$ of 900 ml   . . . . . . . . . . .

**7** $\frac{2}{3}$ of 60 g   . . . . . . . . . . .

**8** $\frac{4}{5}$ of 15 p   . . . . . . . . . . .

**9** $\frac{5}{6}$ of 12 kg   . . . . . . . . . . .

**10** $\frac{99}{100}$ of £5   . . . . . . . . . . .

**11** $\frac{3}{8}$ of 800 m   . . . . . . . . . . .

**12** $\frac{9}{10}$ of 250 ml   . . . . . . . . . . .

Work out

**13** 10% of 20   . . . . . . . . .

**14** 10% of 80   . . . . . . . . .

**15** 20% of 50   . . . . . . . . .

**16** 40% of 70   . . . . . . . . .

**17** 10% of 1 metre   . . . . . . . . .

**18** 20% of £3.60   . . . . . . . . .

**19** 5% of 1 litre   . . . . . . . . .

**20** 30% of 400 g   . . . . . . . . .

**21** 10% of 5 kg   . . . . . . . . .

**22** 40% of 60 cm   . . . . . . . . .

**23** 80% of 200 ml   . . . . . . . . .

**24** 30% of £15   . . . . . . . . .

**25** 320 people on a plane.
One eighth are girls.
10% are boys.

[    ] are adults.

**26** 600g of dog food.
Rex has one quarter.
Rover has 20%.

[    ] g are left.

**27** Jodie has £30.
She spends two fifths in one shop.
She spends 30% in another shop.

She has £[    ] left.

**28** A book has 180 pages.
Lynne reads two ninths one day.
She reads 20% the next day.

She has read [    ] pages.

**Y5**  E3

## Sheet 60          Division

Give the remainder as a fraction.          Give the remainder as a decimal.

**1** 31 ÷ 4 ...$7\frac{3}{4}$...   **5** 37 ÷ 3 ........   **9** 13 ÷ 2 ...6.5...   **13** 35 ÷ 2 ........

**2** 47 ÷ 5 ........   **6** 96 ÷ 10 ........   **10** 22 ÷ 5 ........   **14** 81 ÷ 4 ........

**3** 53 ÷ 8 ........   **7** 70 ÷ 9 ........   **11** 73 ÷ 10 ........   **15** 29 ÷ 5 ........

**4** 44 ÷ 6 ........   **8** 45 ÷ 7 ........   **12** 38 ÷ 4 ........   **16** 56 ÷ 10 ........

Show your working. Write the answer in the box.

**17** Taslima saves £5 each week. How long will it take her to save £172?

172 ÷ 5       172

         − ___ (5 × 30)

         ......

         − ___ (5 × ....)

Answer [     ] weeks

**19** One P.E. mat costs £9. How many can a school buy for £220?

Answer [     ] mats

**18** Pens are sold in packs of 3. How many packs can be made from 200 pens ?

200 ÷ 3       200

         − ___ (3 × .......)

         ......

         ___ (3 × ....)

Answer [     ] packs

**20** A baker makes 250 cakes. He puts them into boxes of six. How many boxes are needed?

Answer [     ] boxes