1 Change the quantities.

a) 3 cl = | 30 | ml b) 40 ml = | 4 | cl

7 cl = | 70 | ml 320 ml = | 32 | cl

12 cl = | 120 | ml 400 ml = | 40 | cl

20 cl = | 200 | ml 1000 ml = | 100 | cl

105 cl = | 1050 | ml 1540 ml = | 154 | cl

2 Follow the example. Fill in the missing quantities.

a) 45 ml = | 4 | cl | 5 | ml b) 1009 ml = | 100 | cl | 9 | ml

145 ml = | 14 | cl | 5 | ml 1209 ml = | 120 | cl | 9 | ml

76 ml = | 7 | cl | 6 | ml 1054 ml = | 105 | cl | 4 | ml

376 ml = | 37 | cl | 6 | ml 1230 ml = | 123 | cl | 0 | ml

999 ml = | 99 | cl | 9 | ml 1999 ml = | 199 | cl | 9 | ml

3 An adult needs about 2 litres of water per day. Half of this amount is contained in food and other liquids.

a) If a man drinks the same amount of water 4 times per day to make up the extra, how much water should he drink each time?

Half of 2 litres: 1 litre . . . . Litres remaining: 1 . . . .

Amount in each drink: . . 25 cl . . . .

b) How much water should he drink each time if he drinks 5 times per day?

. . . . 1 litre $\div$ 5 = 100 cl $\div$ 5 = 20 cl . . . .

. . . .
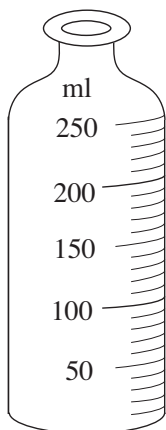
4 Sue and Jane share 2 litres of orange juice between them. Complete the table.

S	1 litre	half a litre	130 cl	70 ml	1170 ml	115 cl	600 ml	0 cl
J	1 litre	1 and a half litres	70 cl	1930 ml	830 ml	85 cl	1400 ml	200 cl

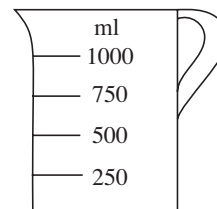*Rule*: $S = 2 - J$ $J = 2 - S$ $S + J = 2$

1

This baby's bottle has marks at every 10 ml up to 250 ml.

a)   How many marks are on the bottle? ..25..............

b)   How much milk will be in the bottle if it is level with:

  i)   the 5th mark   5 × 10 ml = 50 ml..............

  ii)   the 7th mark   7 × 10 ml = 70 ml...............

  iii)   the 10th mark   10 × 10 ml = 100 ml............

  iv)   the 20th mark?   20 × 10 ml = 200 ml............

2

How many 5 cl glasses of water would it take to fill up this measuring jug to:

a)   the 1st mark   ..25 cl ÷ 5 cl = 5 glasses...........

b)   the 2nd mark   ..50 cl ÷ 5 cl = 10 glasses.........

c)   the 3rd mark   ..75 cl ÷ 5 cl = 15 glasses.........

d)   the 4th mark?   ..100 cl ÷ 5 cl = 20 glasses........

3

Complete the table.

ml	1200	2000	800	1230	1500	1900	1850
cl	120	200	80	123	150	190	185
10 cl	12	20	8	12 cl 3 ml	15	19	18 cl 5 ml
litres	1 and 2 tenths	2	8 tenths	1 and 23 hundredths	1 and 5 tenths	1 and 9 tenths	1 and 85 hundredths

4

Elephant drank 4 more litres of water than *Rhino*. Complete the table.

🐘	35 litres	51 litres	33 and a half litres	1350 cl	32 litres 20 cl	23 and 3 tenths litres	41.3 litres
🦏	31 litres	47 litres	29 and a half litres	950 cl	28 litres 20 cl	19 and 3 tenths litres	37.3 litres

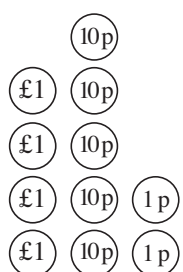*Rule*: $E = R + 4$ litres $R = E - 4$ litres   4 litres $= E - R$
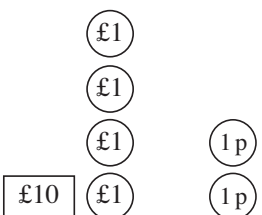
5

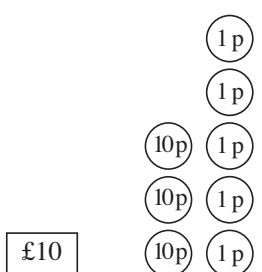Write the rule and complete the table. *Rule*: ..Number *B* is number *A* rounded to nearest 10.

A	36 ml	23 cl	1214 ℓ	141 ml	716 cl	325 ℓ	996 ml	102 cl	450 ℓ
B	40 ml	20 cl	1210 ℓ	140 ml	720 ml	330 *l*	1000 ml	100 cl	450 *l*

1

How much money is in each picture? Write the amount in pence.

a)   10p · £1 10p · £1 10p · £1 10p 1p · £1 10p 1p

| 4 | 5 | 2 | p

b)   £1 · £1 · £1 1p · £10 £1 1p

| 1 | 4 | 0 | 2 | p

c)   1p · 1p · 10p 1p · 10p 1p · £10 10p 1p
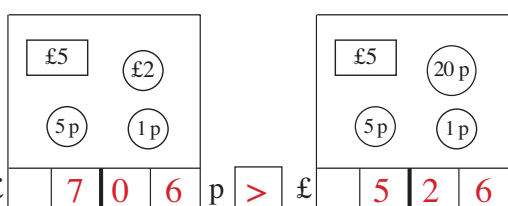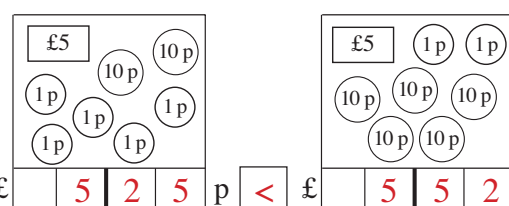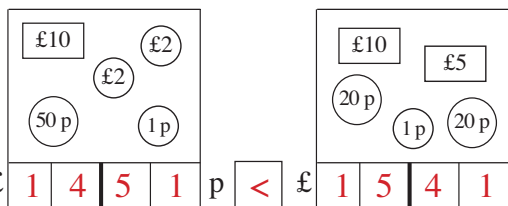
| 1 | 0 | 3 | 5 | p
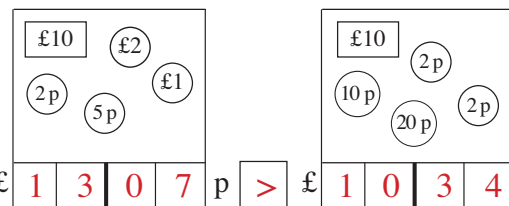
2

How much money is in each box? Which box in each pair has more? (<, >, =)

a)   £5 £2 5p 1p

£ | | 7 | 0 | 6 | p **>** £ | | 5 | 2 | 6 | p

£5 20p 5p 1p

b)   £5 10p 10p 1p 1p 1p 1p

£ | | 5 | 2 | 5 | p **<** £ | | 5 | 5 | 2 | p

£5 1p 1p 10p 10p 10p 10p 10p

c)   £10 £2 £2 50p 1p

£ | 1 | 4 | 5 | 1 | p **<** £ | 1 | 5 | 4 | 1 | p

£10 £5 20p 1p 20p

d)   £10 £2 £1 2p 5p

£ | 1 | 3 | 0 | 7 | p **>** £ | 1 | 0 | 3 | 4 | p

£10 2p 10p 20p 2p

3

Exchange the money for (1p) coins.

a)   8 (10p) = ..80.. (1p)   b)   8 (£1) = .800.. (1p)

c)   12 (10p) = ..120. (1p)   d)   12 (£1) = 1200.. (1p)

4

Exchange the money for (10p) coins.

a)   60 (1p) = ...6... (10p)   b)   9 (£1) = .90... (10p)

c)   180 (1p) = ..18.. (10p)   d)   10 (£1) = .100... (10p)

e)   900 (1p) = ..90.. (10p)   f)   12 (£1) = .120... (10p)

5

Exchange the money for (£1) coins.

a)   100 (1p) = ..1.... (£1)   b)   60 (10p) = ..6... (£1)

c)   900 (1p) = ..9.... (£1)   d)   100 (10p) = ..10.. (£1)

e)   1400 (1p) = .14... (£1)   f)   150 (10p) = ..15.. (£1)

1   Fill in the missing values.

a)

560 ℓ

+ **200 l**   + **80 l**

360 ℓ + 280 ℓ **640 l**

+ 80 ℓ + **200 l**

440 l

b) **E.g:**   320 kg

− **400 kg**   − **70 kg**

720 kg   − 470 kg   250 kg

− **200 kg**   **E.g:**   − **270 kg**

520 kg

---
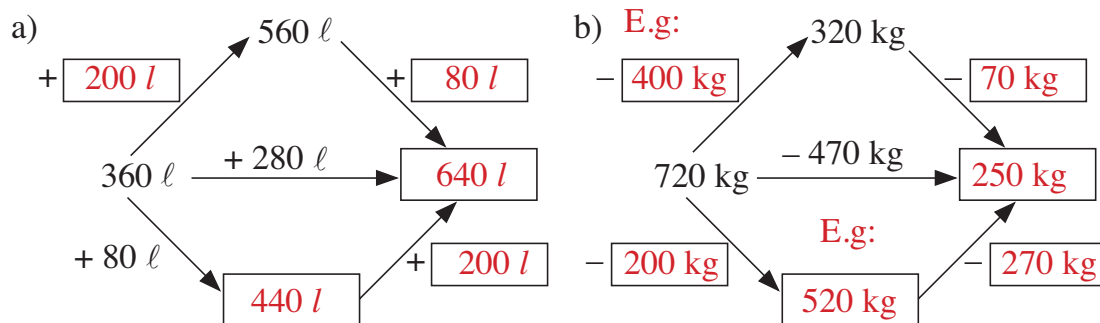
2   Fill in the missing quantities to make the equations correct.

a)   260 cm + 350 cm = 360 cm +   **250 cm**

b)   190 g + 470 g =   **480 g**   + 180 g

c)   470 ml + 280 ml = 480 ml +   **270 ml**

d)   260 m + 340 m =   **431 m**   + 169 m

e)   750 ℓ − 160 ℓ = 740 ℓ −   **150 l**

f)   630 mm − 470 mm =   **640 mm**   − 480 mm

---

3   Bella's piece of ribbon is 800 cm longer than Anne's. What length of ribbon could they each have? Complete the table and write the rule.

A	100 cm	**200 cm**	300 cm	**600 cm**	500 cm	**1100 cm**	0 cm	**1200 cm**	700 cm
B	**900 cm**	1000 cm	**1100 cm**	1400 cm	**1300 cm**	1900 cm	**800 cm**	2000 cm	**1500 cm**

Rule: A = B − 800 cm B = A + 800 cm   800 cm = B − A

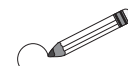**4**   Write the calculations and underline the answer.

a)   Emma has £700 and Freddy has £500. How much do they have altogether?

     Total: £700 + £500 = £1200

b)   George has £700. Harry has £500 less than George.

    i)   How much money does Harry have?

     H = £700 − £500 = £200

    ii)   How much money do they have altogether?

     Total: G + H = £700 + £200 = £900

1

0	(11)	20	(37)	44	(59)	62
73	88	95	(100)	(111)	(126)	(135)
142	(157)	(160)	173	184	191	200

a)   Circle in *red* the 3-digit numbers in the 2nd row.

b)   Circle in *green* the 3-digit even numbers in the 3rd column from the left.

c)   Circle in *yellow* the 2-digit odd numbers in the 3rd row from the bottom.

d)   Circle in *blue* the odd numbers in the 6th column from the right.

2

Write additions and subtractions about each picture.

a)

(100) (100) (10) (100)
(100) (50) (1) (1) (50) (1)
(1) (1)

363 + 152 = 515
152 + 363 = 515
515 − 363 = 152
515 − 152 = 363

b)

(100) (100) (10) (100) (10)
(50) (50) (1) (20) (1)
(50) (20) (1) (1)

381 + 133 = 514
133 + 381 = 514
514 − 381 = 133
514 − 133 = 381

c)

(100) (100) (10) (20)
(100) (20) (50) (5) (10)
(1) (20)

401 + 35 = 436
35 + 401 = 436
436 − 401 = 35
436 − 35 = 401

3

Estimate the sums by rounding the numbers to the nearest whole ten.

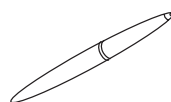a)   471 + 384 ≈ 470 + 380 = 850   b)   326 + 75 ≈ 330 + 80 = 410

c)   1365 + 524 ≈ 1370 + 520 = 1890   d)   1723 + 255 ≈ 1720 + 260 = 1980

4

Katy went shopping.
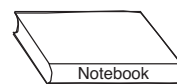
£5 73 p   £4 58 p   £3 12 p   £2 36 p
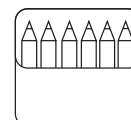
a)   Estimate to the nearest £ how much she spent if she bought:

i)   the pen and the book   £5 + £3 ≈ £8

ii)   the purse and the pencils   £6 + £2 ≈ £8

b)   Estimate to the nearest 10 p how much she spent if she bought:

i)   the purse and the pen   £5.70 p + £4.60 p ≈ £10.30 p

ii)   the book and the pencils   £3.10 p + £2.40 p ≈ £5.50 p

1

Estimate by using values rounded to the nearest 10 p.   Find the exact amount in the picture and compare it with your estimate.
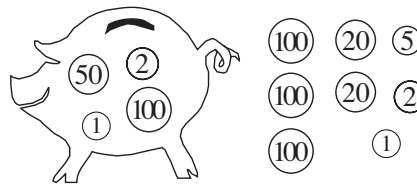
a)   Liz had £1 53 p in her piggy bank. She was given another £3 48 p. How much does she have in her piggy bank now?

Had: £ . .1 53 p .   ≈   £ .1 50 p . .

Was given: £ . .3 48 p .   ≈   £ .3 50 p . .

Now has: £ . .5 01 p .   ≈   £ .5 00 p . .

£ . .5 01 p .   > £ 5.00 p . . .

b)   Brian has £3 55 p. Carolyn has £1 13 p more than Brian. How much does Carolyn have?

B: £ .3 55 p . .   ≈   £ . .3 60 p . .

C: £ .4 68 p . .   ≈   £ . .4 70 p . .

£ .4 68 p . .   < £ .4 70 p . . .
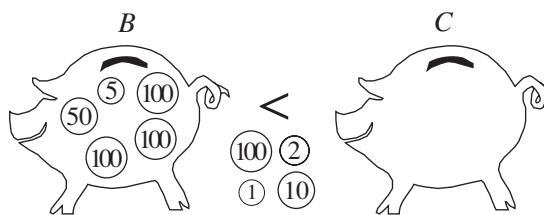
2

Estimate each amount to the nearest 10 p, Then write down the exact amount.

A:
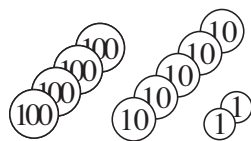
Estimate	Exact amount
4 5 0	4 5 2

B:

Estimate	Exact amount
2 4 0	2 3 6

A + B:
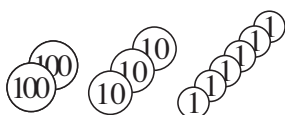
Estimate	Exact amount
6 9 0	6 8 8

3

How can the butterfly get to the flower? Calculate the length of possible routes.

5 m 32 cm

2 m 40 cm
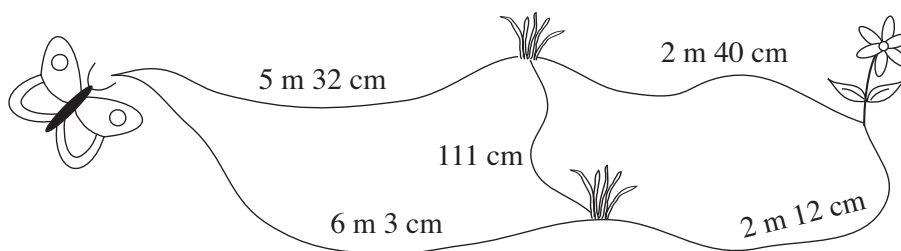
111 cm

6 m 3 cm

2 m 12 cm

5 m 32 cm + 2 m 40 cm = 7 m 72 cm

5 m 32 cm + 111 cm + 2 m 12 cm = 8 m 55 cm

6 m 3 cm + 2 m 12 cm = 8 m 15 cm

6 m 3 cm + 111 cm + 2 m 40 cm = 9 m 54 cm

1 How much money do the two children have altogether? Complete the drawing, then estimate, calculate and check the answer.

Alice:

Estimation

≈ | 4 | 7 | 0 |

Sam:
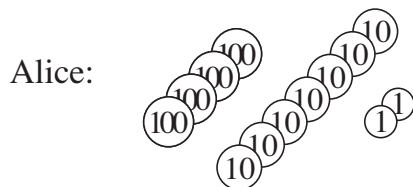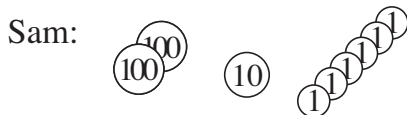
Estimation

≈ | 2 | 2 | 0 |

Total:

Estimation

≈ | 6 | 9 | 0 |

	H	T	U
A	4	7	2
S	2	1	6
T	6	8	8

2 How much money do the two children have altogether? Complete the drawing, then estimate, calculate and check the answer.

Fred:

Estimation

≈ | 5 | 1 | 0 |

Gordon:
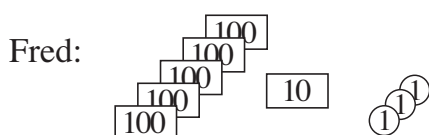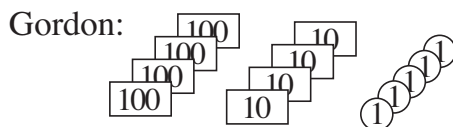
Estimation

≈ | 4 | 5 | 0 |

Total:

≈ | 9 | 6 | 0 |

Calculation

	H	T	U
F	5	1	3
G	4	4	5
T	9	5	8

3 Write the numbers in the place value table. Estimate, then calculate the sum.

a)   136 + 312

E: | 4 | 5 | 0 |

H	T	U
1	3	6
3	1	2
4	4	8

b)   271 + 117

E: | 3 | 9 | 0 |

H	T	U
2	7	1
1	1	7
3	8	8

c)   632 + 324

E: | 9 | 5 | 0 |

H	T	U
6	3	2
3	2	4
9	5	6

d)   426 + 32

E: | 4 | 6 | 0 |

H	T	U
4	2	6
	3	2
4	5	8

4 Estimate, then calculate the sum. Write the estimate in detail.

336 + 452

E: 336 + 452 ≈ 340 + 450 = 790

C:

	3	3	6
+	4	5	2
	7	8	8

1 Estimate, then calculate the sums. Write the estimates in detail.

a)   642 + 207

E: $642 + 207 \approx 640 + 210 = 850$

C:
```
    6 4 2
+   2 0 7
    8 4 9
```

b)   508 + 161

E: $508 + 161 \approx 510 + 160 = 670$

C:
```
    5 0 8
+   1 6 1
    6 6 9
```

c)   397 + 501

E: $397 + 501 \approx 400 + 500 = 900$

C:
```
    3 9 7
+   5 0 1
    8 9 8
```

d)   43 + 945

E: $43 + 945 \approx 40 + 950 = 990$

C:
```
      4 3
+   9 4 5
    9 8 8
```

2 Calculate the sums. Look at the diagram to see how the numbers change.

a)
```
    3 4 6
+   2 1 3
    5 5 9
```

b)
```
    3 4 6
+   3 1 3
+   6 5 9
```

c)
```
    3 4 6
+   1 1 3
    4 5 9
```

346   213

346   313
                        100

346   113
              100
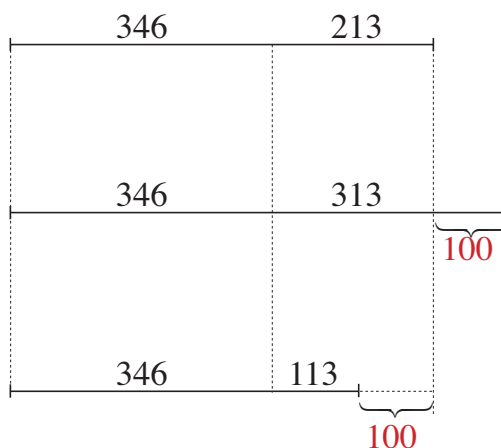
3 Find the data and write a plan. Estimate, calculate and check the result.
Write the answer in a sentence.

A greengrocer ordered 264 kg of apples and 525 kg of bananas.

How many kg of fruit did he order altogether?

Data: A: 264 kg,   B: 525 kg

Plan: A + B: 264 kg + 525 kg *E:*   260 + 530 = 790

C:
```
    2 6 4
+   5 2 5
    7 8 9
```

Answer: He ordered 789 kg of fruit altogether.

1

Complete the drawing. Round the numbers to the nearest whole ten.
Estimate, then calculate the sum.

342 + 753   *E:* 342 + 753 ≈ 340 + 750 = 1090

Thousands	Hundreds	Tens	Units
1	0	9	5

(10 × 100
= 1000)

Th	H	T	U
	3	4	2
	7	5	3
1	0	9	5

			3	4	2
+			7	5	3
	1	0	9	5	

2

Complete the drawing. Round the numbers to the nearest whole ten.
Estimate, then calculate the sum.

537 + 259 ≈   537 + 259 ≈ 540 + 260 = 800

Hundreds	Tens	Units
7	8 + 1 = 9	6

(16 × 1
= 1 ten + 6 units)

	H	T	U
	5	3	7
+	2	5	9
	7	9	6

		5	3	7
+	2	5	9	
		7	9	6

3

Fiona has 367 books and her brother Graham has 715 books. How many books
do they have altogether?

Data: *F*: 367 books,   *G*: 715 books   *E:* 370 + 720 = 1090

Th	H	T	U
	3	6	7
	7	1	5
1	0	8	2

Calculation:

		3	6	7
+	7	1	5	
1	0	8	2	

Answer:

They had 1082 books altogether.

4

Round these numbers to the nearest

a)   10:   i) 743 ≈ 740   ii) 997 ≈ 1000   iii) 550 ≈ 550

b)   100:   i) 835 ≈ 800   ii) 666 ≈ 700   iii) 850 ≈ 900

1 Estimate, then calculate the sums. Write the estimates in detail.

a)   513 + 521

   E: $513 + 521 \approx 510 + 520 = 1030$

   C:
   $$\begin{array}{r} 5\ 1\ 3 \\ +\ 5\ 2\ 1 \\ \hline 1\ 0\ 3\ 4 \end{array}$$

b)   634 + 723

   E: $634 + 723 \approx 630 + 720 = 1350$

   C:
   $$\begin{array}{r} 6\ 3\ 4 \\ +\ 7\ 2\ 3 \\ \hline 1\ 3\ 5\ 7 \end{array}$$

c)   358 + 411

   E: $358 + 411 \approx 360 + 410 = 770$

   C:
   $$\begin{array}{r} 3\ 5\ 8 \\ +\ 4\ 1\ 1 \\ \hline 7\ 6\ 9 \end{array}$$

d)   476 + 218

   E: $476 + 218 \approx 480 + 220 = 700$

   C:
   $$\begin{array}{r} 4\ 7\ 6 \\ +\ 2\ 1\ 8 \\ \hline 6\ 9\ 4 \end{array}$$

e)   563 + 295

   E: $563 + 295 \approx 560 + 300 = 860$

   C:
   $$\begin{array}{r} 5\ 6\ 3 \\ +\ 2\ 9\ 5 \\ \hline 8\ 5\ 8 \end{array}$$

2 Mum wants to make matching dresses for herself and her daughter, Julia.
She needs 2 m 35 cm of material for her own dress and 1 m 25 cm for Julia's
dress. How much material will she need to buy altogether?

   Data: *M*: 2 m 35 cm = 235 cm, *J*: 1 m 25 cm = 125 cm
   Estimate: 235 cm + 125 cm ≈ 240 cm + 130 cm = 370 cm
   Calculation: 235 + 125 = 360 cm   (*Check*: 360 ≈ 370)

Answer: Mum will need to buy 360 cm (= 3 m 60 cm) of material.

3 a)   Kate used a 23 cm 5 mm piece of ribbon to tie up her hair. Linda used a
   piece 12 cm 5 mm less than Kate. What length was Linda's ribbon?

   Data: *K*: 23 cm 5 mm = 235 mm, *L*: *K* – 125 mm
   Estimate: 235 mm – 125 mm ≈ 240 mm – 130 mm = 110 mm
   Check: Calculated difference = estimate

   Answer: The length of Linda's ribbon was 110 mm (= 11 cm).

b)   Dad bought a piece of wood and cut it into two pieces, one 2 m 35 cm and
   the other 3 m 15 cm long. What length of wood did Dad buy?

   Data: 2 m 35 cm = 235 cm, 3 m 15 cm = 315 cm
   Estimate: 235 cm + 315 cm ≈ 240 cm + 320 cm = 560 cm
   Check: 235 cm + 315 cm = 550 cm (≈ 560 cm)

   Answer: The length of wood Dad bought was 550 cm (= 5 m 50 cm).

1 Round the numbers to the nearest ten, then estimate and calculate the sums.

a) 428 + 541

E: [ ][9][7][0]

```
      4 2 8
  +   5 4 1
      9 6 9
```

b) 1328 + 661

E: [1][9][9][0]

```
    1 3 2 8
  +     6 6 1
    1 9 8 9
```

c) 462 + 1417

E: [1][8][8][0]

```
        4 6 2
  + 1 4 1 7
    1 8 7 9
```

2 Round the numbers to the nearest ten, then estimate and calculate the sums.

a) E: [1][7][6][0]   E: [1][4][5][0]   E: [ ][9][3][0]   E: [ ][9][6][0]

```
  1 4 3 6        1 3 6 2          5 7 2          6 3 8
+     3 2 2      +       9 2      + 3 5 6        + 3 2 2
  1 7 5 8        1 4 5 4          9 2 8          9 6 0
```

b) E: [1][1][7][0]   E: [1][2][7][0]   E: [ ][9][5][0]   E: [ ][9][2][0]

```
      8 5 6          3 5 8          8 6 2          5 0 7
  + 3 1 2        + 9 1 1        +     9 2      + 4 0 8
    1 1 6 8        1 2 6 9          9 5 4          9 1 5
```

3 Uncle Tom gathered 468 kg of pears and 1335 kg of apples from the trees in his orchard. How much fruit did he gather altogether?

Data: *P*: 468 kg, *A*: 1335 kg

Plan: *P* + *A*: 468 kg + 1335 kg   *E:*   500 + 1300 = 1800   *C:*
```
        4 6 8
  +  1 3 3 5
     1 8 0 3
```

Answer: He gathered 1803 kg of fruit altogether.

4 Paul has a piece of wire 5 m 47 cm long but it is 602 cm shorter than he needs. What length of wire does Paul need?

Data: Has: 5 m 47 cm = 547 cm,   Needs: 602 cm more

Plan: 547 cm + 602 cm   *E:* 550 + 600 = 1150   *C:*
```
      5 4 7
  +     6 0 2
    1 1 4 9
```

Answer: Paul needs 1149 cm (= 11 m 49 cm) of wire.

5 Mark *Barry Bear*'s sums with a ✔ or a ✗. Correct his mistakes.

a)
```
    2 2 1
  + 3 8 7
    508  ✗
   (608)
```

b)
```
    5 3 2
  + 2 0 9
    741  ✔
```

c)
```
    4 5 9
  + 1 1 1
    570  ✔
```

d)
```
    8 3 3
  +   7 4
    807  ✗
   (907)
```

e)
```
    5 6 7
  + 6 0 3
    1180  ✗
   (1170)
```

1 Fill in the missing digits. Check the addition.

a)
```
    3 2 4
+   2 5 2
    5 7 6
```

b)
```
    2 4 9
+   4 2 1
    6 7 0
```

c)
```
    3 5 2
+   2 2 4
    5 7 6
```

d)
```
    3 2 7
+   7 5 7
  1 0 8 4
```
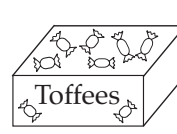
2 In how many different ways can Jenny choose from these treats?

   A   **B**   **C**   **D**

Toffees

£1 62 p   £1 36 p   £5 45 p   £4 94 p

Write how much she would pay if she bought

a)   at most two things:

   (1)   A: £1 62 p . or B: £1 36 p . . or C: £5 45 p . . or D: £4 94 p.

   (2)   A + B = £2 98 p. . or A + C = £7 07 p . . or A + D = £6 56 p . .

       B + C = £6 81 p . . or B + D = £6 30 p . . or C + D = £10 39 p .

b)   at least 3 things: (Do the calculations in your exercise books.)

   (3)   A + B + C = £8 43 p . . . . . or A + B + D = £7 92 p, or . . . . .

       A + C + D = £12 01 p . . . . . or B + C + D = £11 75 p . (4 ways)

   (4)   A + B + C + D = £13 37 p . (1 way). . . . .

3 a)   Fill in the missing digits.

   i)
```
    3 2 5
+ 1 2 4 3
  1 5 6 8
```

   ii)
```
    1 3 5
+   9 1 3
  1 0 4 8
```

   iii)
```
    5 3 9
+   8 0 1
  1 3 4 0
```

   iv)
```
    5 0 7
+ 1 1 8 8
  1 6 9 5
```

   v)
```
    9 7 5
+   3 6 1
  1 3 3 6
```

b)   Write an addition which uses each of the digits from 0 to 9 once only.

   Try out different solutions. Use your exercise books if you need to.

E.g:
```
    2 8 9
+   7 6 4
  1 0 5 3
```
```
    2 6 9
+   7 8 4
  1 0 5 3
```

+ □□□ = □□□□

+ □□□ = □□□□

1

Change the prices of the soft toys to pence.

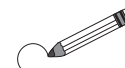| £5.46	£3.56	£8.65	£6.49
546 p	356 p	865 p	649 p
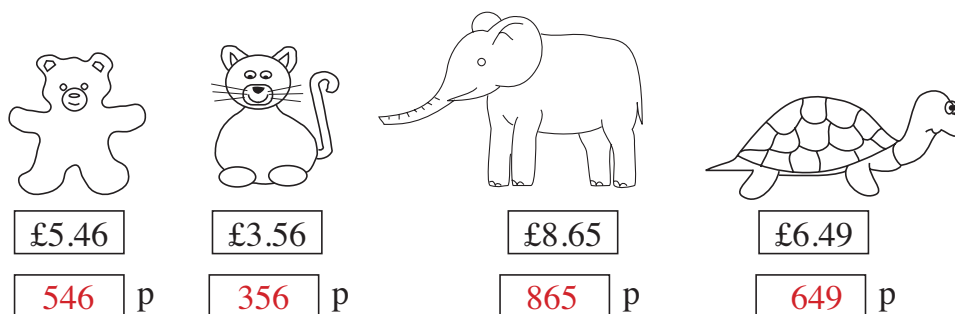
By rounding the prices to the nearest 10 p, estimate the difference between

a)   the bear and the cat: 546 p – 356 p $\approx$ 550 p – 360 p =   190   p

b)   the elephant and the tortoise:

865 p – 649 p $\approx$ 870 – 650 = ... =   220   p

c)   the elephant and the cat:

865 p – 356 p $\approx$ 870 – 360 = ... =   510   p

d)   the tortoise and the bear:

649 p – 546 p $\approx$ 650 – 550 = ... =   100   p

2

Circle the correct answers.

a)   Estimate the difference between 678 and 432

   i)   by rounding to the nearest 100:   100   200   (300)   400

   ii)   by rounding to the nearest 10:   240   (250)   260   270

b)   Estimate the difference between 582 and 147

   i)   by rounding to the nearest 100:   100   300   (500)   700

   ii)   by rounding to the nearest 10:   420   (430)   440   540

3

Estimate the difference by rounding the numbers to the nearest 10:

a)   674 – 466 $\approx$ 670   –   470   =   200

b)   682 – 444 $\approx$ 680   –   440   =   240

c)   639 – 451 $\approx$ 640   –   450   =   190

d)   926 – 543 $\approx$ 930   –   540   =   390

e)   918 – 550 $\approx$ 920   –   550   =   370

1

Fill in the missing numbers.

$$-\ 60 \quad \nearrow \quad 340$$

– 60	340	620	530	310	900	470	783	939
	400	680	590	370	960	530	843	999
– 160	240	520	430	210	800	370	683	839

2

Compare the two sides. Fill in the missing signs.

a) $300 + 800$ $\boxed{<}$ $400 + 900$ b) $126 - 34$ $\boxed{>}$ $46 + 38$

c) $1000 - 400$ $\boxed{<}$ $1200 - 400$ d) 6×40 $\boxed{=}$ 60×4

e) $1500 - 800$ $\boxed{>}$ $1400 - 900$ f) $420 \div 7$ $\boxed{>}$ $420 \div 70$

3

Which is more? How many more? Write subtractions and inequalities.

a)   The smallest 4-digit number compared with the greatest 3-digit number.

$1000 - 999 = 1$ $1000 > 999$

b)   The smallest 4-digit number compared with the smallest 3-digit number.

$1000 - 100 = 900$ $1000 > 100$

c)   The smallest 4-digit number compared with the smallest 2-digit number.

$1000 - 10 = 990$ $1000 > 10$

d)   The greatest 3-digit whole ten compared with the greatest 3-digit hundred.

$990 - 900 = 90$ $990 > 900$

e)   The smallest 4-digit hundred compared with the smallest 4-digit whole ten.

$1000 - 1000 = 0$ $1000 = 1000$

f)   The smallest whole hundred compared with the smallest whole ten.

$100 - 10 = 90$ $100 > 10$

4

Fill in the missing numbers and write the rule. * Do these calculations below.

✿	670	1000	549	394	777	893	987	*573	*464
🍄	420	814	231	384	555	618	555	348	59
🍐	250	186	318	10	222	275	432	225	405

✿ = 🍄 + 🍐   🍄 = ✿ – 🍐   🍐 = ✿ – 🍄

```
    5 7 3
  – 3 4 8
    2 2 5
```

```
    4 6 4
  –   5 9
    4 0 5
```

1 Complete the additions. Write a subtraction for each one.

a)

```
    5 4 3
  + 3 3 2
    8 7 5
```

```
    8 7 5
  - 5 4 3
    3 3 2
```

b)

```
    1 5 6
  + 8 3 3
    9 8 9
```

```
    9 8 9
  - 1 5 6
    8 3 3
```

c)

```
    2 1 7
  + 4 4 2
    6 5 9
```

```
    6 5 9
  - 2 1 7
    4 4 2
```

d)

```
    6 3 2
  + 2 3 5
    8 6 7
```

```
    8 6 7
  - 6 3 2
    2 3 5
```

e)

```
    1 2 5 4
  +   6 4 2
    1 8 9 6
```

```
    1 8 9 6
  - 1 2 5 4
        6 4 2
```

2 Estimate the difference (by rounding to the nearest 10), then do the calculation.

876 – 345   *E*: 880 – 350 = 530. . . . .
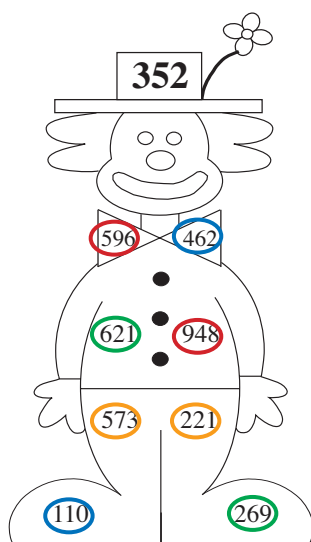
```
    8 7 6
  - 3 4 5
    5 3 1
```

3 Practise subtraction.

a) i)
```
    3 8 6
  - 2 1 5
    1 7 1
```
ii)
```
    3 8 6
  - 2 1 6
    1 7 0
```
iii)
```
    3 8 6
  - 2 1 7
    1 6 9
```
iv)
```
    3 8 6
  - 2 1 8
    1 6 8
```

b) i)
```
    7 6 8
  - 2 4 5
    5 2 3
```
ii)
```
    7 6 8
  - 2 6 5
    5 0 3
```
iii)
```
    7 6 8
  - 2 8 5
    4 8 3
```
iv)
```
    7 6 8
  - 3 0 5
    4 6 3
```

c) i)
```
    5 0 4
  - 3 0 1
    2 0 3
```
ii)
```
    5 0 4
  - 3 1 1
    1 9 3
```
iii)
```
    5 0 4
  - 3 2 1
    1 8 3
```
iv)
```
    5 0 4
  - 3 3 1
    1 7 3
```

4

352

596 462
621 948
573 221
110 269

Use the numbers in the clown to write subtractions.
The difference should be the number in his hat.

```
    9 4 8
  - 5 9 6
    3 5 2
```

```
    4 6 2
  - 1 1 0
    3 5 2
```

```
    6 2 1
  - 2 6 9
    3 5 2
```

```
    5 7 3
  - 2 2 1
    3 5 2
```

1 Fill in the missing numbers.

820 – 220

960 – 160

260 + 340

750 + 50

600	800
500	300

290 + 210

440 – 140

780 – 280

570 – 270
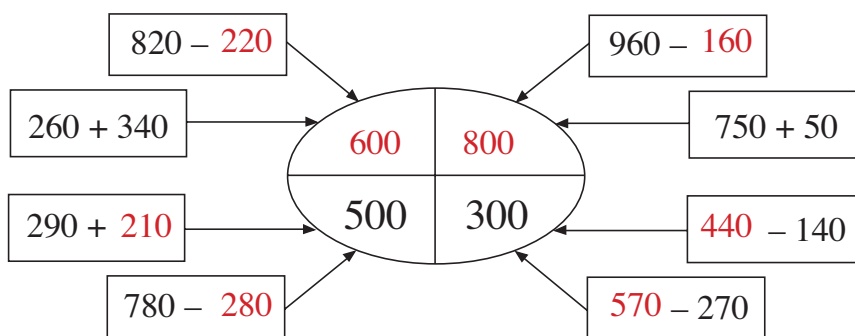
2 How much money did we have left after our holiday? Complete the drawing.
Estimate by rounding to the nearest whole ten. Do the calculation and check it.

a)

	Estimation	Calculation	Check
Had:	≈ 3 4 0	Th H T U 3 4 2	Th H T U 1 1 1
Spent:	≈ 2 3 0	– 2 3 1	+ 2 3 1
Had left:	≈ 1 1 0	1 1 1	3 4 2

b)

	Estimation	Calculation	Check
Had:	≈ 5 5 0	Th H T U 5 4 5	Th H T U 2 0 3
Spent:	≈ 3 4 0	– 3 4 2	+ 3 4 2
Had left:	≈ 2 1 0	2 0 3	5 4 5

3 Estimate the difference by rounding the numbers to the nearest whole ten.

Do the calculation, then check it in your head with an addition.

a)

i)
```
  9 4 3
– 6 1 2
  3 3 1
```
E: 3 3 0

ii)
```
  7 8 5
– 2 4 5
  5 4 0
```
E: 5 4 0

iii)
```
  8 4 7
– 3 4 6
  5 0 1
```
E: 5 0 0

iv)
```
1 8 6 4
1 3 5 2
    5 1 2
```
E: 5 1 0

v)
```
1 7 5 6
    6 5 2
1 1 0 4
```
E: 1 1 1 0

b)

i)
```
  8 7 2
– 3 5 6
  5 1 6
```
E: 5 1 0

ii)
```
  7 8 0
– 3 5 7
  4 2 3
```
E: 4 2 0

iii)
```
  8 2 5
– 6 0 9
  2 1 6
```
E: 2 2 0

iv)
```
  7 3 5
– 4 8 2
  2 5 3
```
E: 2 6 0

v)
```
  9 0 3
– 5 7 1
  3 3 2
```
E: 3 3 0

1 Fill in the missing numbers. Continue the pattern once more.

E.g:

```
    8  6  8          6  5  5          5  2  3          3  0  2          1  5  3          1  2  0
 -  2  1  3       -  1  3  2       -  2  2  1       -  1  4  9       -     3  3       -     2  0
    6  5  5          5  2  3          3  0  2          1  5  3          1  2  0          1  0  0
```

2 One of these statements is <u>not</u> correct. Circle its sign.
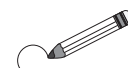
✳   The difference between 597 and 389 is 208.

✠   The difference between 589 and 397 is less than one thousand.

(☆)   The difference between 687 and 265 is an odd number.

3 Write down the data. Make a plan. Estimate, calculate and check the answer.

a) There are 857 fruit trees in an orchard. 614 are apple trees and the rest are plum trees. How many plum trees are in the orchard?

Data: T: 857; A: 614

Plan: P: T − A = 857 − 614

Estimation: 860 − 610 = 250

Answer: There are 243 plum trees in the orchard.

Calculation

```
    8  5  7
 -  6  1  4
    2  4  3
```

Check

```
    2  4  3
 +  6  1  4
    8  5  7
```

b) Mary and Jane are collecting buttons. Mary has 857 buttons.
Jane has 641 fewer buttons than Mary. How many buttons does Jane have?

Data: M: 857 ; J: M − 641

Plan: 857 − 641

Estimation: 860 − 640 = 220

Answer: Jane has 216 buttons.

Calculation

```
    8  5  7
 -  6  4  1
    2  1  6
```

Check

```
    2  1  6
 +  6  4  1
    8  5  7
```

4 a) Alan and Barry have 945 stamps altogether. Complete the table to show how many stamps they could each have.

A	321	430	238	536	372	264	537	222	73	27
B	624	515	707	409	573	681	408	723	872	918

b) Cindy and Diana are collecting 1 p coins. Cindy has 345 more coins than Diana. Complete the table to show how many coins they could each have.

C	756	468	876	754	909	662	1058	1068	1567	1628
D	411	123	531	409	564	317	713	723	1222	1283

1 Write down the data. Make a plan. Estimate, calculate and check the answer.

a)   A large barrel can hold 578 litres and a small barrel can hold 256 litres.
     How much more liquid can the large barrel hold than the small one?

Data: L: 578 ;   S: 256

Plan: L – S = 578 – 256

Estimation: 580 – 260 = 320 (litres)

Answer: The large barrel holds 322 litres more than the small one.

Calculation

```
    5  7  8
 -  2  5  6
    3  2  2
```

Check

```
    3  2  2
 +  2  5  6
    5  7  8
```

b)   The length of Molly's bedroom is 4 m 32 cm, which is 1 m 27 cm more
     than its width. What is the width of Molly's bedroom?

Data: L: 4 m 32 cm; W = L – 1 m 27 cm

Plan: W = 432 cm – 127 cm

Estimation: 430 – 130 = 300 cm

Answer: The width is 3 m 5 cm.

Calculation

```
    4  3  2
 -  1  2  7
    3  0  5
```

Check

```
    3  0  5
 +  1  2  7
    4  3  2
```

2 What number is:

Calculations

a)   the difference between 677 and 352? | 325 | 677 – 352 = 325

b)   352 more than 677? | 1029 | 677 + 352 = 1029

c)   352 less than 677? | 325 | 677 – 352 = 325

d)   the sum of 677 and 352? | 1029 | 677 + 352 = 1029

3 There were 236 women, 347 men, 163 boys and 148 girls on a beach.

a)   How many people were on the beach altogether? | 894 |

b)   How many of them were adults? | 583 |

c)   How many more adults than children were there? | 272 |

d)   i)   Were there more males or females on the beach? | Males |

     ii)   How many more? | 126 |

4 Complete the subtractions.

a)
```
    8  7  6
 -  1  5  4
    7  2  2
```

b)
```
    9  5  2
 -  7  0  4
    2  4  8
```

c)
```
    9  6  9
 -  4  5  6
    5  1  3
```

d)
```
    8  5  9
 -  3  2  7
    5  3  2
```

e)
```
    1  7  6  4
 -  1  5  1  8
       2  4  6
```

1 Complete the additions. Write a subtraction for each one.

a)

```
  4 5 5
+ 1 4 2
  5 9 7
```

```
  5 9 7
− 1 4 2
  4 5 5
```

b)

```
  3 7 3
+ 3 0 5
  6 7 8
```

```
  6 7 8
− 3 0 5
  3 7 3
```

c)

```
    5 5 4
+ 1 3 2 5
  1 8 7 9
```

```
  1 8 7 9
− 1 3 2 5
    5 5 4
```

d)

```
  1 3 5 6
    2 5 0
+
  1 6 0 6
```

```
  1 6 0 6
−   2 5 0
  1 3 5 6
```

e)

```
    5 5 3
+   4 6 0
  1 0 1 3
```

```
  1 0 1 3
−   4 6 0
    5 5 3
```

2 Complete the subtractions. Write the differences in increasing order.

a)

```
  6 7 3
− 3 2 1
  3 5 2
```

b)

```
  4 9 6
− 2 7 2
  2 2 4
```

c)

```
  8 9 3
− 6 2 8
  2 6 5
```

d)

```
  5 4 1
− 3 5 2
  1 8 9
```

189 < 224 < 265 < 352

3 Solve the problem in your exercise book. Check your result. Write the answer.

On Monday, the children picked 253 apples in their grandparents' orchard.
On Tuesday they picked 89 more apples than they did on Monday.

How many apples did the children pick altogether?

*Answer*: 253 + 253 + 89 = 595   The children picked 595 apples altogether.

4 Use every number on a dice only once in each subtraction, so that the subtraction makes sense and the difference is:

a)   at least 300

E.g:
```
  6 5 4
− 2 3 1
  4 2 3
```

b)   the smallest possible

```
  4 1 2
− 3 6 5
    4 7
```

c)   between 200 and 300

E.g:
```
  6 5 3
− 4 1 2
  2 4 1
```

d)   even

E.g:
```
  4 6 5
− 3 2 1
  1 4 4
```

e)   the greatest possible

```
  6 5 4
− 1 2 3
  5 3 1
```

f)   divisible by 10

```
  □ □ □
− □ □ □
  □ □ □
```

Impossible!

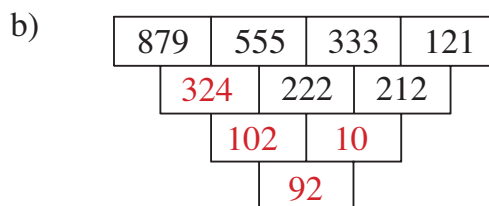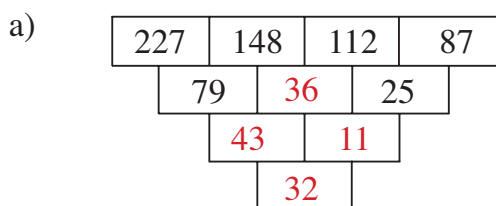**1** The sum of any two adjacent numbers is the number directly above them.
The same sign means the same number. Fill in the missing numbers.

a)

| 2000 |
| ⊕ 800 | ★ 1200 |
| ▼ 400 | ▼ 400 | ⊕ 800 |

b)

| 900 |
| � 360 | ● 540 |
| ❋ 180 | ❋ 180 | ✳ 360 |
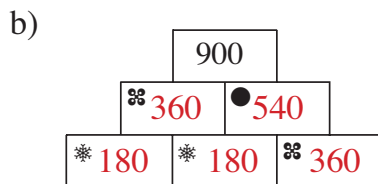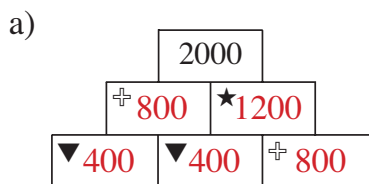
2 Work out the rule and fill in the missing numbers.

a)

227	148	112	87
79	36	25
43	11
32

b)

879	555	333	121
324	222	212
102	10
92

Rule: The difference between two adjacent numbers is the number directly below them.

3 Write your answer as an operation. What number is:

a)   189 more than the sum of 372 and 476? $372 + 476 + 189 = 1037$ . . . . .

b)   189 more than the difference between 372 and 476?

$476 - 372 + 189 = 293$ . . . . . .

c)   189 less than the sum of 372 and 476? $372 + 476 - 189 = 659$ . . . . . .

d)   178 less than 4 times 80? $4 \times 80 - 178 = 142$ . . . .

e)   593 more than 1 sixth of 480? $480 \div 6 + 593 = 673$ . . . .

4 Which numbers can be written instead of the letters to make the statements true?

i) $589 + \boxed{a} = 832$ ii) $645 - \boxed{d} = 331$ iii) $\boxed{g} - 375 = 412$
$a =$ __243__ $d =$ __314__ $g =$ __787__

$589 + \boxed{b} > 832$ $645 - \boxed{e} \geq 331$ $\boxed{h} - 375 < 412$
$b :$ __244, 245, 246, ...__ $e :$ __314, 313, ...__ $h :$ __786, 785, ...__

$589 + \boxed{c} \leq 832$ $645 - \boxed{f} < 331$ $\boxed{i} - 375 > 412$
$c :$ __243, 242, ...__ $f :$ __315, 316, ..., 645__ $i :$ __788, 789, ...__

5 The same letter stands for the same digit.
What is the value of each letter?
Write the sum with digits.

E.g:

```
  O N E        1 8 9          3 2 4
+ F O U R    + 5 1 6 0      + 1 3 7 0
─────────    ─────────      ─────────
  F I V E      5 3 4 9        1 6 9 4
```
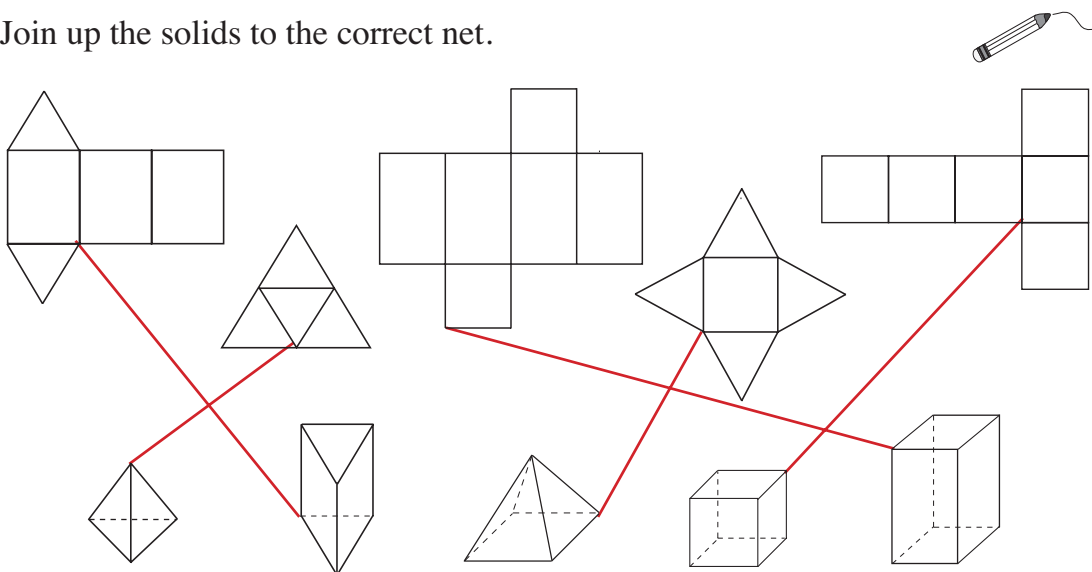etc.

1 Count the number of faces, vertices and edges of each solid and fill in the table.

.

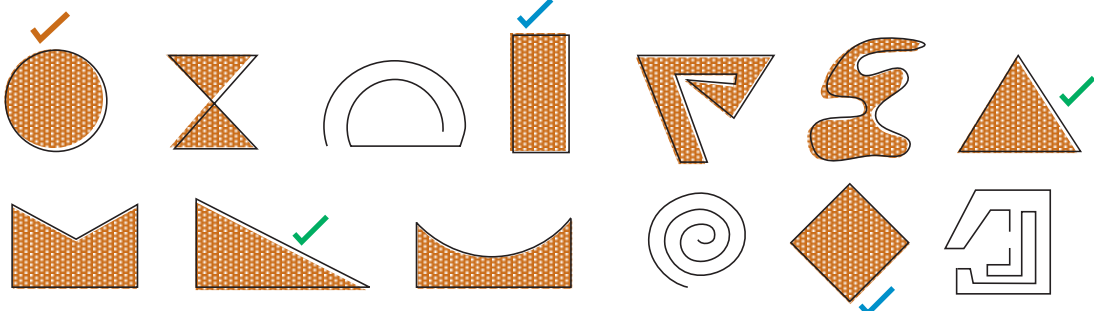|	Square-based pyramid	Triangle-based prism	Cuboid	Cube	Hexagonal prism	Triangle-based pyramid
Faces	5	5	6	6	8	4
Vertices	5	6	8	8	12	4
Edges	8	9	12	12	18	6

2 Join up the solids to the correct net.

3 Colour the plane shapes which are bordered by an unbroken line.

Tick any circles with *red*, any rectangles with *blue* and any triangles with *green*.

4 Draw the shapes described on a squared grid sheet (or in your exercise books).

a) A line 8 units long which is divided into 3 segments, 2 of them equal.

b) A rectangle which has perimeter 8 units.

c) A plane shape which has area 8 square units and perimeter 14 units.
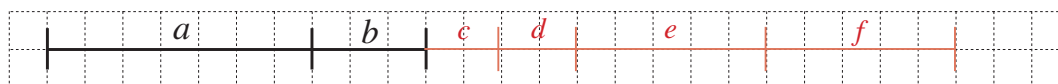
Accurate drawings required.

1

How long is the perimeter of this shape?
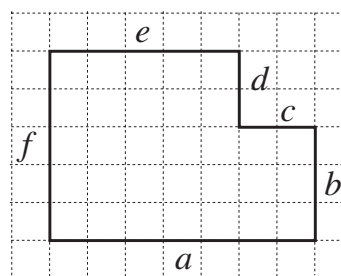
First draw the perimeter as one horizontal line.
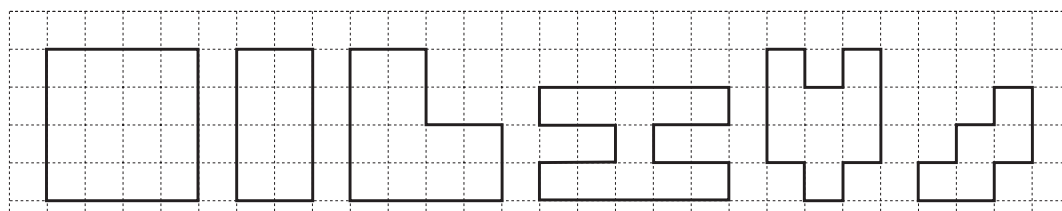Draw each side in letter order and label it.

$$7 + 3 + 2 + 2 + 5 + 5 = 24$$

a)   If the unit used is ⊢⊣ , then   Perimeter = | 24 | ⊢⊣

b)   If the unit used is ⊢^{1 cm}⊣ , then   Perimeter = | 12 | cm

c)   If the unit used is ⊢——⊣ , then   Perimeter = | 8 | ⊢——⊣

2

Complete the table to show the perimeter (*P*) and area (*A*) of each shape.

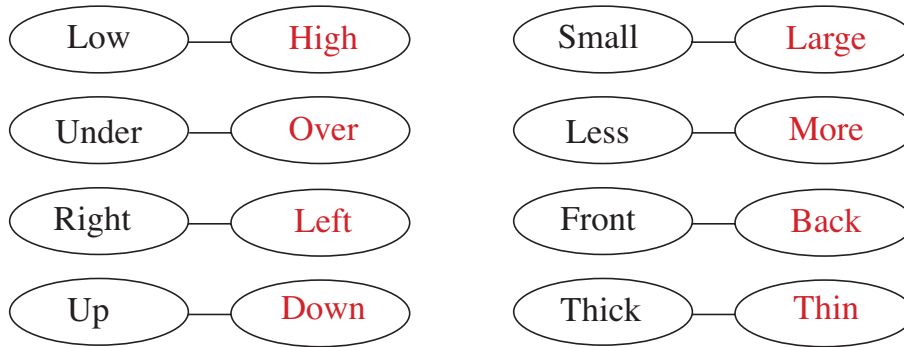| P ⊢⊣	16	12	16	24	16	12
A □	16	8	12	11	9	5

3

What is the area of each shape? Write the number of units inside each one.
(Shape 12 has been divided up into easier parts.)

1 **6**   2 **10**

3 **16**   4 **14**

5 **25**

6 [**1**]   7 **2**   8 **4**   9 **8**

10 **16**

11 **8**

12 **4.5** **4.5**

18 **4.5** (**36**)

Page 86
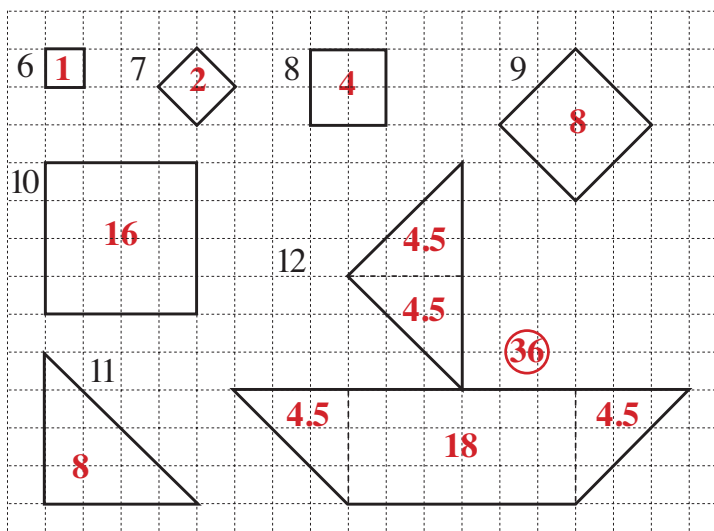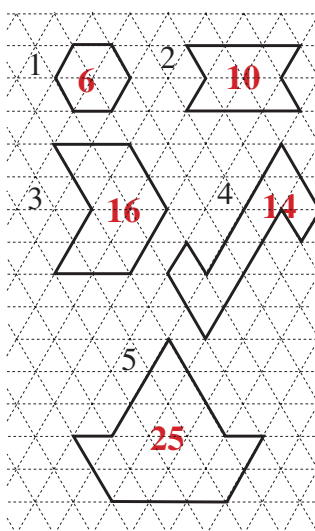
1   Write the opposite part of each pair.

Low — High   Small — Large

Under — Over   Less — More

Right — Left   Front — Back

Up — Down   Thick — Thin

2   This is a plan of a classroom. Follow the instructions.

Tick:

Column 5 in *green*

Row 3 in *red*

Column 2 in *blue*

Colour:
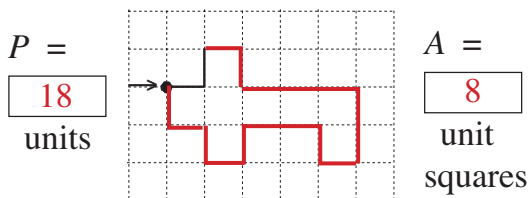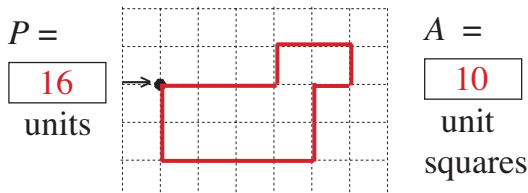
(C2, R1) in *green*

(C1, R3) in *red*

(C5, R2) in *blue*

Blackboard

Teacher's desk

Column 1

Row 1
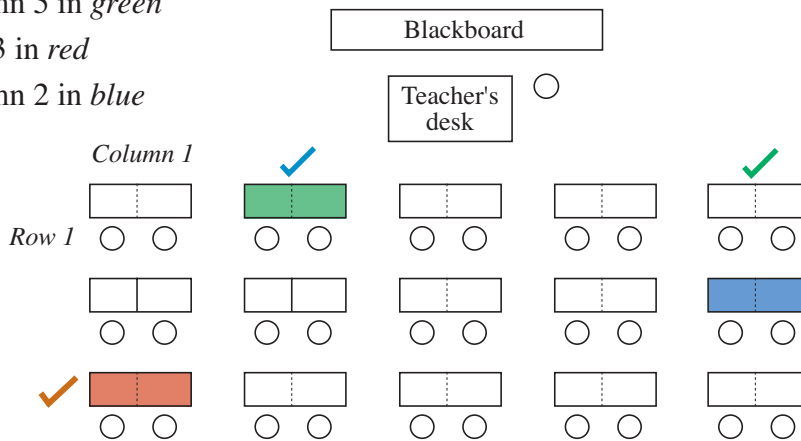
3   Follow the instructions and draw the pictures.

a)   Right 1, Up 1, R1, Down 1,
     R3, D2, Left 1, U1, L2,
     D1, L1, U1, L1, U1.

$P =$ 18 units

$A =$ 8 unit squares

b)   R3, U1, R2, D1, L1, D2,
     L4, U2.

$P =$ 16 units

$A =$ 10 unit squares

Write instructions on how to draw these shapes.

c)

R1, D1,
R1, U1, R1, D1,
R1, U1, R1, D2,
L1, D2, R1, D1,
L5, U1, R1, U2,
L1, U2
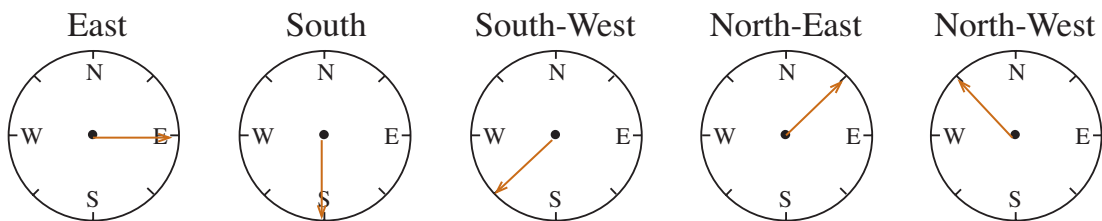
$P = 28$ units

$A = 19$ unit squares

d)

U1, R1, U3, R1,
D3, R3, U1, R1,
D3, L1, U1, L3,
D3, L1, U3, L1

$P = 30$ units

$A = 14$ unit squares

Page 87

1 Draw an arrow on each compass, so that it points in the given direction.

East   South   South-West   North-East   North-West

2 Start facing North. Follow the instructions. In which direction are you facing?

a) Turn 2 right angles to the left, then 1 right angle to the right.

Compass point: . West . . . . .

b) Turn 3 right angles to the right, then half a right angle to the left.

Compass point: . South West .

c) Turn 2 right angles to the right, then 1 and a half right angles to the right.
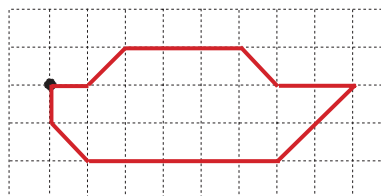
Compass point: . North West .

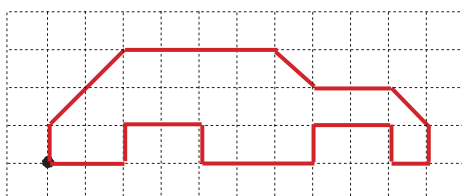**3** Start from the point. Follow the instructions and draw the shape.
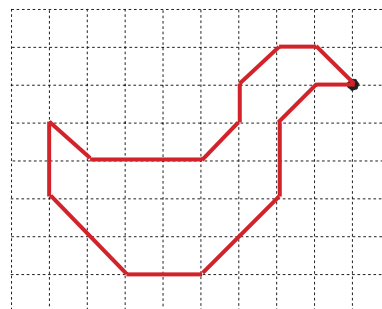
a) N3, W1, NE1, E3, SE1,
W1, S3, W3.
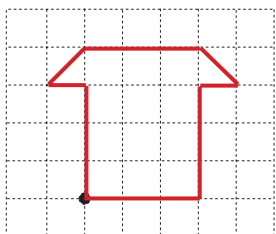
b) E1, NE1, E3, SE1, E2, SW2,
W5, NW1, N1

c) N1, NE2, E4, SE1, E2, SE1,
S1, W1, N1, W2, S1, W3, N1,
W2, S1, W2.

d) NW1, W1, SW1, S1, SW1, W3, NW1,
S2, SE2, E2, NE2, N2, NE1, E1.

4 A man walked 1 km South, then 3 km West, then 1 km North. How far in which direction does he still have to walk to get back to his starting point?

. 3 km East . .