

**1**

Fill in the results. Colour equal values in the same colour.

$18 + 15 = 33$	$31 - 10 - 5 = 16$	$25 + 10 - 2 = 33$
$28 + 5 = 33$	$31 - 11 - 4 = 16$	$28 + 2 + 3 = 33$
$31 - 15 = 16$	$18 + 10 + 5 = 33$	$31 - 10 - 1 - 4 = 16$
$35 - 11 = 24$	$18 + 20 - 5 = 33$	$31 - 7 + 8 = 32$
$25 - 8 = 17$	$31 - 20 + 5 = 16$	$25 + 5 + 3 = 33$

**2**

Mike has 35 books. He has 18 reference books and the rest are story books.

- a) How many story books does Mike have? ...17.....(35 - 18).....
- b) Which type of book does Mike have more of? **reference books**.....
- How many more does he have? ...1.....

**3**

Do what the arrows tell you. Fill in the missing numbers.

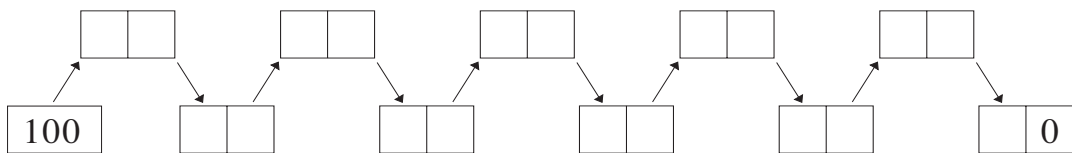
a)

	$\begin{matrix} \nearrow +20 \\ \searrow +17 \end{matrix}$	$\begin{matrix} \nearrow -11 \\ \searrow +33 \end{matrix}$	$\begin{matrix} \nearrow -23 \\ \searrow +25 \end{matrix}$	$\begin{matrix} \nearrow +18 \\ \searrow -29 \end{matrix}$	$\begin{matrix} \nearrow -35 \\ \searrow -5 \end{matrix}$
$\begin{matrix} \boxed{3} & \boxed{0} \\ \hline \boxed{1} & \boxed{0} \end{matrix}$	$\begin{matrix} \boxed{3} & \boxed{6} \\ \hline \boxed{4} & \boxed{7} \end{matrix}$	$\begin{matrix} \boxed{4} & \boxed{6} \\ \hline \boxed{6} & \boxed{9} \end{matrix}$	$\begin{matrix} \boxed{8} & \boxed{9} \\ \hline \boxed{7} & \boxed{1} \end{matrix}$	$\begin{matrix} \boxed{2} & \boxed{5} \\ \hline \boxed{6} & \boxed{0} \end{matrix}$	$\begin{matrix} \boxed{2} & \boxed{5} \\ \hline \boxed{2} & \boxed{0} \end{matrix}$

b)

	$\begin{matrix} \nearrow +15 \\ \searrow +7 \end{matrix}$	$\begin{matrix} \nearrow +18 \\ \searrow -13 \end{matrix}$	$\begin{matrix} \nearrow -9 \\ \searrow +52 \end{matrix}$	$\begin{matrix} \nearrow +24 \\ \searrow -14 \end{matrix}$	$\begin{matrix} \nearrow -30 \\ \searrow -40 \end{matrix}$
$\begin{matrix} \boxed{1} & \boxed{5} \\ \hline \boxed{\quad} & \boxed{0} \end{matrix}$	$\begin{matrix} \boxed{4} & \boxed{0} \\ \hline \boxed{2} & \boxed{2} \end{matrix}$	$\begin{matrix} \boxed{1} & \boxed{8} \\ \hline \boxed{2} & \boxed{7} \end{matrix}$	$\begin{matrix} \boxed{9} & \boxed{4} \\ \hline \boxed{7} & \boxed{0} \end{matrix}$	$\begin{matrix} \boxed{9} & \boxed{4} \\ \hline \boxed{8} & \boxed{0} \end{matrix}$	$\begin{matrix} \boxed{5} & \boxed{0} \\ \hline \boxed{1} & \boxed{0} \end{matrix}$

c) Make up your own operations to get from 100 to 0.



**4**

Practise addition and subtraction.

- |                            |                           |                          |
|----------------------------|---------------------------|--------------------------|
| a) $39 + 61 = \boxed{100}$ | b) $45 - 25 = \boxed{20}$ | c) $77 + 7 = \boxed{84}$ |
| $47 + 13 = \boxed{60}$     | $63 - 47 = \boxed{16}$    | $88 + 8 = \boxed{96}$    |
| $64 + 26 = \boxed{90}$     | $36 - 18 = \boxed{18}$    | $55 - 15 = \boxed{40}$   |

**1**

Complete the table.

x	0	1	2	3	4	5	6	7	8	9	10	11	12	13
△	0	2	4	6	8	10	12	14	16	18	20	22	24	26
⬠	0	5	10	15	20	25	30	35	40	45	50	55	60	65
⬠	0	10	20	30	40	50	60	70	80	90	100	110	120	130

**2**

Complete the table. Multiply the numbers in the top row by 4, 7 and 8.

x	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
4	0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
7	0	7	14	21	28	35	42	49	56	63	70	77	84	91	98	105
8	0	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120

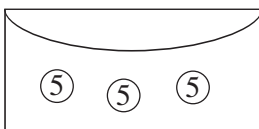
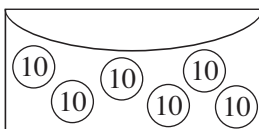
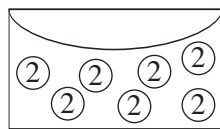
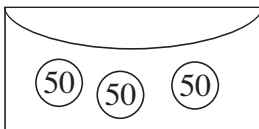
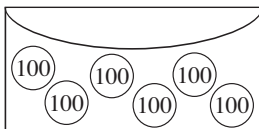
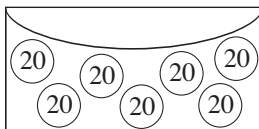
**3**

Practise multiplication.

- a)  $4 \times 3 = 12$   
 $2 \times 7 = 14$   
 $6 \times 8 = 48$   
 $5 \times 6 = 30$   
 $7 \times 4 = 28$
- b)  $7 \times 7 = 49$   
 $3 \times 9 = 27$   
 $6 \times 4 = 24$   
 $9 \times 9 = 81$   
 $8 \times 5 = 40$
- c)  $2 \times 8 = 16$   
 $4 \times 0 = 0$   
 $3 \times 1 = 3$   
 $10 \times 1 = 10$   
 $10 \times 10 = 100$

**4**

What is the value of each purse? Write a multiplication below each picture.

- a)   
 $3 \times 5 = 15$
- b)   
 $6 \times 10 = 60$
- c)   
 $7 \times 2 = 14$
-   
 $3 \times 50 = 150$
-   
 $6 \times 100 = 600$
-   
 $7 \times 20 = 140$

**5**

James had 37 marbles. He won 11 marbles from each of his 3 friends. How many marbles does James have now?

$$37 + 11 + 11 + 11 = 37 + 3 \times 11 = 70$$

70 marbles

**1**

Pull out the data. Make a plan. Do the calculation and check it.

- a) Each taxi can take 6 people. How many taxis will be needed for 30 people?

Plan:  $30 \div 6$

Calculation:  $30 \div 6 = 5$

Check:  $5 \times 6 = 30$

Answer: **5 taxis are needed.**

- b) 45 sweets are divided equally among 7 children. How many sweets will each child get?

Plan:  $45 \div 7$

Calculation:  $45 \div 7 = 6, \text{ remainder } 3$  Check:  $3 + 6 \times 7 = 45$

Answer: **Each child will get 6 sweets. There will be 3 sweets remaining.**

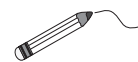
**2**

Practise division.

- |   |  |  |
|---|--|--|
| a) $50 \div 5 = $ <input type="text" value="10"/> | b) $16 \div $ <input type="text" value="2"/> $= 8$ | c) $14 \div 2 = $ <input type="text" value="7"/> |
| $70 \div 10 = $ <input type="text" value="7"/>    | $40 \div $ <input type="text" value="10"/> $= 4$   | $140 \div 2 = $ <input type="text" value="70"/>  |
| $80 \div 2 = $ <input type="text" value="40"/>    | $40 \div $ <input type="text" value="5"/> $= 8$    | $140 \div 20 = $ <input type="text" value="7"/>  |
| $18 \div 2 = $ <input type="text" value="9"/>     | $45 \div $ <input type="text" value="5"/> $= 9$    | $10 \div 2 = $ <input type="text" value="5"/>    |
| $35 \div 5 = $ <input type="text" value="7"/>     | $15 \div $ <input type="text" value="5"/> $= 3$    | $100 \div 2 = $ <input type="text" value="50"/>  |

**3**

Which shape has a half, a quarter, an eighth of it shaded?  
Join up the shapes to the matching parts.



A: B: C: D: E: 
  
           

**4**

- a) It takes 3 and a half minutes to boil an egg.  
How long will it take to boil 3 eggs? **Three and a half minutes**

- b) There are 4 sisters in a family. Each of them has one brother.  
How many children are in this family?  
**5 children (4 girls and 1 boy)**

**1**

Practise division. What is the remainder? Check it with a multiplication.

- |    |  |  |  |
|----|--|--|--|
| a) | $13 \div 4 = \boxed{3}$<br>remainder $\boxed{1}$<br>Check<br>$1 + 3 \times 4 = 13$ | $12 \div 9 = \boxed{1}$<br>remainder $\boxed{3}$<br>Check<br>$3 + 1 \times 9 = 12$   | $16 \div 7 = \boxed{2}$<br>remainder $\boxed{2}$<br>Check<br>$2 + 7 \times 2 = 16$ |
| b) | $29 \div 8 = \boxed{3}$<br>remainder $\boxed{5}$<br>Check<br>$5 + 8 \times 3 = 29$ | $35 \div 3 = \boxed{11}$<br>remainder $\boxed{2}$<br>Check<br>$2 + 11 \times 3 = 35$ | $26 \div 4 = \boxed{6}$<br>remainder $\boxed{2}$<br>Check<br>$2 + 4 \times 6 = 26$ |
| c) | $45 \div 7 = \boxed{6}$<br>remainder $\boxed{3}$<br>Check<br>$3 + 7 \times 6 = 45$ | $56 \div 4 = \boxed{14}$<br>remainder $\boxed{0}$<br>Check<br>$4 \times 14 = 56$     | $39 \div 8 = \boxed{4}$<br>remainder $\boxed{7}$<br>Check<br>$7 + 8 \times 4 = 39$ |

**2**

Which number does each letter represent? Fill in the missing numbers.

- $5 \times a = 25$      $7 \times b = 42$      $c \times 4 = 36$      $d \times 6 = 54$      $16 \div e = 4$   
 $a = \boxed{5}$      $b = \boxed{6}$      $c = \boxed{9}$      $d = \boxed{9}$      $e = \boxed{4}$
- $f \div 7 = 9$      $g \div 7 = 8$      $45 \div h = 9$      $53 \div i = 10, \text{ remainder } 3$   
 $f = \boxed{63}$      $g = \boxed{56}$      $h = \boxed{5}$      $i = \boxed{5}$
- $40 \div j = 6, \text{ remainder } 4$      $k \div 10 = 9, \text{ remainder } 1$      $l \div 3 = 7, \text{ remainder } 1$   
 $j = \boxed{6}$      $k = \boxed{91}$      $l = \boxed{22}$

**3**

List the whole numbers which make the inequalities true.

- a)  $5 \times 6 < \square < 9 \times 4$      $\square$ :  $31, 32, 33, 34, 35$  .....
- b)  $35 \div 5 \leq \textcircled{\text{diagonal lines}} \leq 81 \div 9$      $\textcircled{\text{diagonal lines}}$ :  $7, 8, 9$  .....
- c)  $6 \times 6 - 4 \times 7 > \text{semi-circle}$      $\text{semi-circle}$ :  $0, 1, 2, 3, 4, 5, 6, 7$  .....
- d)  $15 \times 5 < \text{pentagon} \leq 10 \times 8$      $\text{pentagon}$ :  $76, 77, 78, 79, 80$  .....

**4**

I thought of a number. I divided it by 7 and the result was 8, remainder 6. What is the number I was thinking of?

Calculation:  $7 \times 8 + 6 = 62$  .....

Check:  $62 \div 7 = 8, \text{ remainder } 6$  ..... Answer:  $62$

**1**

Fill in the missing numbers and units.

a) 2 litres = 200

d) 3 litres 50 cl = 350

b) 5 litres =  cl

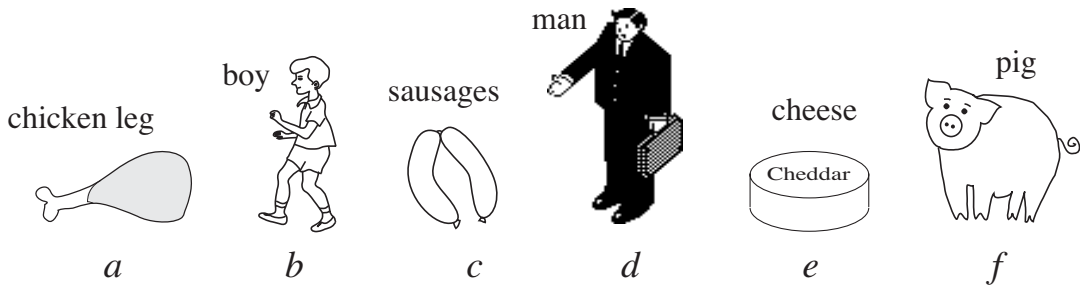
e) 2 and a half litres =  cl

c) 9 litres =  cl

f) 40 cl =  ml

**2**

What do you think they would weigh in real life? Write the letters in the circles.



100 kg <  < 200 kg      30 kg <  < 40 kg      60 kg <  < 90 kg

500 g <  < 800 g      1000 g <  < 2000 g      100 g <  < 200 g

**3**

Change the measures of time. Fill in the missing numbers.

a) 73 days =  weeks  days

b) 68 minutes =  hours  minutes

c) 135 minutes =  hours  minutes

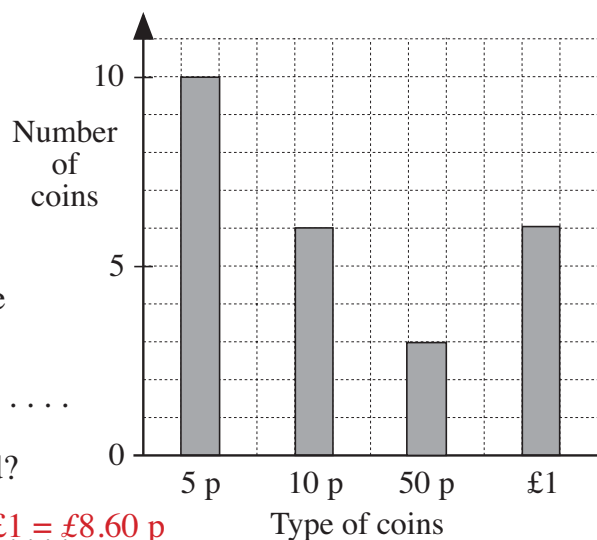
d) 15 months =  years  months

**4**

Rachel emptied her piggy bank and counted the coins she had saved.



The graph shows the number of each type of coin in Rachel's piggy bank.



a) How many coins did Rachel have in her piggy bank altogether?

.....  .....

b) How much money had she saved?

× 5 p +  × 10 p +  × 50 p +  × £1 =

**1**

Collect data on birthdays for all the pupils in your class.



- a) Keep a tally of the number of birthdays on each **day** (1st to 31st) of the month in this table.

**Birthdays on each day of the month**

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

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

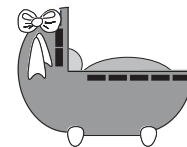
- b) Keep a tally of the number of birthdays in each **month** (January to December) in this table.



**Birthdays in each month**

<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>

- c) Keep a tally of the number of pupils in your class who were born in each **year**.



**Year of birth**

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

- d) Which is the **most** common:  
 i) day ..... ii) month ..... iii) year? .....
- e) Which is the **least** common:  
 i) day ..... ii) month ..... iii) year? .....
- f) Will this result be the same for **all** classes in your school? .....  
 Why? .....

**1**

Sue spent some money on sweets. How much did she have left?  
Complete the table.

Had (p)	100	200	90	190	150	180	150	150
Spent (p)	50	50	60	160	140	110	110	140
Had left (p)	50	150	30	30	10	70	40	10

**2**

Use only the digits 0, 1, 2, 3, 4 or 5. Which of these digits can be put in the units, tens or hundreds boxes so that the numbers are

- a) **exactly** divisible by 5      2 5 <sup>0/5</sup>       2 <sup>0/1/2/3/4/5</sup>  0      <sup>1/2/3/4/5</sup>  30      2 0 <sup>0/5</sup>
- b) **exactly** divisible by 10?      2 5       1  0       30      2 0
- 0      0/1/2/3/4/5      1/2/3/4/5      0

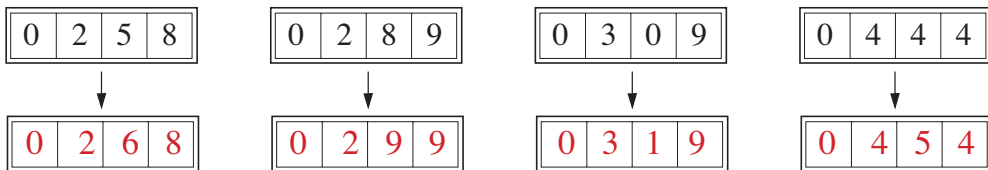
**3**

Fill in the missing numbers.

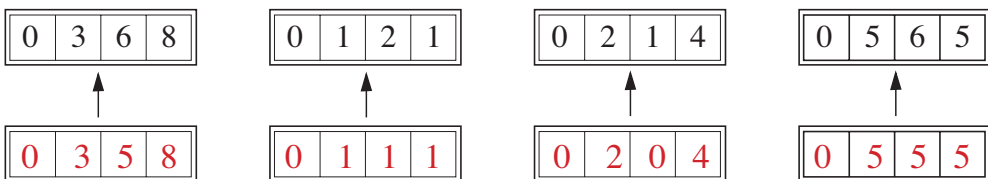
- a)  $4 + 7 = \boxed{11}$      $40 + 70 = \boxed{110}$      $1 + 8 = \boxed{9}$      $10 + 80 = \boxed{90}$
- b)  $5 + 8 = \boxed{13}$      $50 + 80 = \boxed{130}$      $6 + 9 = \boxed{15}$      $60 + 90 = \boxed{150}$
- c)  $20 - 5 = \boxed{15}$      $200 - 50 = \boxed{150}$      $13 - 4 = \boxed{9}$      $130 - 40 = \boxed{90}$
- d)  $30 - 6 = \boxed{24}$      $300 - 60 = \boxed{240}$      $15 - 8 = \boxed{7}$      $150 - 80 = \boxed{70}$
- e)  $75 - 9 = \boxed{66}$      $750 - 90 = \boxed{660}$      $23 - 7 = \boxed{16}$      $230 - 70 = \boxed{160}$

**4**

a) What will the milometer show when we have gone another 10 miles?



b) What did the milometer show 10 miles ago?



**5**

Which different 1-digit numbers could  $a$ ,  $b$  and  $c$  be if  $a + b + c = 14$  and  $a \times b \times c = 84$ ?    E.g:  $a = \boxed{3}$      $b = \boxed{4}$   
 $c = \boxed{7}$

**1**

Write these numbers in the correct boxes.

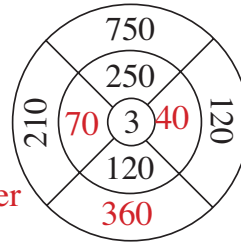
0, 3, 6, 7, 9, 13, 22, 34, 67, 88, 102, 112, 123, 156, 187

Even 0, 6, 22, 34, 88, 102, 112, 156	Odd 3, 7, 9, 13, 67, 123, 187
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**2**

Write the rule and fill in the missing numbers.

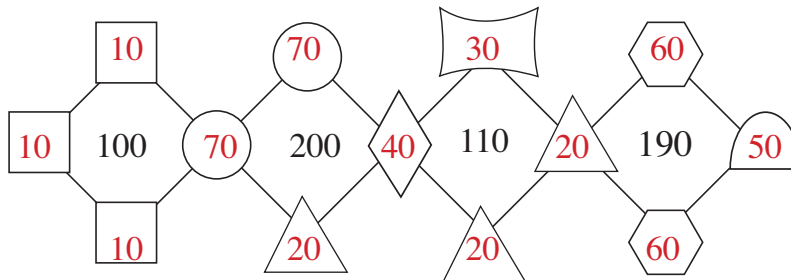
Rule: E.g: .....  
 (outer number)  $\div$  (middle number) = innermost number



**3**

The same shape means the same number. The number in the middle is the **sum** of the 4 numbers around it. Fill in the missing numbers. Choose from:

10, 20, 30, 40, 50, 60 or 70.



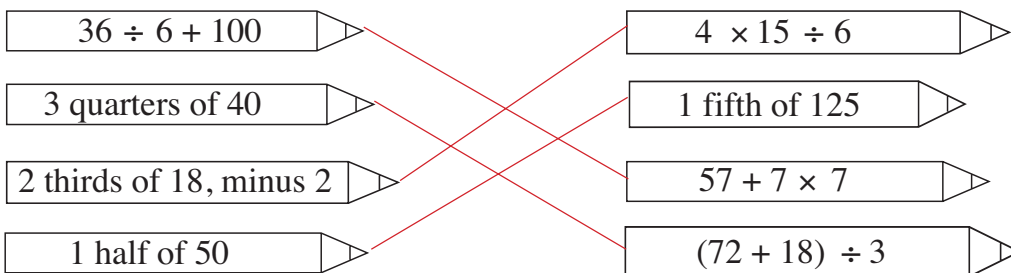
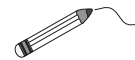
**4**

Fill in the numbers missing from the snakes. Write the rules in their heads.



**5**

Join up the equal amounts.





**1**

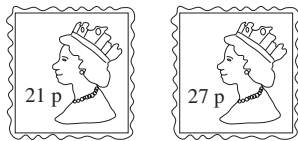
List the numbers which make the inequality true.

- a)  $70 \div 5 > \square > 200 \div 10$        $\square$  : Impossible.....
- b)  $8 \times 4 + 14 < \star \leq 11 \times 5 - 5$        $\star$  : ..47, 48, 49, 50.....
- c)  $81 \div 9 \times 3 \geq \triangle > 100 \div 5$        $\triangle$  : ..21, 22, 23, 24, 25, 26, 27

**2**

A 1st class stamp costs 27 p and a 2nd class stamp costs 21 p.

a) Complete the table.



Number of:

21 p stamps	1	1	2	2	2
27 p stamps	1	2	0	1	2
Total cost (p)	48	75	42	69	96

b) I paid exactly £1 65 p for stamps. How many 1st class and how many 2nd class stamps did I buy?

$$4 \times 21 + 3 \times 27 = 84 + 81 = 165$$

Answer: ..I bought 3 1st class stamps and 4 2nd class stamps.....

**3**

How many different results can you find? Use +, -, or  $\times$  signs.

$70 \square + 10 \square + 3 = \square 83$

$70 \square \times 10 \square - 3 = \square 697$

$70 \square + 10 \square - 3 = \square 77$

$70 \square + 10 \square \times 3 = \square 100$

$70 \square - 10 \square + 3 = \square 63$

$70 \square - 10 \square \times 3 = \square 40$

$70 \square - 10 \square - 3 = \square 57$

$70 \square \times 10 \square \times 3 = \square 2100$

$70 \square \times 10 \square + 3 = \square 703$

$70 \square 10 \square 3 = \square$

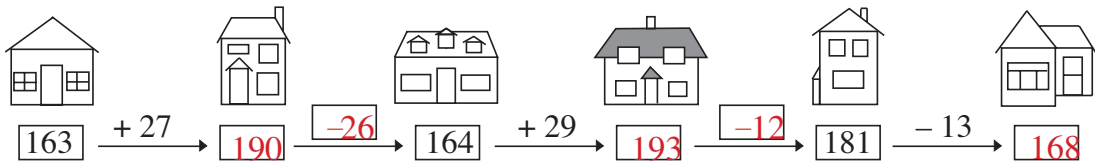
**4**

Fill in the missing numbers and complete the drawings.

HTU	HTU	HTU	HTU	HTU	HTU
1 3 8	325	159	2 5 0	4 0 7	1 3 5

**1**

Fill in the missing numbers and signs.



**2**

List the numbers which make the statement true.

$170 < \boxed{?} + 40 < 190 - 15$      $\boxed{\phantom{000}}$  : 131, 132, 133, 134, .....

**3**

Write the answers as Roman numerals.

- a)  $CXIII - XI = CII$     b)  $LXXXI + IX = XC$     c)  $CCX + L = CCLX$   
 d)  $XL \times II = LXXX$     e)  $XLII \div VII = VI$     f)  $LX + XL = C$

**4**

E.g:

1	2	3
8	9	4
7	6	5

Using each of the numbers 1 to 9 once only, make an **anti-magic square**.

The sums of the numbers along each row, column and diagonal must all be different.

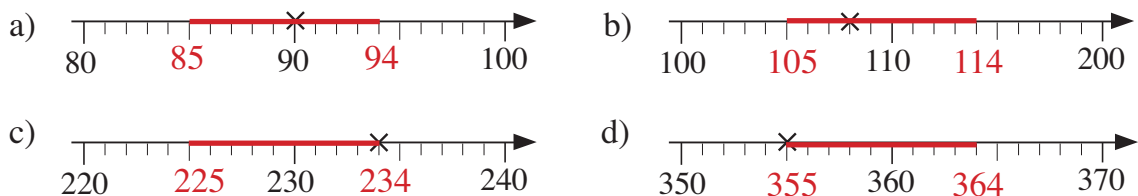
**5**

Write the calculation **without** brackets so that the result is the same.

- a)  $147 - (50 - 6) = \boxed{103}$      $147 - 50 + 6$  .....
- b)  $200 + (66 - 9) = \boxed{257}$      $200 + 66 - 9$  .....
- c)  $135 - (40 - 12) = \boxed{107}$      $135 - 40 + 12$  .....
- d)  $(20 - 3) \times 7 = \boxed{119}$      $20 \times 7 - 3 \times 7$  .....
- e)  $(120 + 50) \div 10 = \boxed{17}$      $120 \div 10 + 50 \div 10$  .....

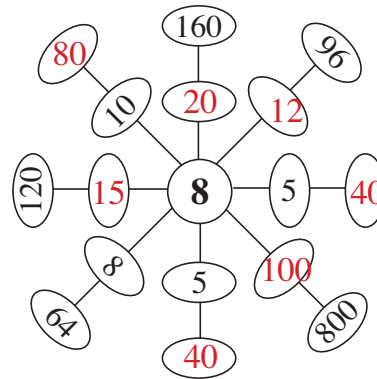
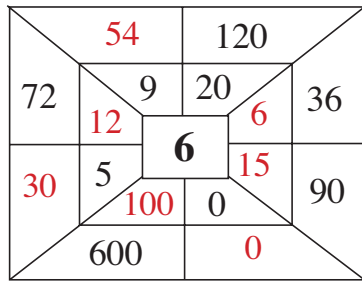
**6**

Draw over the parts of the number line which can be **rounded** to the same whole ten as the number marked. Label the highest and lowest possible whole numbers.



**1**

Fill in the missing numbers. Write down the rule.



Rule: E.g. No. in centre  $\times$  number in next section = number in outer section.

**2**

Round these numbers to the next nearest whole ten.

- a) 33  $\approx$        57  $\approx$        96  $\approx$
- b) 108  $\approx$        203  $\approx$        399  $\approx$
- c) 556  $\approx$        411  $\approx$        666  $\approx$

**3**

Write the Roman numerals below these numbers.

- a) 152      b) 74      c) 300      d) 99      e) 108  
 CLII      LXXIV      CCC      XCIX      CVIII

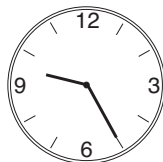
**4**

Practise calculation.

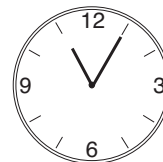
- a)  $10 \times$   = 300      b)   $\times 17 = 0$       c)   $\times 4 = 60$
- $9 \times$   = 270       $150 \div$   = 15       $167 \div$   = 167
- $\times 5 = 500$        $90 \div$   = 45        $\div 2 = 50$
- $\times 8 = 240$         $\div 5 = 200$         $\div 19 = 0$
- $\times 11 = 110$         $\div 6 = 110$         $\div 50 = 5$

**5**

a) How many hours and minutes have passed in an evening from:



to



hours  
 minutes

b) How many more minutes will it then be until midnight?

minutes

**1**

Complete the open sentences so that they are correct.

E.g:

a) 1 fifth of an hour +  hour = 1 hour.

b) 40 minutes +  hour = 1 hour.

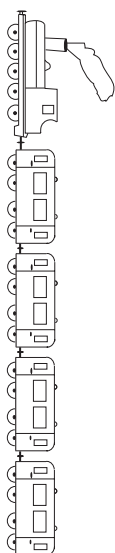
c) 10 minutes + half an hour +  minutes = 1 hour.

d) 3 quarters of an hour + 1 sixth of an hour +  minutes = 1 hour.

e) 2 thirds of an hour +  minutes = 1 hour.

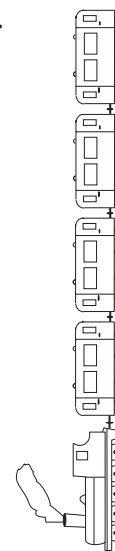
f)  minutes + 3 quarters of an hour = 1 hour.

g) 2 thirds of an hour +  hour = 1 hour.

**2**

A train runs at different times of the day between 2 stations.  
Complete the table.

Departs from Station A at:	Arrives at Station B at:	Journey time:
6:53	11:30	4 h 37 min
10:25	13:10	2 h 45 min
17:05	20:56	3 h 51 min
21:30	00:45	3 h 15 min
00:36	04:35	3 h 59 min

**3**

Practise division. Check with multiplication.

a)  $31 \div 5 = \boxed{6}$

remainder

Check

$1 + 6 \times 5 = 31$

b)  $87 \div 9 = \boxed{9}$

remainder

Check

$6 + 9 \times 9 = 87$

c)  $48 \div 7 = \boxed{6}$

remainder

Check

$6 + 6 \times 7 = 48$

d)  $106 \div 10 = \boxed{10}$

remainder

Check

$6 + 10 \times 10 = 106$

e)  $98 \div 3 = \boxed{32}$

remainder

Check

$2 + 32 \times 3 = 98$

f)  $85 \div 60 = \boxed{1}$

remainder

Check

$25 + 1 \times 60 = 85$

**1**





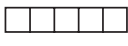







I planted roses in 80 square metres of my garden.  This area is 1 fifth of my whole garden. How big is my garden?

$5 \times 80 = 400$

Answer: My garden is 400 square metres.

**2**

Complete the table.

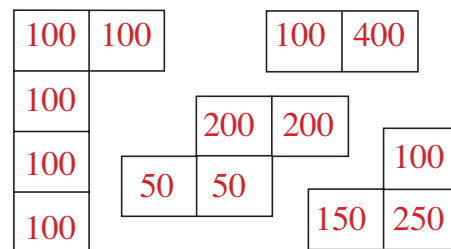
Unit						
Shape						
Value of shape	3	1 third	2	1 half	2 fifths	2 thirds

**3**

Colour these shapes in the grid so that the **sum** of each shape is 500.

E.g:

100	100	200	100	400	200	200	450
100	150	150	200	50	50	150	200
100	50	100	350	350	300	200	100
100	400	250	250	400	50	150	250



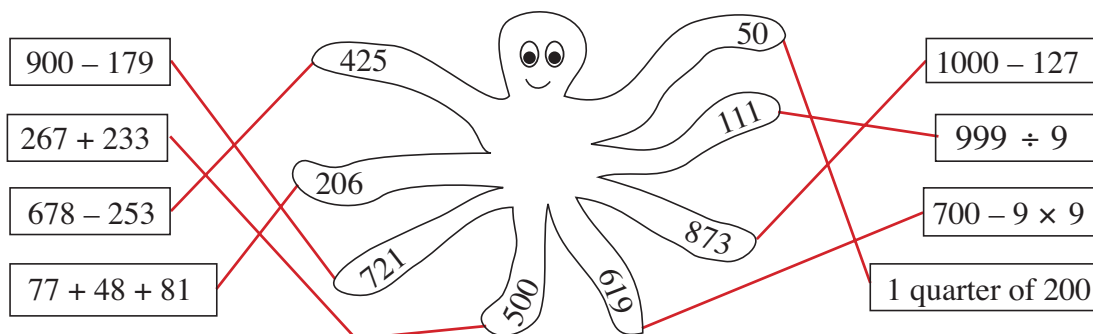
**4**

What is:

- a) 49 less than 123 74
- b) 250 more than 125 375
- c) 3 times more than 33 99
- d) 1 fifth of 110 22
- e) the difference between 97 and 48 49
- f) 1 ninth of 81 9
- g) the product of 18 and 4 72
- h) the sum of 176 and 54? 230

**5**

Join up the equal amounts.



**1**

Write the numbers as digits.

a) Th H T U      b) Th H T U      c) Th H T U      d) Th H T U

1 4 3 8      1 4 0 3      1 7 4 0      1 0 0 3

**2**

Write these numbers as digits. Which is more? Write in the correct sign. (<, =, >)

- a) 6 hundred and 5 = 605 < 650 = 6 hundred and 50
- b) 9 hundreds + 2 tens = 920 > 919 = 9 hundreds + 1 ten + 9 units
- c) 2 hundreds + 1 ten + 7 = 217 > 209 = 2 hundreds + 0 tens + 9 units
- d) 7 hundred and 13 = 713 < 720 = 7 hundreds + 2 tens

Colour *yellow* the boxes which contain even numbers.

**3**

a) Complete the table.

		Th	H	T	U	
i)	320	$3 \times 100 + 2 \times 10 + 0 \times 1$		3	2	0
ii)	951	$9 \times 100 + 5 \times 10 + 1 \times 1$		9	5	1
iii)	888	$8 \times 100 + 8 \times 10 + 8 \times 1$		8	8	8
iv)	603	$6 \times 100 + 0 \times 10 + 3 \times 1$		6	0	3
v)	1071	$1 \times 1000 + 0 \times 100 + 7 \times 10 + 1 \times 1$	1	0	7	1
vi)	3540	$3 \times 1000 + 5 \times 100 + 4 \times 10 + 0 \times 1$	3	5	4	0

b) Write the numbers in the table in words.

- i) ... Three hundred and twenty .....
- ii) ... Nine hundred and fifty one .....
- iii) ... Eight hundred and eighty eight .....
- iv) ... Six hundred and three .....
- v) ... One thousand and seventy one .....
- vi) ... Three thousand five hundred and forty .....

**1**

Study the numbers in set **B**. Complete the sentences so that they are correct.

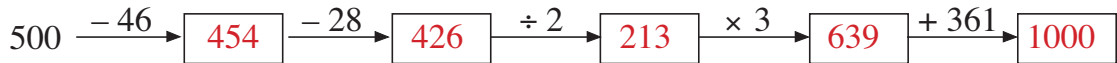
$$B = \{ 144, 273, 50, 18, 705, 1001, 850 \}$$

E.g:

- a) All these numbers ... **are whole numbers.** .....
- b) Not all these numbers ... **have 3 digits.** .....
- c) None of these numbers ... **has 5 digits.** .....
- d) There is at least one number which **has 2 digits .. or .. is larger than 1000.**
- e) There are no numbers which ... **have only 1 digit.** .....
- f) There is at least one number which is not ... **a 2 or 3 digit number.** .....

**2**

Fill in the missing numbers.






Write the operations in reverse order.



**3**

Complete the table. Write the rule in different ways.

	475	625	10	217	37	475	118	111	456
	360	335	1002	555	926	525	382	765	394
	835	960	1012	772	963	1000	500	876	850

$$\text{moon} = \text{star} + \text{sun} \quad \text{star} = \text{moon} - \text{sun} \quad \text{sun} = \text{moon} - \text{star}$$

**4**

Write these numbers as Roman numerals.

- a) 653      b) 402      c) 317      d) 528      e) 1010
- ... **DCLIII** ...      ... **CDII** ...      ... **CCCXVII** ...      ... **DXXVIII** ...      ... **MX** ...

**5**

A glass full of milk weighs 370 g. When the glass is half full of milk it weighs 290 g. What does the empty glass weigh?

$$2 \times (370 - 290) = 2 \times 80 = 160$$

$$370 - 160 = 210$$

Answer: ... **210 g** .....

**1**

Round the lengths given in millimetres to the nearest centimetre. Follow this pattern:

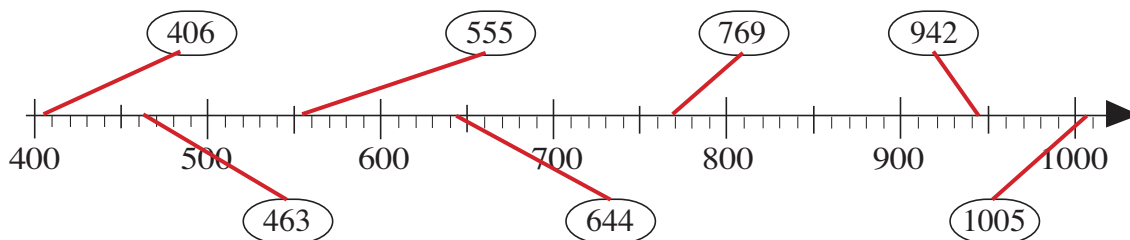
$$658 \text{ mm} \approx 660 \text{ mm}, \quad 660 \text{ mm} = 66 \text{ cm}$$

$$658 \text{ mm} \approx 66 \text{ cm}$$

- a)  $324 \text{ mm} \approx$  32 cm     $324 \text{ mm} \approx 320 \text{ mm}, \quad 320 \text{ mm} = 32 \text{ cm} \dots$   
 $324 \text{ mm} \approx 32 \text{ cm} \dots$
- b)  $530 \text{ mm} \approx$  53 cm     $530 \text{ mm} = 53 \text{ cm} \dots$   
 $\dots$
- c)  $799 \text{ mm} \approx$  80 cm     $799 \text{ mm} \approx 800 \text{ mm}, \quad 800 \text{ mm} = 80 \text{ cm} \dots$   
 $799 \text{ mm} \approx 80 \text{ cm} \dots$
- d)  $2002 \text{ mm} \approx$  200 cm     $2002 \text{ mm} \approx 2000 \text{ mm}, \quad 2000 \text{ mm} = 200 \text{ cm} \dots$   
 $2002 \text{ mm} \approx 200 \text{ cm} \dots$

**2**

Join up these numbers to the **approximate** place on the number line.



**3**

a) Complete the table.

Number	Rounded to nearest 10	Rounded to nearest 100
943	940	900
304	300	300
184	180	200
765	770	800
125	130	100
550	550	600
247	250	200
805	810	800

b) List all the 3 digit whole numbers which have:

- 5 as the tens digit when rounded to the nearest ten,
- and also
- 5 as the hundreds digit when rounded to the nearest hundred.

3 digit numbers are:

450, 451, 452, 453, 454  
 545, 546, 547, 548, 549



**1**

Round the amounts in millilitres to the nearest centilitre.

- a) 293 ml  $\approx$   cl      b) 994 ml  $\approx$   cl  
 295 ml  $\approx$   cl      995 ml  $\approx$   cl  
 298 ml  $\approx$   cl      999 ml  $\approx$   cl  
 c) 1004 ml  $\approx$   cl      d) 1593 ml  $\approx$   cl  
 1005 ml  $\approx$   cl      1595 ml  $\approx$   cl  
 1006 ml  $\approx$   cl      1597 ml  $\approx$   cl

**2**

Colin and Diane have saved £900 altogether. How much money could they each have saved? Complete the table and write the rule.

C	£100	£700	£500	£900	£700	£860	£10	£400	£890	£899
D	£800	£200	£400	£0	£200	£40	£890	£500	£10	£1

Rule:  $C = £900 - D$        $D = £900 - C$        $£900 = C + D$

**3**

Write the calculations and underline the answer.

- a) Irene has £700 and Joanne has £500. Who has more? How much more?  
 $£700 - £500 = £200$  ..... Irene has £200 more than Joanne. ....
- b) Dan and Bob have £700 altogether. Dan has £500 more than Bob.  
 How much money does Bob have?  
 $(£700 - £500) \div 2 = £100$  ..... Bob has £100.  $(£600 + £100 = £700)$  .....  
 $£600 - £100 = £500$

**4**

Which is more? Fill in the missing signs. Write the greater value in the table.

- a) 12 l 25 cl  12.5 l  
 b) £150 24 p  £15.24  
 c) 6.59 m  655 cm  
 d) 220 cl  2 l 86 cl  
 e) 4 m 65 cm  4.6 m

	H	T	U	t	h
a)		1	2	5	0
b)	1	5	0	2	4
c)			6	5	9
d)			2	8	6
e)			4	6	5

**1**

David has £233 and James has £426. How much do they have altogether?  
Complete the tables.

	Hundreds	Tens	Units						
D	<table border="1"><tr><td>100</td><td>100</td></tr></table>	100	100	<table border="1"><tr><td>10</td><td>10</td></tr><tr><td>10</td><td></td></tr></table>	10	10	10		① ① ①
100	100								
10	10								
10									
J	<table border="1"><tr><td>100</td><td>100</td></tr><tr><td>100</td><td>100</td></tr></table>	100	100	100	100	<table border="1"><tr><td>10</td><td>10</td></tr></table>	10	10	① ① ① ① ① ①
100	100								
100	100								
10	10								

	H	T	U
£	2	3	3
£	4	2	6
£	6	5	9

	2	3	3
+	4	2	6
	6	5	9

**2**

Estimate, then calculate the sum. Show your estimate in detail.

b)  $514 + 256$

*E:*  $514 + 256 \approx 510 + 260 = 770$

*C:*

	5	1	4
+	2	5	6
	7	7	0

c)  $614 + 257$

*E:*  $614 + 257 \approx 610 + 260 = 870$

*C:*

	6	1	4
+	2	5	7
	8	7	1

d)  $614 + 258$

*E:*  $614 + 258 \approx 610 + 260 = 870$

*C:*

	6	1	4
+	2	5	8
	8	7	2

**3**

Find the data and write a plan. Estimate, calculate and check the result.  
Write the answer as a sentence.

- a) Susan bought 2 rolls of remnant material to make curtains.  
In one roll there was 6 m 5 cm and in the other there was 3 m 62 cm.  
How many cm of material did Susan buy altogether?

*Data:* Roll A: 6 m 5 cm, Roll B: 3 m 62 cm

*Plan:* Roll A + Roll B

*E:*  $610 + 360 = 970$

*C:*

*Answer:* Susan bought 967 cm of material.

	6	0	5
+	3	6	2
	9	6	7

- b) Last month, Mum earned £1247 and Dad earned £551 more.  
How much did they earn altogether last month?

*Data:* M: £1247, D: £1247 + £551

*Plan:* M + D

*E:*  $1250 + 1800 = 3050$

*C:*

*Answer:* They earned £3045 altogether.

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

**1**

*Freddy Fox* was going home. He ran for 579 m, then had a rest. Then he ran for another 356 m and reached his house. How far away had he been from home?

Data:  $579 \text{ m} + 356 \text{ m}$  E:  $580 + 360 = 940$

Th	H	T	U
	5	7	9
	3	5	6
	9	3	5

Calculation:

		5	7	9
+		3	5	6
		9	3	5

Answer:

He had been 935 m from home.

**2**

24 cm 6 mm was cut from a roll of tape. If 254 mm was left, how long was the original roll of tape?

Data:  $24 \text{ cm } 6 \text{ mm} + 254 \text{ mm}$

Plan:  $246 \text{ mm} + 254 \text{ mm}$  E:  $250 + 250 = 500$

Answer: The original roll was 500 mm (50 cm) long.

C:

		2	4	6
+		2	5	4
		5	0	0

**3**

Practise addition. Check by adding up  $\uparrow$ , then down  $\downarrow$ .

a) 

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

b) 

	4	1	1
	3	7	8
+	1	1	0
	1	8	8
	8	9	

c) 

		9	6
	5	0	3
+	2	0	3
	8	0	2

d) 

	4	4	0
+	1	0	1
	1	5	1
	2	9	7
	7	0	

e) 

	3	0	7
	8	0	1
+	2	0	4
	1	3	1
	2	1	2

f) 

	5	9	0
		2	7
+	4	4	2
	1	0	5
	9		

g) 

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

h) 

	7	3	4
	3	0	0
+	5	0	7
	1	5	4
	1		

i) 

	2	6	6
	1	1	1
+	5	4	5
	1	9	2
	1		

j) 

	9	3	3
	9	5	5
+			5
	1	8	9
	3		

**4**

Draw amounts to correspond to the numbers shown on the number lines.

Choose from 

1000
------

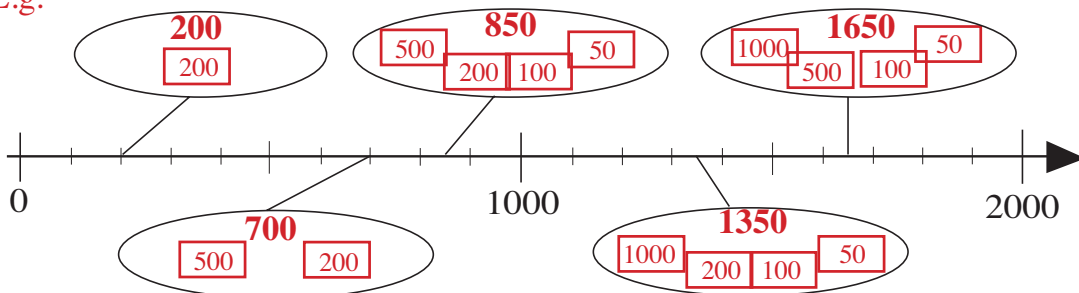
500
-----

200
-----

100
-----

50
----

E.g:



**1**

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

- a)  $951 - 549 \approx \boxed{950} - \boxed{550} = \boxed{400}$
- b)  $1364 - 652 \approx \boxed{1360} - \boxed{650} = \boxed{710}$
- c)  $1374 - 648 \approx \boxed{1370} - \boxed{650} = \boxed{720}$
- d)  $1324 - 657 \approx \boxed{1320} - \boxed{660} = \boxed{660}$
- e)  $1763 - 450 \approx \boxed{1760} - \boxed{450} = \boxed{1310}$

**2**

A and B are two numbers.

H is an estimate of their difference by rounding them to the nearest 100.

T is an estimate of their difference by rounding them to the nearest 10.

Complete the table.

A	723	971	314	636	809	527	715
B	274	508	151	463	347	463	315
H	400	500	100	100	500	0	400
T	450	460	160	180	460	70	400

**3**

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

- a)  $854 - 403$      E:  $\boxed{850} - \boxed{400} = \boxed{450}$  .....      $\begin{array}{|c|c|c|} \hline 8 & 5 & 4 \\ \hline 4 & 0 & 3 \\ \hline 4 & 5 & 1 \\ \hline \end{array}$
- b)  $785 - 64$      E:  $\boxed{790} - \boxed{60} = \boxed{730}$  .....      $\begin{array}{|c|c|c|} \hline 7 & 8 & 5 \\ \hline & 6 & 4 \\ \hline 7 & 2 & 1 \\ \hline \end{array}$

**4**

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

- a) Sarah cut 2 m 17 cm from a 3 m 24 cm piece of lace to trim a cushion.  
 How much lace did she have left?      $324 \text{ cm} - 217 \text{ cm} = 107 \text{ cm} = 1 \text{ m } 7 \text{ cm}$   
*Check:*  $107 \text{ cm} + 217 \text{ cm} = 324 \text{ cm}$   
*Answer:* Sarah had 1 m 7 cm of lace left. ....
- b) Jim bought 5 litres of plant food. He used 2 litres 78 cl on his vegetables  
 and 1 litre 25 cl on the other plants in his garden. How much plant food  
 did he have left?      $500 \text{ cl} - (278 \text{ cl} + 125 \text{ cl}) = 500 \text{ cl} - 403 \text{ cl} = 97 \text{ cl}$   
*Check:*  $97 \text{ cl} + 403 \text{ cl} = 500 \text{ cl}$   
*Answer:* Jim had 97 cl of plant food left. ....

**1**

The same letter stands for the same digit within each part. What is the value of each letter? Try it out in your exercise books first.

$$\begin{array}{r} A A \\ B B \\ + C C \\ \hline A B C \end{array}$$

$$\begin{array}{r} A B \\ + A B \\ \hline B C D \end{array}$$

$$\begin{array}{r} A A A B \\ - A A A \\ \hline C C C \end{array}$$

At least 9 possible answers,  
e.g:

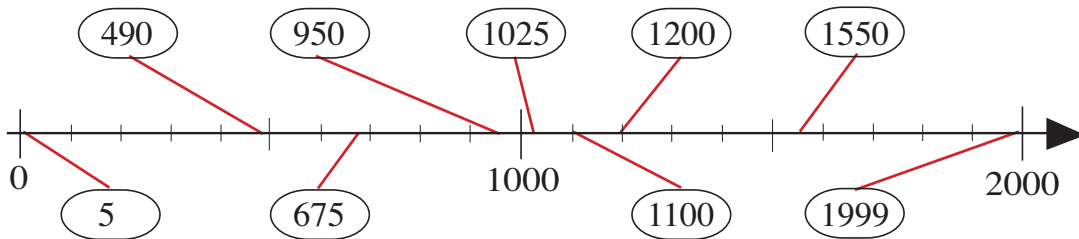
A = 1 B = 9 C = 8  
(Unique answer)

A = 7 B = 1 C = 4  
D = 2

A = 1 B = 0 C = 9  
(Unique answer)

**2**

Join up the numbers to their approximate positions on the number line.



**3**

Practise addition. Check by adding up  $\uparrow$ , then down  $\downarrow$ .

a)	b)	c)	d)	e)
$\begin{array}{r} 1\ 6\ 0\ 1 \\ \phantom{1}\phantom{6}\phantom{0}\phantom{1} \\ +\phantom{1}\phantom{6}\phantom{0}\phantom{1} \\ \hline 1\ 9\ 8\ 7 \end{array}$	$\begin{array}{r} \phantom{1}\phantom{2}\phantom{2}\phantom{2} \\ 1\ 1\ 1\ 1 \\ +\phantom{1}\phantom{2}\phantom{2}\phantom{2} \\ \hline 2\ 3\ 3\ 2 \end{array}$	$\begin{array}{r} \phantom{1}\phantom{2}\phantom{8}\phantom{7} \\ \phantom{1}\phantom{2}\phantom{3}\phantom{0} \\ +\phantom{1}\phantom{2}\phantom{3}\phantom{0} \\ \hline 8\ 1\ 9 \end{array}$	$\begin{array}{r} \phantom{1}\phantom{3}\phantom{0}\phantom{3} \\ \phantom{1}\phantom{3}\phantom{0}\phantom{3} \\ +\phantom{1}\phantom{3}\phantom{0}\phantom{3} \\ \hline 2\ 2\ 7\ 0 \end{array}$	$\begin{array}{r} \phantom{1}\phantom{9}\phantom{4} \\ \phantom{1}\phantom{9}\phantom{4} \\ +\phantom{1}\phantom{9}\phantom{4} \\ \hline 1\ 0\ 0\ 0 \end{array}$
f)	g)	h)	i)	j)
$\begin{array}{r} 1\ 3\ 9\ 0 \\ \phantom{1}\phantom{3}\phantom{9}\phantom{0} \\ +\phantom{1}\phantom{3}\phantom{9}\phantom{0} \\ \hline 1\ 9\ 7\ 9 \end{array}$	$\begin{array}{r} \phantom{1}\phantom{4}\phantom{2} \\ \phantom{1}\phantom{4}\phantom{2} \\ +\phantom{1}\phantom{4}\phantom{2} \\ \hline 2\ 6\ 8\ 2 \end{array}$	$\begin{array}{r} \phantom{1}\phantom{6}\phantom{3} \\ \phantom{1}\phantom{6}\phantom{3} \\ +\phantom{1}\phantom{6}\phantom{3} \\ \hline 1\ 1\ 4\ 0 \end{array}$	$\begin{array}{r} \phantom{1}\phantom{7}\phantom{3}\phantom{2} \\ \phantom{1}\phantom{7}\phantom{3}\phantom{2} \\ +\phantom{1}\phantom{7}\phantom{3}\phantom{2} \\ \hline 1\ 6\ 0\ 3 \end{array}$	$\begin{array}{r} \phantom{1}\phantom{9}\phantom{8}\phantom{7} \\ \phantom{1}\phantom{9}\phantom{8}\phantom{7} \\ +\phantom{1}\phantom{9}\phantom{8}\phantom{7} \\ \hline 1\ 7\ 6\ 4 \end{array}$

**4**

Join up the equal values.

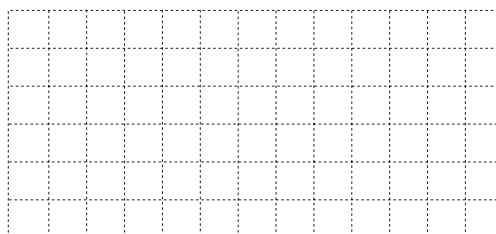
- 1** Continue the sequences for 4 terms in each direction. Write the rules.
- a)  $340, 365, 390, 415, 440, 465, 490, 515, 540, 565, 590$ , Rule: Add 25
- b)  $245, 315, 385, 455, 525, 595, 665, 735, 805, 875, 945$ , Rule: Add 70
- c)  $1263, 1203, 1143, 1083, 1023, 963, 903, 843, 783, 723, 663$ , Rule: Subtract 60
- d)  $1140, 1105, 1070, 1035, 1000, 965, 930, 895, 860, 825, 790$ , Rule: Subtract 35

- 2** Draw the shapes described on a squared grid sheet (or in your exercise books).
- a) A plane shape which has area 8 square units and perimeter 12 units.
- b) A plane shape which has area 8 square units and perimeter 18 units.
- c) A square which has perimeter 12 units.

- 3** Practise calculation.
- a)  $197 + 100 \div 10 = 207$       b)  $874 - 50 \times 5 = 624$
- c)  $60 \times 6 + 512 = 872$       d)  $270 \div 9 + 888 = 918$
- e)  $(614 + 85) \div 3 = 233$       f)  $320 \div (1000 - 968) = 10$
- g)  $150 \times 2 + 720 = 1020$       h)  $(390 - 70) \div 4 = 80$

- 4** Which positive, whole numbers can be written instead of the letters?
- i)  $690 + [a] = 943$       ii)  $865 - [d] = 553$       iii)  $[g] - 597 = 634$   
 $a = 253$        $d = 312$        $g = 1231$
- $300 + [b] < 412 - 99$        $865 - [e] \geq 442$        $[h] - 486 < 523$   
 $b : 0, 1, 2, \dots, 12$        $e : 0, 1, \dots, 423$        $h : 1008, 1007, \dots$
- $456 + [c] = 832$        $865 - [f] < 442$        $[i] - 486 > 523$   
 $c = 376$        $f : 424, 425, \dots$        $i : 1010, 1011, \dots$

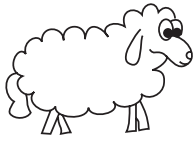
- 5** Draw a picture on this grid using only straight lines.  
 Draw a dot at the starting point.  
 Write instructions on how to draw it.



**1**

Practise calculation.

- a)  $60 + 120 \div 6 =$  80      b)  $689 - 50 \times 3 =$  539
- c)  $100 \times 7 + 3 =$  703      d)  $250 \div 5 + 20 =$  70
- e)  $(379 + 221) \div 3 =$  200      f)  $320 \div 8 - 4 =$  36
- g)  $250 \times 4 - 160 \div 8 =$  980      h)  $1450 - 70 \div 10 =$  1443

**2**

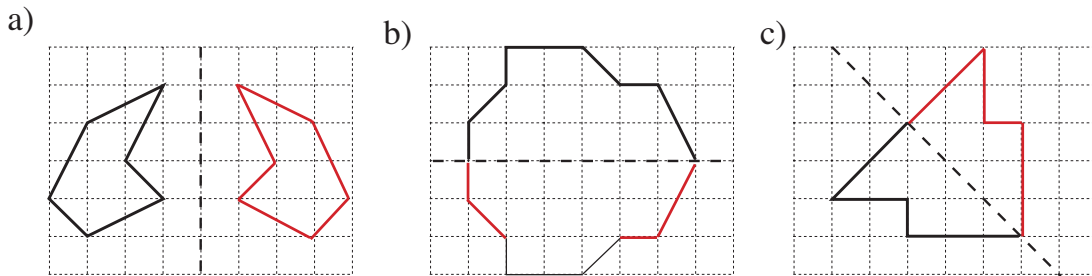
*Larry Lamb* has done his homework. He had to write 4 numbers in different ways. Mark his work and correct any mistakes.

Help him to finish the last number.

- a) 4 H + 5 T + 3 U,      400 + 50 + 3,       $4 \times 100 + 5 \times \overset{10}{\cancel{100}} + 3 \times 1$
- b) 1 T + 8 H + 7 U,      ~~1807 U~~,      MDCCCVII,       $1 \times 1000 + 8 \times 100 + 7 \times 1$
- c) 9 H + 2 T,      92 T,      ~~CMII~~, ~~CMXX~~       $9 \times 100 + 2 \times 10 + 0 \times 1$
- E.g:  
d) 269:  $2 \text{ H} + 6 \text{ T} + 9 \text{ U}$ ,  $269 \text{ U}$ ,  $\text{CCLXIX}$ ,  $2 \times 100 + 6 \times 10 + 9 \times 1$

**3**

Draw the **mirror image** of each shape.

**4**

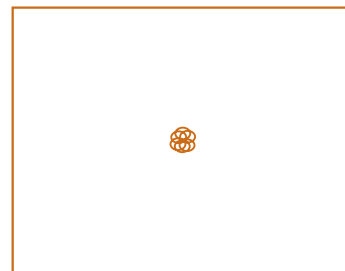
The sides of a rectangular pond are 4 m 50 cm and 3 m 50 cm.

Draw a plan of the pond. Use a ruler. Let 1 m in real life be 1 cm on your plan.

How long in real life is the wall around the pond?

$$\begin{aligned}
 P &= 450 \text{ cm} + 350 \text{ cm} + 450 \text{ cm} + 350 \text{ cm} \\
 &= 1600 \text{ cm} \\
 &= 16 \text{ m}
 \end{aligned}$$

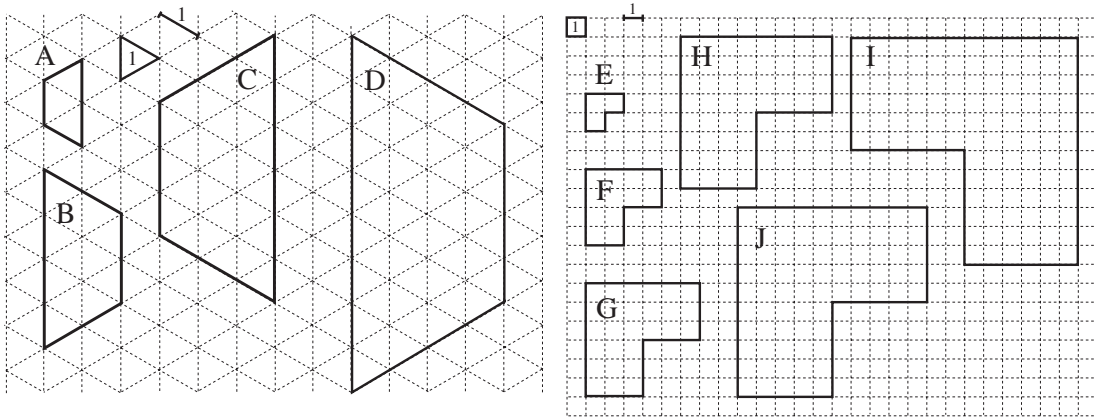
Draw a water lily in the middle of the pond.



Plan of pond.  
1 cm represents 1 m.

1

How many of the units shown are the area and perimeter of shapes A to J?

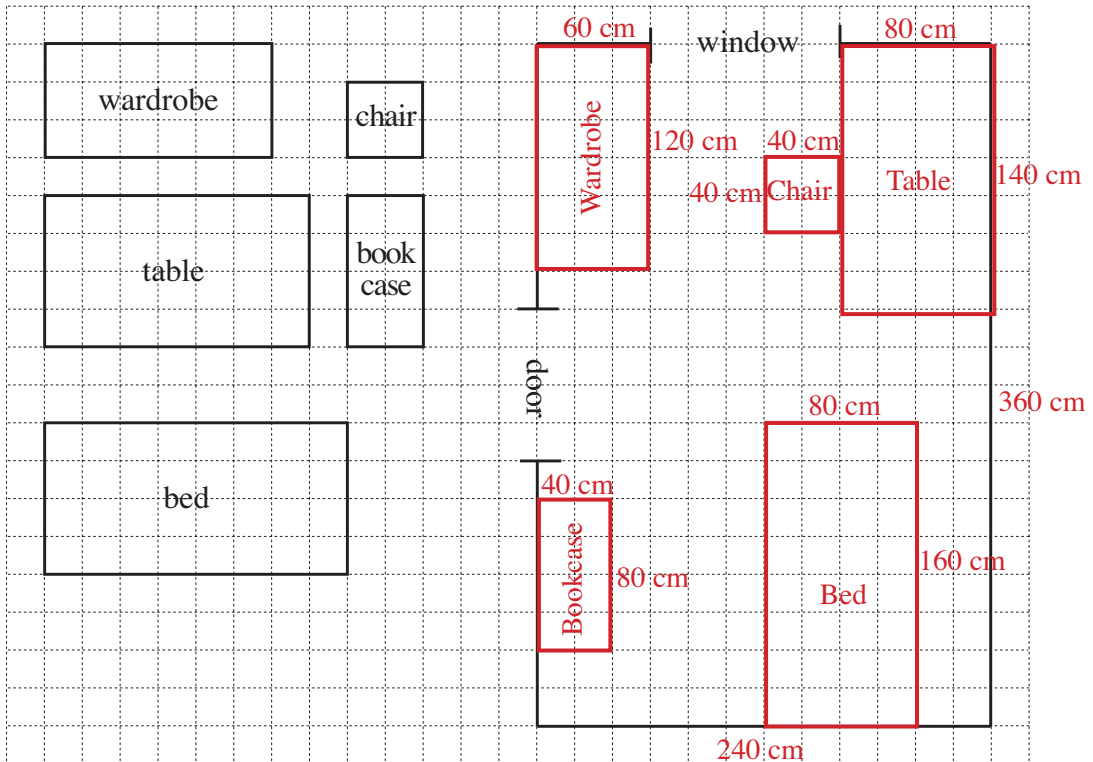


- Area: A  B  C  D  units  
 E  F  G  H  I  J  units
- Perimeter: A  B  C  D  units  
 E  F  G  H  I  J  units

2

How would you fit the furniture into the bedroom? Draw a plan to show it.

E.g:



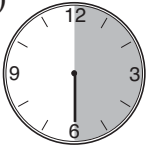

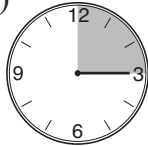


The scale of the plan is: 1 mm on the plan → 4 cm in real life.

Measure in the plan the sides of the room and the items of furniture.  
 Calculate the **real** lengths and write them beside each line in the plan.



**1**

Only the minute hands are on the clocks. How many minutes do they show?

a) 	b) 	c) 	d) 	e) 
half an hour	1 twelfth of an hour	1 quarter of an hour	1 sixth of an hour	1 tenth of an hour
<input type="text" value="30"/> min.	<input type="text" value="5"/> min.	<input type="text" value="15"/> min.	<input type="text" value="10"/> min.	<input type="text" value="6"/> min.

**2**

How many millimetres are in these parts of 10 cm?

a) 1 half	b) 1 fifth	c) 1 tenth	d) 1 quarter
<input type="text" value="50"/> mm	<input type="text" value="20"/> mm	<input type="text" value="10"/> mm	<input type="text" value="25"/> mm

**3**

Fill in the missing numbers. ('min' means 'minutes' and 'hrs' means 'hours')

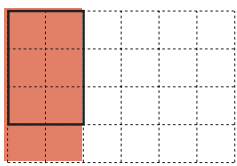
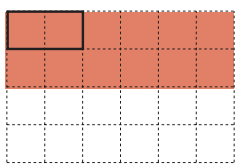
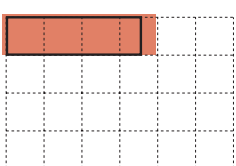
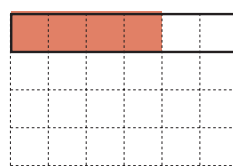
a) half an hour = <input type="text" value="30"/> min	b) half a day = <input type="text" value="12"/> hrs
3 quarters of an hour = <input type="text" value="45"/> min	2 thirds of a day = <input type="text" value="16"/> hrs
3 fifths of an hour = <input type="text" value="36"/> min	3 quarters of a day = <input type="text" value="18"/> hrs
2 thirds of an hour = <input type="text" value="40"/> min	5 eighths of a day = <input type="text" value="15"/> hrs
5 sixths of an hour = <input type="text" value="50"/> min	1 twelfth of a day = <input type="text" value="2"/> hrs
3 tenths of an hour = <input type="text" value="18"/> min	1 and a half days = <input type="text" value="36"/> hrs
2 and a half hours = <input type="text" value="150"/> min	5 half days = <input type="text" value="60"/> hrs

**4**

Draw 1 unit if this is:

E.g:

a) 3 quarters      b) 1 sixth      c) 7 eighths      d) 1 and a half

			
---	---	--	---

**5**

Draw a line 14 cm long. Colour over 3 sevenths of it.



**1**

Which positive whole numbers can be written instead of the shapes?

a)  $936 + \triangle < 541 + 449$        $\triangle : \dots 1, 2, 3, \dots, 53 \dots$

b)  $500 - 69 < 333 + \bullet \leq 433$        $\bullet : \dots 99, 100 \dots$

**2**

Round these numbers to the nearest ten.

a)  $1876 \approx \boxed{1880}$       b)  $555 \approx \boxed{560}$       c)  $210 \approx \boxed{210}$

d)  $99 \approx \boxed{100}$       e)  $-4 \approx \boxed{0}$       f)  $-8 \approx \boxed{-10}$

**3**

Continue the sequences.

a)  $950, 800, 650, \dots 500, 350, 200, 50, -100, -250, \dots$

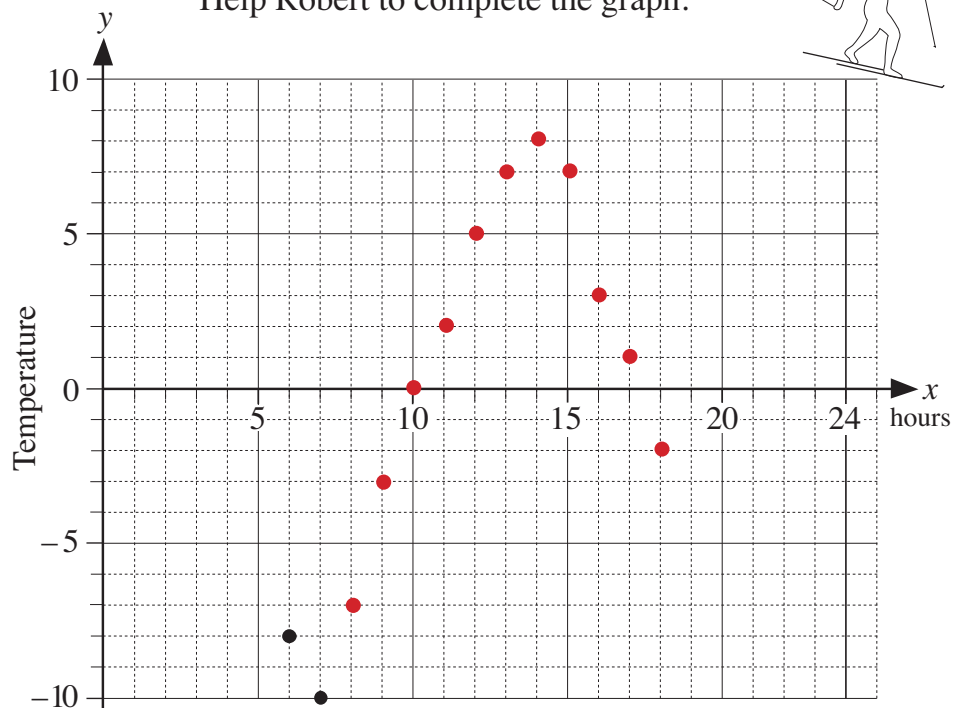
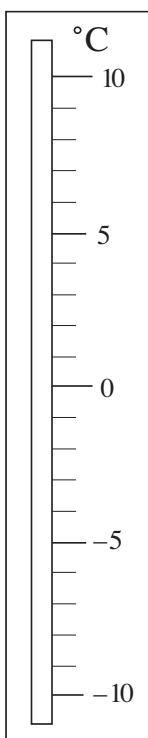
b)  $-10, -8, -6, \dots -4, -2, 0, 2, 4, 6, 8, 10, \dots$

**4**

Robert went on a skiing holiday to Andorra. One day, he read the thermometer outside his hotel every hour from 6.00 am to 6.00 pm. These are his data.

Time (hours)	6	7	8	9	10	11	12	13	14	15	16	17	18
Temperature (°C)	-8	-10	-7	-3	0	2	5	7	8	7	3	1	-2

Help Robert to complete the graph.



**1** Are the inequalities correct? Mark with a ✓ or a ✗. Correct the mistakes.

a)  $-8 < -2$  ✓    b)  $-20 \overset{<}{\cancel{>}} -10$  ✗    c)  $-5 < 5$  ✓    d)  $-6 > -7$  ✓

e)  $-10 < -9$  ✓    f)  $-15 > -20$  ✓    g)  $0 \overset{>}{\cancel{<}} -1$  ✗    h)  $-50 < -2$  ✓

**2** Round these numbers to the next nearest ten.

a)  $1056 \approx 1060$      $705 \approx 710$      $112 \approx 120$

b)  $1966 \approx 1970$      $550 \approx 560$      $401 \approx 410$

c)  $-6 \approx 0$      $3 \approx 10$      $1005 \approx 1010$


**3** Write these numbers as Roman numerals.

a) 1250    b) 2628    c) 599    d) 1973    e) 444

MCCL    MMDCXXVIII    DXCIX    MCMLXXIII    CDXLIV

**4** Draw a picture using straight lines. Choose a starting point. Write instructions on how you drew it for a friend to copy. (L: Left, R: Right, U: Up, D: Down)

E.g:



Start, R14, D7, L1, U5, L12, D5, L1, U7.

**5** Complete the drawing and the calculations.

$\begin{array}{|c|c|} \hline 500 & 10 \\ \hline \end{array} \times 3 = \begin{array}{|c|c|} \hline 500 & 10 \\ \hline \end{array} \begin{array}{|c|c|} \hline 500 & 10 \\ \hline \end{array} \begin{array}{|c|c|} \hline 500 & 10 \\ \hline \end{array}$

$\begin{array}{|c|c|c|} \hline 5 & 1 & 2 \\ \hline 5 & 1 & 2 \\ \hline + & 5 & 1 & 2 \\ \hline 1 & 5 & 3 & 6 \\ \hline \end{array}$      $\begin{array}{|c|c|c|c|c|} \hline 5 & 1 & 2 & \times & 3 \\ \hline 1 & 5 & 3 & 6 & \\ \hline \end{array}$

**1**

Calculate the answers using multiplication.

- a) Six workers earned £409 each.  
How much did they earn altogether?

Answer: **They earned £ 2454 altogether.** . . . . .

Th	H	T	U		
	4	0	9	×	6
2	4	5	4		

- b) A salesman drives 423 km each working day.  
How far does he drive from Monday to Friday?

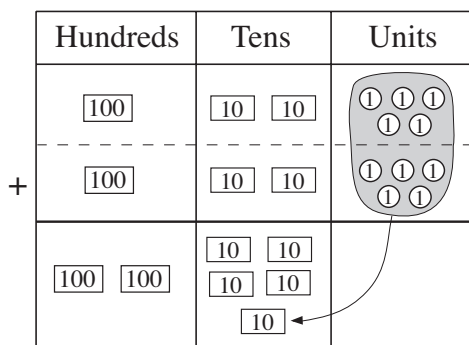
Answer: **He drives 2115 km altogether.** . . . . .

Th	H	T	U		
	4	2	3	×	5
2	1	1	5		

**2**

Estimate in your head first, then do the additions and multiplications.

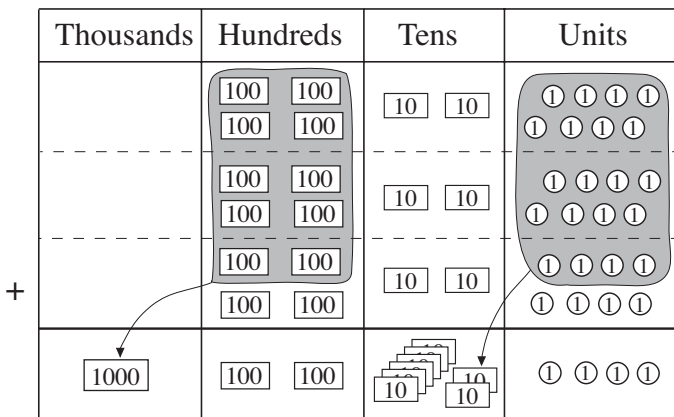
- a)



H	T	U
1	2	5
1	2	5
2	5	0

H	T	U
1	2	5
2	5	0

- b)



Th	H	T	U
	4	2	8
	4	2	8
+	4	2	8
1	2	8	4

Th	H	T	U		
	4	2	8	×	3
1	2	8	4		

**3**

Fill in the missing digits. Check that the multiplication is correct.

- a)

3	2	0	×	3
9	6	0		

4	3	2	×	2
8	6	4		

- b)

2	1	4	×	3
6	4	2		

1	6	1	×	5
8	0	5		

- c)

1	2	5	×	3
3	7	5		

1	8	2	×	4
7	2	8		

- d)

2	2	6	×	3
6	7	8		

1	7	2	×	4
6	8	8		

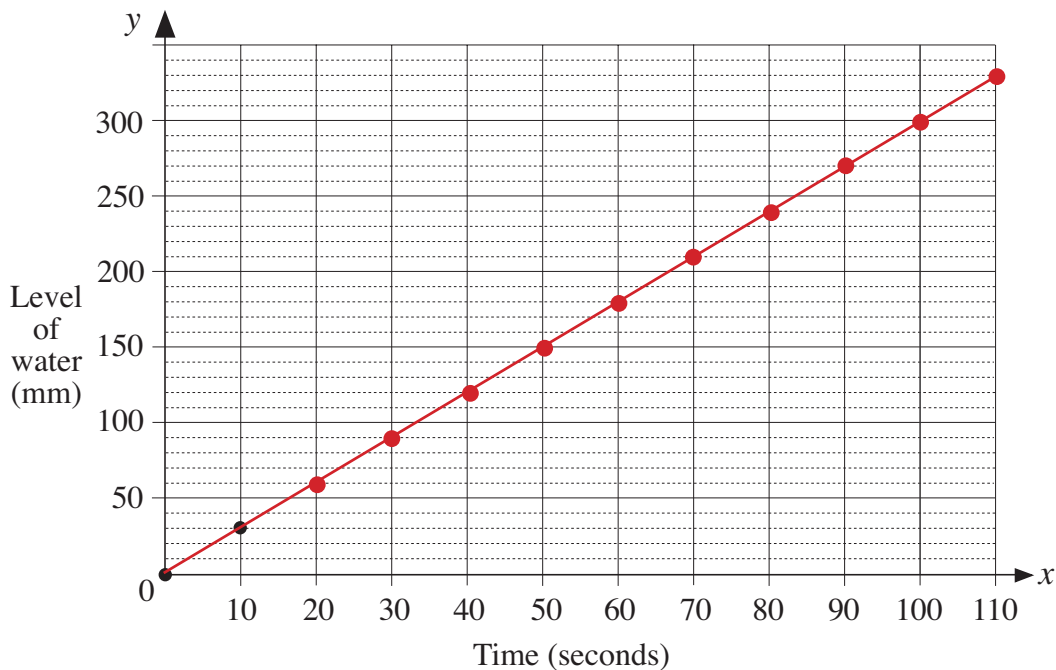
**1**

We ran water from a tap into a large square-based glass container. We made a note of the water level every 10 seconds.

a) Complete the table.

Time (seconds)	0	10	20	30	40	50	60	70	80	90	100	110
Water level (mm)	0	30	60	90	120	150	180	210	240	270	300	330

b) Draw dots on the graph to show the data in the table. Join up the dots.



c) Write the rule in different ways.  $L$  = Level of water,  $T$  = Time

$$L = 3 \times T \qquad T = L \div 3 \qquad L \div T = 3$$

**2**

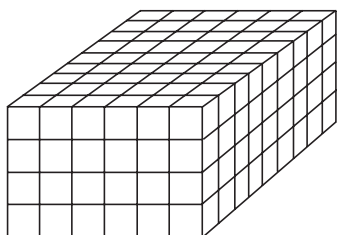
1 kg of tomatoes costs £2.08. Complete the table to show what several kg cost.

Quantity (kg)	1	6	4	9	5	7	1 and a half
Price (pence)	208	1272	832	1872	1040	1456	312

**3**

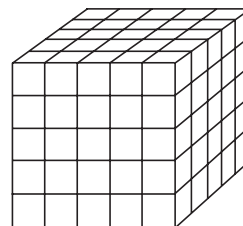
What is the volume of each of these cuboids?

a)



$V = 216$  unit cubes

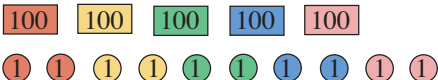
b)

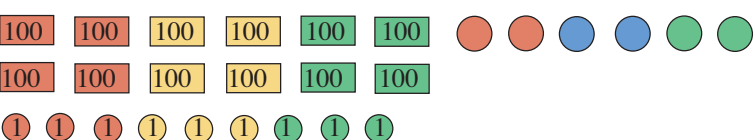


$V = 125$  unit cubes

**1**

Divide the amount into:

a) 5 equal parts   
 $510 \div 5 = 500 \div 5 + 10 \div 5 = 100 + 2 = 102$

b) 3 equal parts   
 $1269 \div 3 = 1200 \div 3 + 60 \div 3 + 9 \div 3 = 400 + 20 + 3 = 423$

**2**

a) Write the whole numbers less than 31 in the correct sets.

	Divisible by 5	Not divisible by 5
Divisible by 2	0 10 20 30	2 4 6 8 12 14 16 18 22 24 26 28
Not divisible by 2	5 15 25	1 3 7 9 11 13 17 19 21 23 27 29

b) Write the labels missing from each of the number sets in the diagram.

	Divisible by 3	Not divisible by 3
Divisible by 2	0 6 12 18 24 30	2 4 8 10 14 16 20 22 26 28
Not divisible by 2	3 9 15 21 27	1 5 7 11 13 19 23 25 29 17

**3**

Make a plan. Estimate, calculate and check the result. Write the answer.

a) Alice had £648 in her bank account. She spent 1 eighth of it. How much did she spend?  
 Plan:  $\pounds 648 \div 8$  ..... Estimate:  $\pounds 640 \div 8 \approx \pounds 80$  .....  
 Calculation:  $648 \div 8 = 640 \div 8 + 8 \div 8 = 80 + 1 = 81$  .....  
 Check:  $81 \times 8 = 648$  ..... Answer: Alice spent £81.

b) Ben had £648 in his bank account. Frank had 1 quarter of Ben's amount. How much did Frank have in his account?  
 Plan:  $\pounds 648 \div 4$  ..... Estimate:  $\pounds 600 \div 4 \approx \pounds 150$  .....  
 Calculation:  $648 \div 4 = 400 \div 4 + 200 \div 4 + 48 \div 4 = 100 + 50 + 12 = 162$  .....  
 Check:  $162 \times 4 = 648$  ..... Answer: Frank had £162.

**1**

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

4 tickets cost £5.68. How much would 7 of these tickets cost?

Data: £5.68 = 568 p

Plan:  $568 \div 4 \times 7$

.....

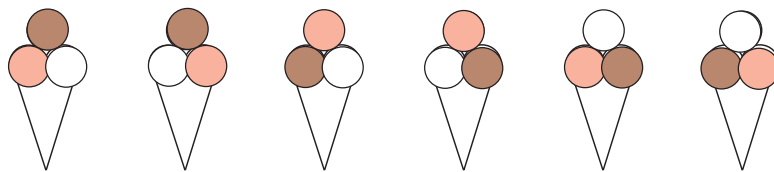
Estimate:  $600 \div 4 = 150$ ;  $150 \times 7 = 1050$

Calculation:  $568 \div 4 = 500 \div 4 + 60 \div 4 + 8 \div 4 = 125 + 15 + 2 = 142$   
 $7 \times 142 = 994$

Answer: 7 tickets would cost £9.94.

**2**

You ask for a 3-scoop ice-cream saying, "Chocolate and strawberry and vanilla please". Colour the ice-creams to show what you could be given.



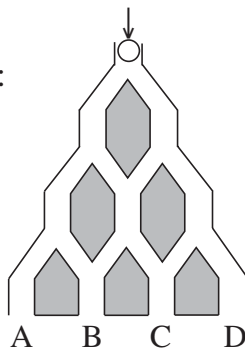
If position of scoops does not matter, there is only 1 way but if position matters, there are 6 ways.

**3**

A marble is dropped into this maze. It has an equal chance of falling to the left or to the right.

a) In how many ways can the marble come out at:

- i) A 1 way
- ii) B 3 ways
- iii) C 3 ways
- iv) D? 1 way



b) Where is it more likely to come out?

B or C as each has a 3 out of 8 chance of happening

c) What is the ratio of the chance of it coming out at A, B, C or D?

A B C D  
 1 : 3 : 3 : 1

**4**

Do the operations in the correct order. Do the calculations in your exercise books.

a)  $1500 \div 5 + 25 \times 4 = 400$

b)  $(712 - 268) \div 2 + 20 = 242$

c)  $20 \times 90 - 640 \div 8 = 1720$

d)  $735 \div 7 \times 3 = 315$

e)  $591 - 9 \times 50 + 41 = 182$

f)  $111 - 68 - 180 \div 6 = 13$

g)  $1827 \div 3 - 360 \div 40 = 600$

h)  $(823 - 157) \div 3 \times 2 = 444$

**5**

Colour equal values in the same colour.

160 ÷ 8

1000 ÷ 50

1 tenth of 200

1800 ÷ 90

2 thirds of 300

450 ÷ 5 - 70

**1**

What data are needed? Make a plan. Calculate, check and write the answer.

Twins Peter and John's 2 sisters and 3 cousins clubbed together to buy them books for their birthday. Peter's 5 books cost £8.70 altogether and John's 3 books cost £10.35 altogether.

How much did each sister or cousin pay if they shared the total cost?

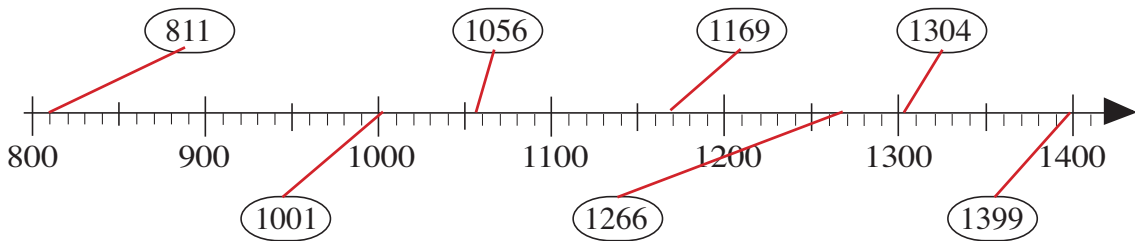
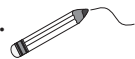
Plan:  $(£8.70 + £10.35) \div (2 + 3)$       Calculation:  $= £19.05 \div 5 = £3.81$

Check:  $5 \times £3.81 = £19.05$

Answer: Each sister or cousin paid £3.81.

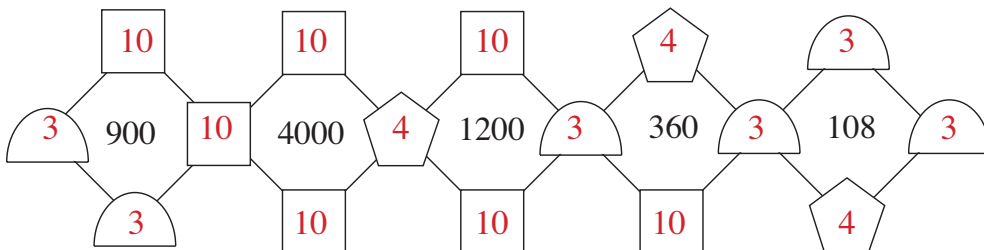
**2**

Join up these numbers to the **approximate** place on the number line.



**3**

The middle number is the product of the 4 numbers around it. Fill in the missing numbers.



**4**

Colour the parts stated. Compare the two rectangles. Fill in the missing sign.

E.g:

a)   
 5 eighths      7 eighths

b)   
 7 tenths      1 half

c)   
 3 quarters      3 eighths

d)   
 3 fifths      1 quarter

**5**

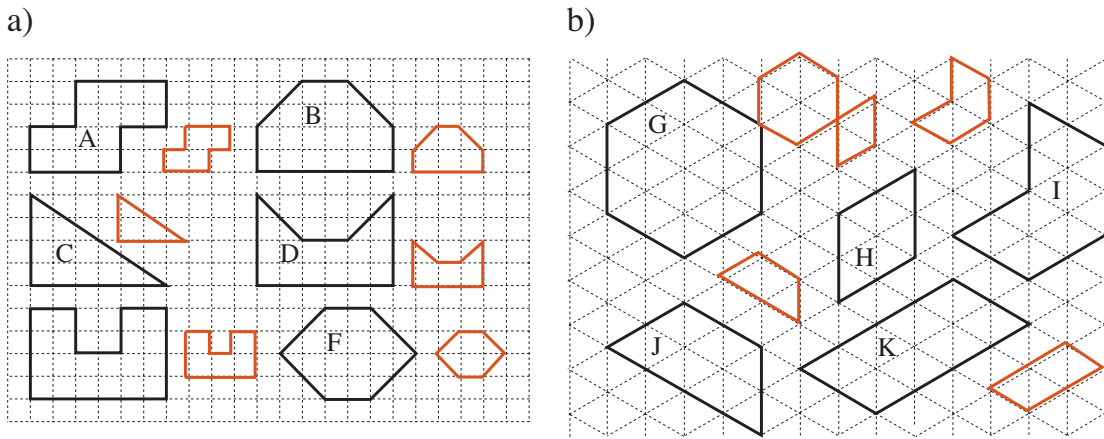
Continue the sequence in Roman numerals.

MCL, MC, ML, M, CML, CM, DXXXL, DCCC, ...

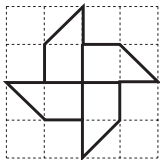


**1**

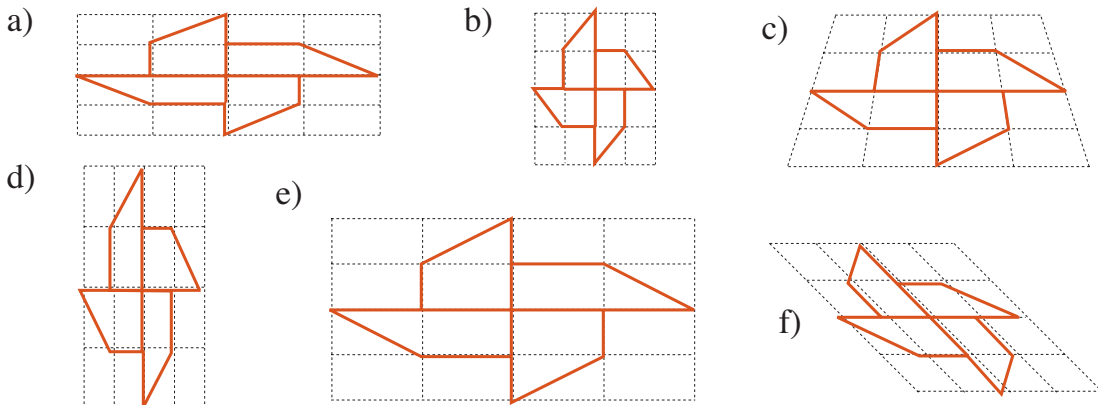
Reduce each shape to half its size.



**2**



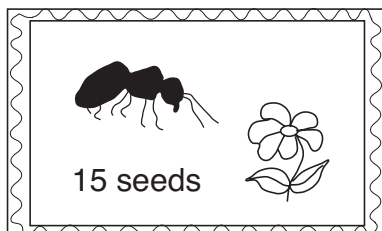
Copy this drawing on the different grids.



**3**

This is an enlarged copy of *Ant's* postage stamp.

Scale: 1 cm on the copy → 1 tenth of a mm on the real stamp



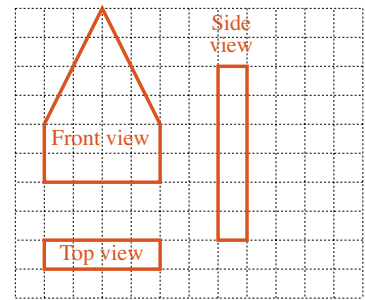
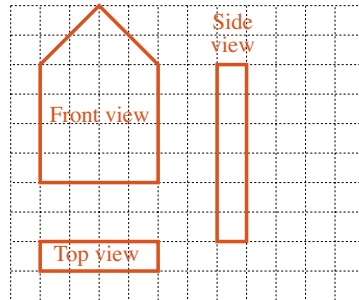
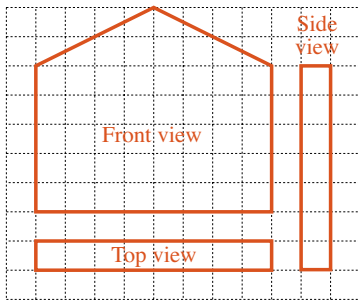
- a) Measure the sides of this copy.  
 $w_1 = \dots 5 \dots$  cm,  $h_1 = \dots 3 \dots$  cm
- b) Calculate the sides of the real stamp.  
 $w_2 = \dots \dots \dots 5 \text{ tenths} \dots$  mm  
 $h_2 = \dots \dots \dots 3 \text{ tenths} \dots$  mm

- c) What is the perimeter of *Ant's* stamp?  $16 \text{ tenths of a mm}$  .....
- d) How many seeds would Ant need to collect to buy 29 of these stamps?  
 $15 \times 29 = 15 \times 30 - 15 \times 1 = 450 - 15 = 435$   
 Ant would need 435 seeds to buy 29 stamps.

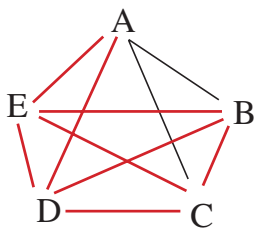
**1**

These houses were built with wooden blocks.

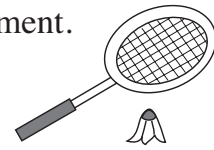
Draw their front, top and side views on a grid sheet or in your exercise books.



**2**



Five children are in a badminton tournament. They all have to play one another.



How many matches will be played altogether?

..... **10 matches** .....

**3**

a) List in increasing order all the 3-digit numbers which have digits 1 or 2.

..... **111 < 112 < 121 < 122 < 211 < 212 < 221 < 222** .....

b) List in decreasing order all the 2-digit numbers which have digits 1, 2 or 3.

..... **33 > 32 > 31 > 23 > 22 > 21 > 13 > 12 > 11** .....

**4**

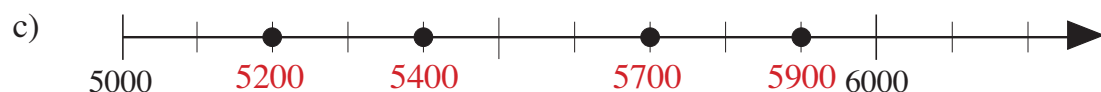
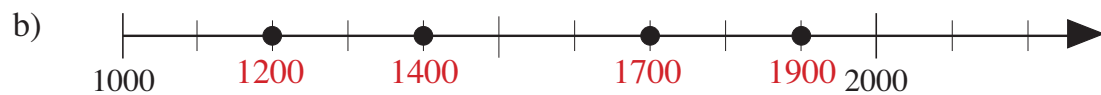
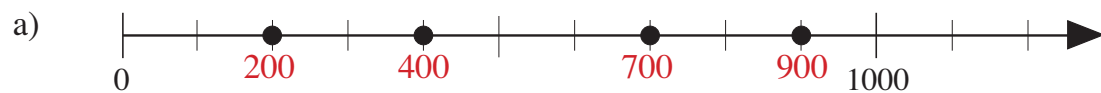
Two boys and two girls had enough money for 1 ride in a dodgem car at the fair. They drew lots to see who would be the passenger and who would steer.

What chance was there of the two girls riding together?

..... **The chance is 1 in 6, or 1 sixth.** .....

**5**

Write the numbers below the dots.



**1**

Change the lengths to the given units.

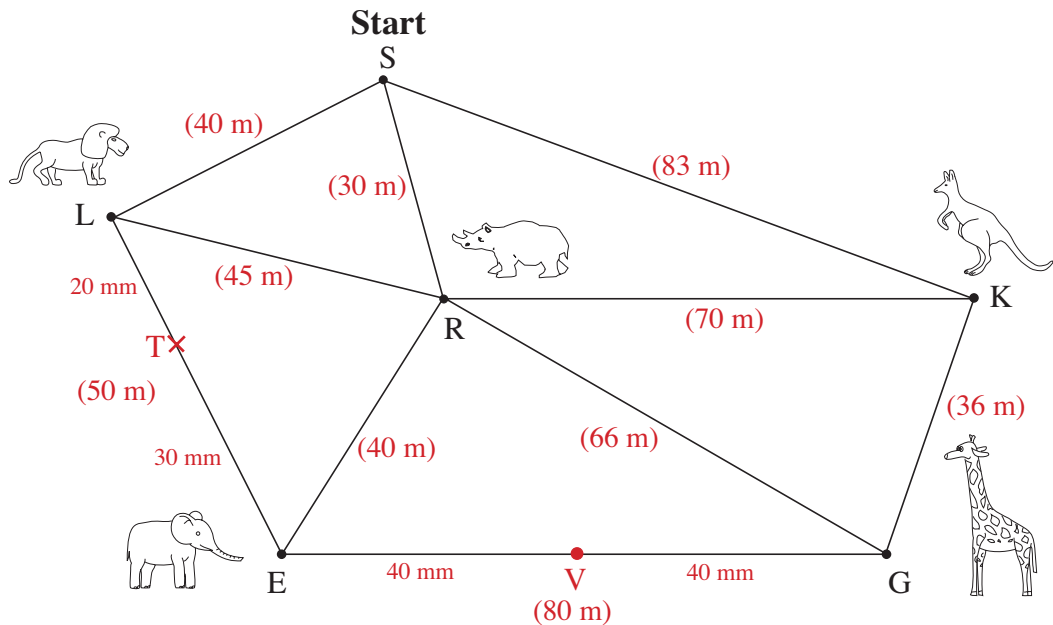
- a) 18 cm =  mm      b) 242 mm =  cm  mm  
 240 cm =  mm      480 mm =  cm  mm  
 5 cm 30 mm =  mm      1263 mm =  cm  mm  
 61 cm 9 mm =  mm      4004 mm =  cm  mm

**2**

You are visiting a wildlife park and want to see all the animals.

This is the map of the park.

Scale: 1 mm on the map → 1 m in real life



- a) Measure each line on the map and write the length beside it.  
 b) Calculate the distances in real life and write in brackets beside the lines.  
 c) Begin and end at **Start**. Write the letter of each animal to show the routes.  
 E.g: i) Find a route which allows you to visit all the animals. **.SRLEGKS.**  
 Total length = ..... **SRLEGKS = 324 m** .....  
 E.g: ii) Try to find a route which is less than 310 metres. **SLEGKRS**.....  
 Total length = ..... **SLEGKRS = 306 m** .....  
 d) i) The ice-cream van is half-way between the elephants and the giraffes. Draw a dot on the map to show it and label it V.  
 ii) The toilets are 30 m from the elephants on the road to the lions. Draw a cross on the map to show them and label it T.