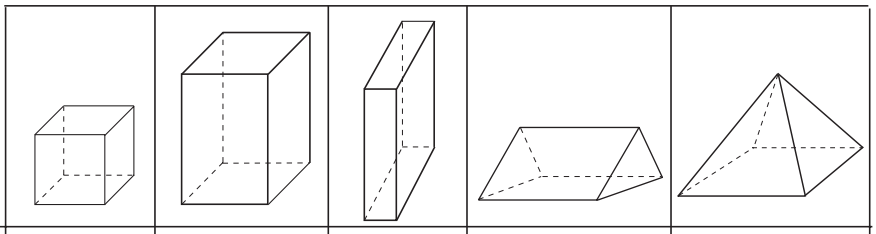
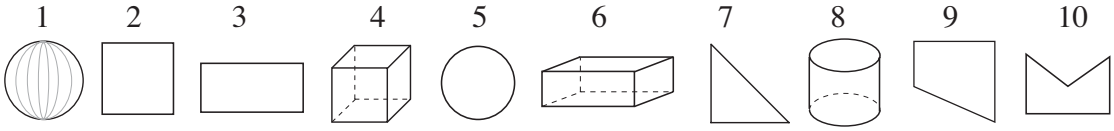
1 Complete the table for these **solids**.



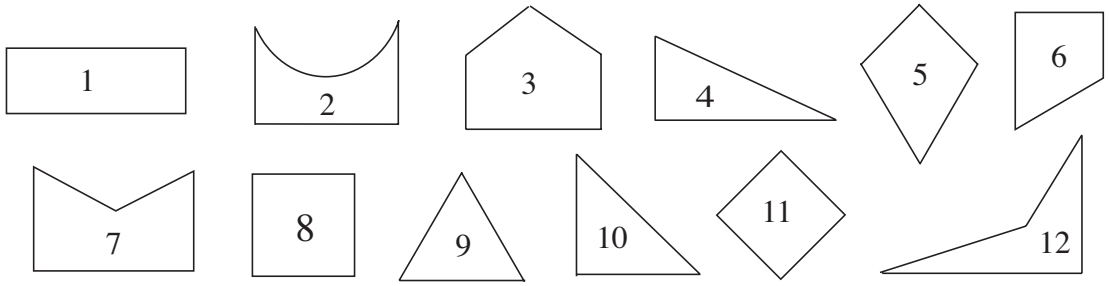
Number of faces	6	6	6	5	5
Number of vertices	8	8	8	6	5
Number of edges	12	12	12	9	8

2 Which shape belongs in which box? Write the numbers in the correct boxes.



Plane shapes	Rectangles	Solids	Quadrilaterals
2, 3, 5, 7, 9, 10	2, 3	1, 4, 6, 8	2, 3, 9

3 These **plane** shapes were cut out from coloured paper.



List the numbers of the shapes which are:

a) quadrilaterals: 1, 5, 6, 8, 11, 12

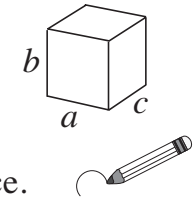
b) rectangles: 1, 8, 11

c) squares: 8, 11

4 How many different **cuboids** can you build from 12 unit cubes?

a) Fill in the table.

b) Circle the cuboids which have at least one square face.



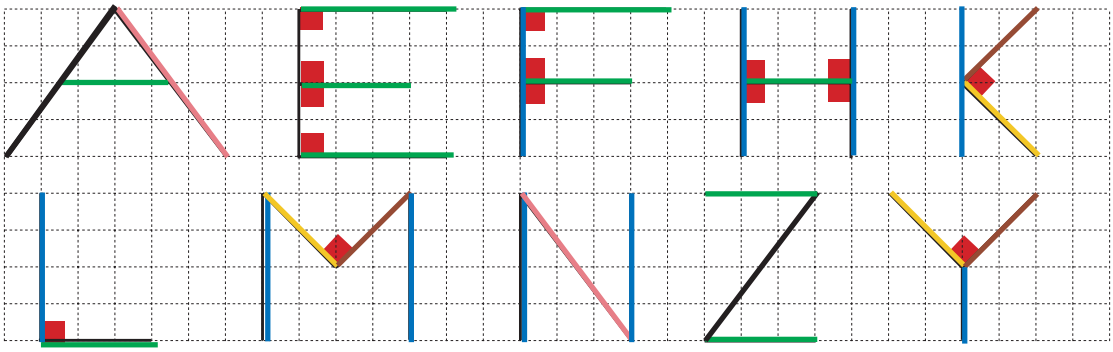
Cuboids

	1	2	3	4
Edge a =	1	1	1	2
Edge b =	1	2	3	2
Edge c =	12	6	4	3

1

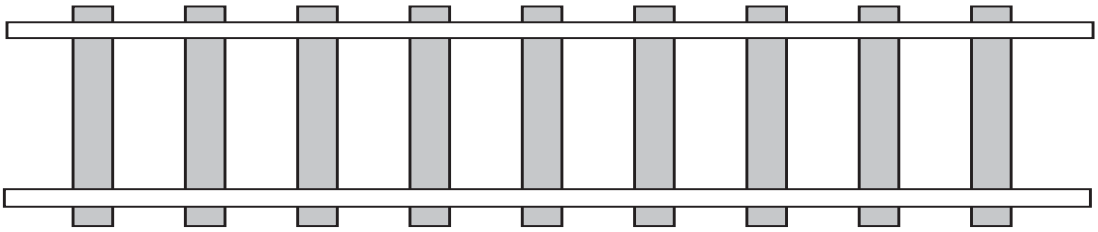
a) Draw over in the same colour the sets of lines which are **parallel**. Use different colours for different sets.

b) Colour the square at all the corners which are right angles.



2

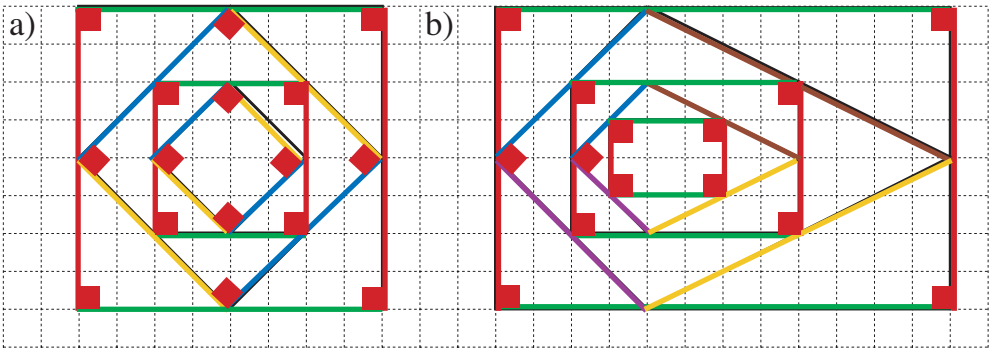
This is part of the track from a model railway.



Measure the distance between the two **horizontal** rails. 20 mm

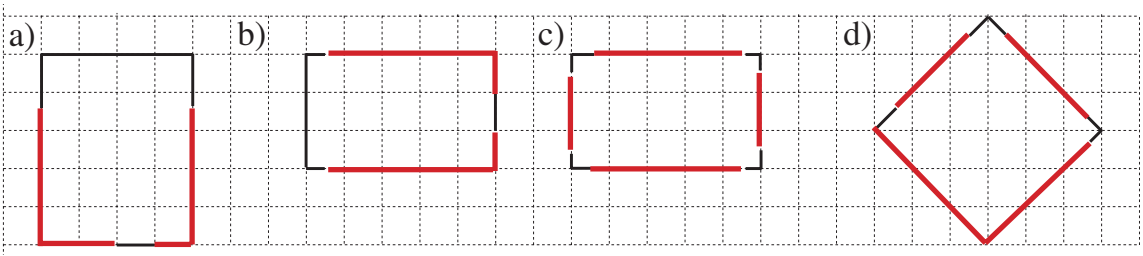
3

Draw over in the same colour the sets of lines which are **parallel**. Use a different colour for each set. Colour the squares at corners which are **right angles**.



4

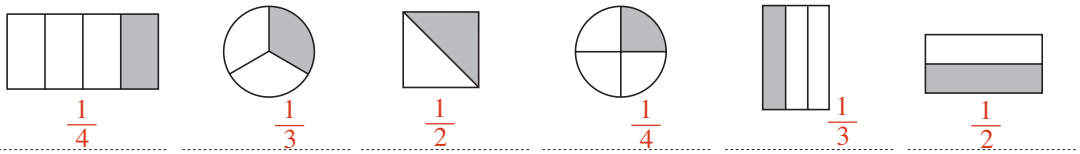
Complete the drawing to make **rectangles**.



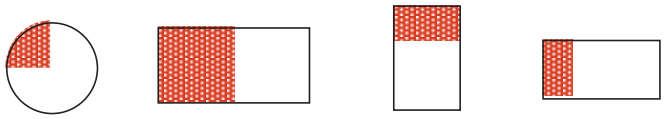
1 *Piggy* bought different kinds of cakes for a party he was arranging.

a) *Piggy* wanted to taste each cake right away.
What part of these cakes did *Piggy* eat before the party?

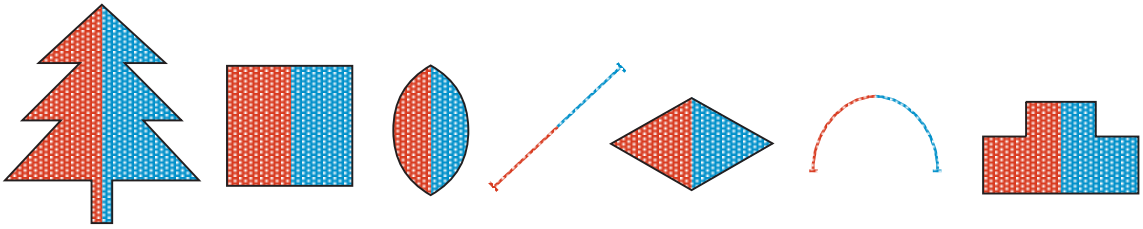
Eaten by 



b) After the party, *Piggy* checked on what had been left.
Colour the parts of the cakes he found.

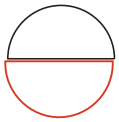


2 Colour one half of each shape in *red* and the other half in *blue*.

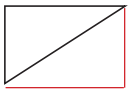


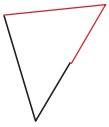
3 Each drawing is only half of the picture. Complete the whole drawing.

a) 

b) 

c) 

d) 

e) 

4 a) Tom had a length of wire which was 110 cm long.
He used half of it to make a model. What length of wire did he have left?

110 cm ÷ 2 = 55 cm

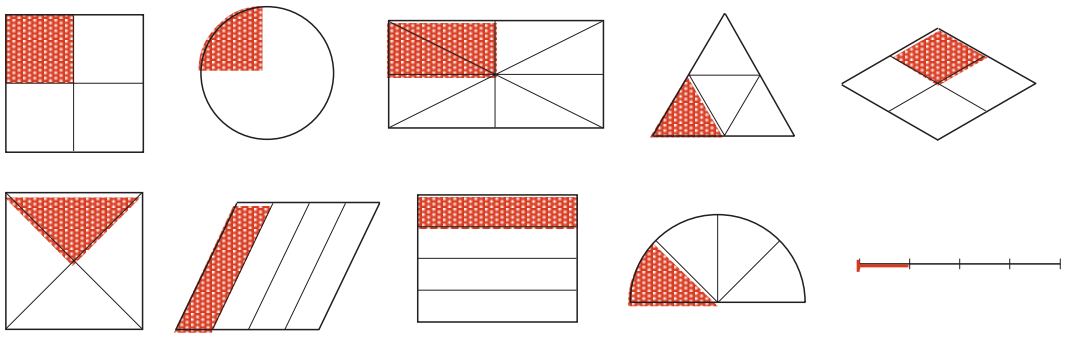
Answer: Tom had 55 cm of wire left.

b) Last month Lucy had £30 in her savings bank. Today, this amount is only half of what she has saved. How much money does Lucy have now?

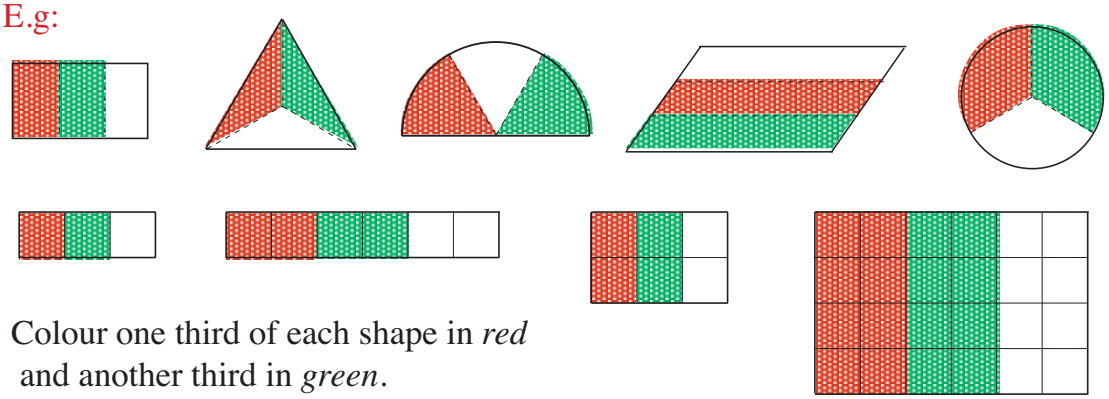
£30 × 2 = £60

Answer: Lucy has £60 now.

1 Colour a quarter of each shape. E.g:



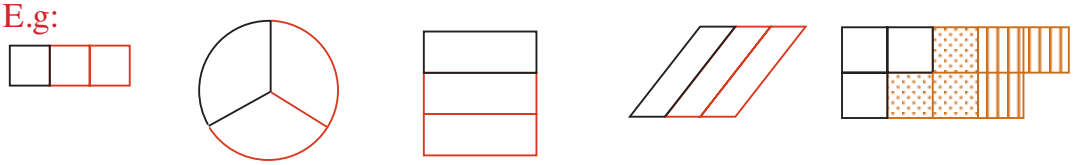
2 E.g:



Colour one third of each shape in *red* and another third in *green*.

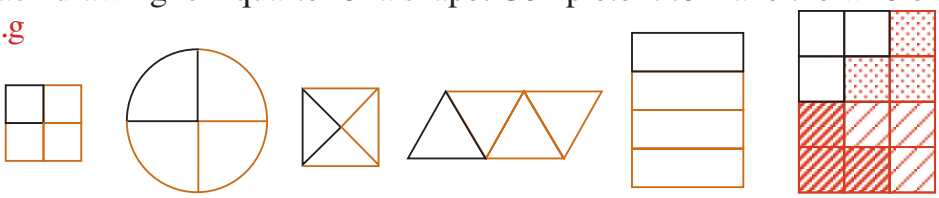
3 a) Each drawing is 1 third of a unit. Complete it to make the whole unit.

E.g:

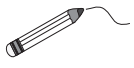


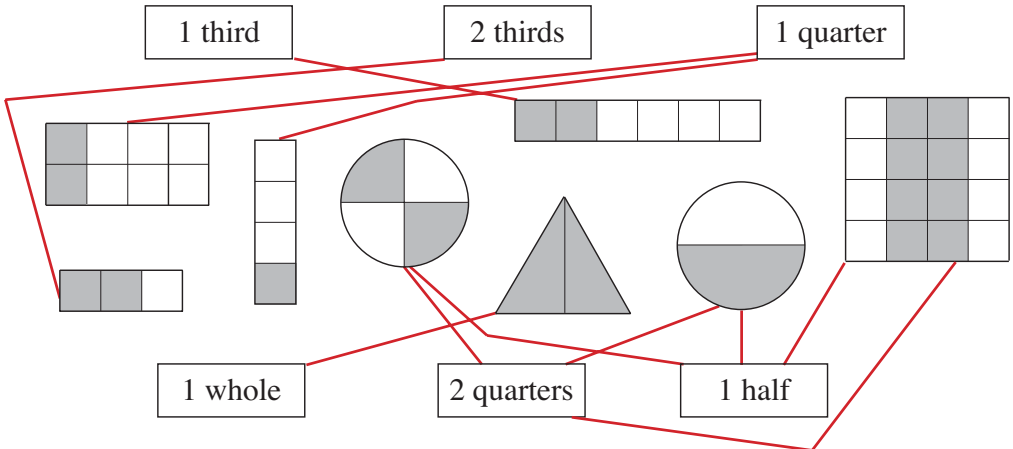
b) Each drawing is 1 quarter of a shape. Complete it to make the whole shape.

E.g



4 Join up the labels to the corresponding shapes.

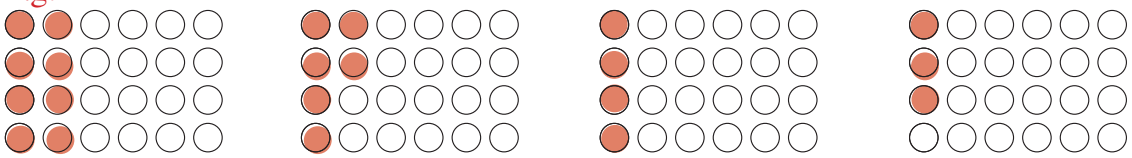




1

Colour the correct number of marbles. Write a division about each picture.

E.g:

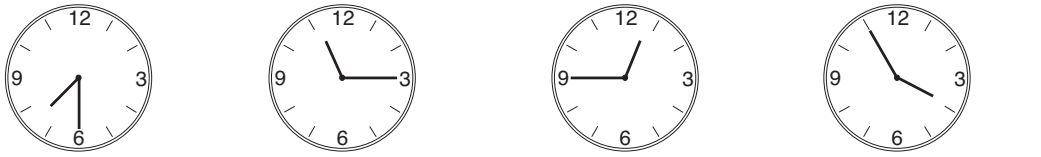


1 third | 1 quarter | 1 sixth | 1 eighth

$24 \div 3 =$ 8 | $24 \div 4 = 6$ | $24 \div 6 = 4$ | $24 \div 8 = 3$

2

How many hours and minutes do the hands on the clock show?



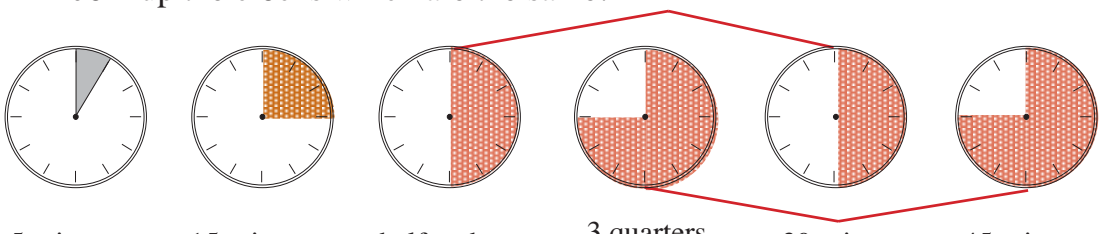
7 hours 30 minutes | 11 hours 15 minutes | 12 hours 45 minutes | 3 hours 55 minutes

3

a) How many minutes does the minute hand on the clock show when it is pointing to these numbers? Complete the table.

Minute hand points to:	12	1	2	3	4	5	6	7	8	9	10	11
Minutes shown	0	5	10	15	20	25	30	35	40	45	50	55

b) Shade the clocks to show how far the minute hand has gone. Join up the clocks which are the same.



5 minutes | 15 minutes | half an hour | 3 quarters of an hour | 30 minutes | 45 minutes

4

Compare the two sides. Write the correct sign between them. (=, <, >)

a) half an hour < 35 minutes b) 15 minutes = a quarter of an hour

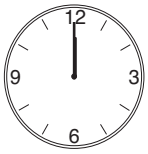
c) 50 minutes > 3 quarters of an hour d) 1 hour = 60 minutes

e) a quarter of an hour + 5 minutes < half an hour – 5 minutes

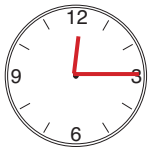
f) 20 minutes + half an hour > a quarter of an hour + half an hour

1

The clock is set at 12 noon.

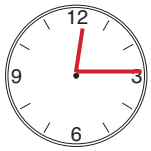


Draw where the hands of the clock will be after these amounts of time:



12 h 15 min

12 h 30 min

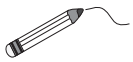


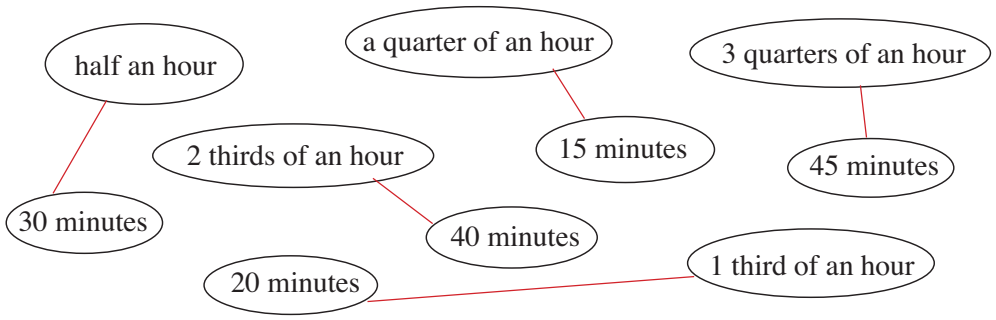
quarter of an hour

12 h 20 min

2

Join up the equal quantities.





3

Complete the open sentences so that they are correct.

a) 3 quarters of an hour + a quarter of an hour = 1 hour.

b) 30 minutes + half an hour = 1 hour.

c) 20 minutes + half an hour + 10 minutes = 1 hour.

d) A quarter of an hour + a third of an hour + 25 minutes = 1 hour.

4

If the statement is correct, write a ✓ in the box. If not, write a ✗ and correct the mistake.

a) 1 hour = 60 minutes ✓

b) Half an hour = 20 minutes ✗
Half an hour = 30 minutes

c) Half an hour = 2 quarters of an hour ✓

d) 20 minutes = 2 thirds of an hour ✗
20 minutes = 1 third of an hour

e) 3 quarters of an hour = 45 minutes ✓

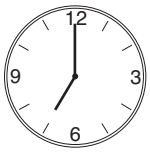
f) 2 thirds of an hour = 1 quarter of an hour + 5 minutes ✗
E.g: 2 thirds of an hour = half an hour + 10 minutes

g) 2 quarters of an hour = 1 quarter of an hour + 15 minutes ✓

1

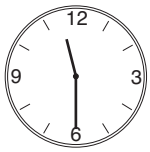
Write the times shown on the clocks in 3 different ways.

a) morning b) nearly mid-day c) afternoon d) evening e) night


7 h 0 min

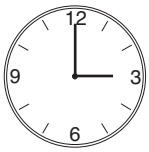
7.00 am

07:00


11 h 30 min

11.30 am

11.30


3 h 00 min

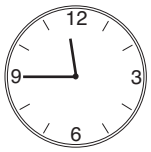
3.00 pm

15:00


9 h 30 min

9.30 pm

21:30


11 h 45 min

11.45 pm

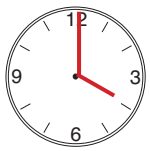
23:45

2

Draw hands on the clocks to show the times given. Write the time in a different way below each clock.

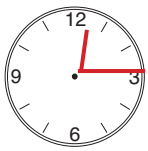
a) 4.00 am b) 8.30 pm c) 8.30 am d) 12.15 pm e) 0.15 am

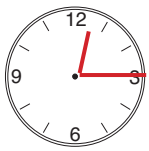
E.g:


04:00


20:30


8 h 30 min


12:15


0 h 15 min

3

Fill in the missing numbers.

a) 1 hour = 60 minutes

1 minute = 60 seconds

1 day = 24 hours

2 days = 48 hours

b) half a day = 12 hours

a quarter of a day = 6 hours

a third of a day = 8 hours

3 quarters of an hour = 45 minutes

4

Complete the tables.

a)

Days	1	2	1 quarter	3 quarters	1 third	2 thirds	1 eighth	1 half
Hours	24	48	6	18	8	16	3	12

$H = D \times 24$ $D = H \div 24$

b)

Hours	1	3	5	1 half	1 quarter	1 and a half	1 third	2 thirds	1 sixth	1 fifth
Minutes	60	180	300	30	15	90	20	40	10	12

1 Colour the odd one out. Write the reason for your choice.

120 minutes

1 twelfth of a day

1 hour + half an hour + 25 minutes

60 minutes + 3 quarters of an hour + 1 quarter of an hour

3 quarters of an hour + 1 third of an hour + 55 minutes

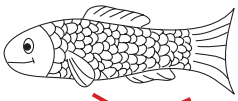
Reason: The other times are 2 hours;; this one is 1 hour and 55 minutes.

2 Write the amounts of time in **increasing** order.

10 minutes | 3 quarters of an hour | half a day | 35 minutes | 1 third of an hour | 1 quarter of an hour

10 minutes < 1 quarter of an hour < 1 third of an hour < 35 minutes < 3 quarters of an hour < half a day

3 *Sparrow* and *Trout* were arguing over the times in a day. Who is correct? Tick the correct answer and cross out the wrong one.

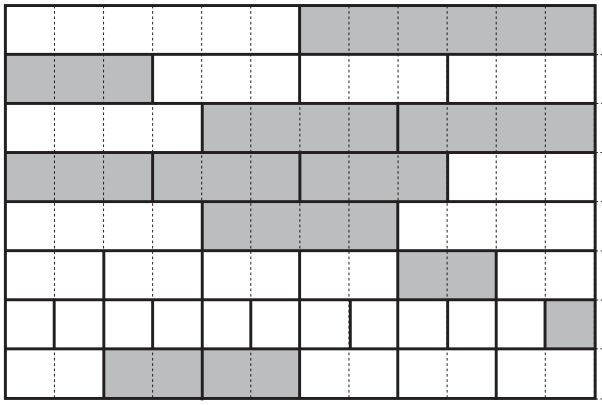


✓ 12 hours	half a day	~~30 hours~~
~~14 hours~~	2 quarters of a day	12 hours ✓
✓ 4 hours	1 sixth of a day	4 hours ✓
~~45 minutes~~	2 half hours	60 minutes ✓
✓ 15 minutes	a quarter of an hour	~~20 minutes~~
✓ 40 minutes	2 thirds of an hour	~~45 minutes~~
~~2 hours~~	1 eighth of a day	3 hours ✓
~~9 hours~~	2 sixths of a day	8 hours ✓
✓ 18 minutes	3 tenths of an hour	~~20 minutes~~

1

If this is 1 unit:  → 1 unit

what is the value of each shaded part?



→ 1 half a unit

→ 1 quarter of a unit

→ 2 thirds of a unit

→ 3 quarters of a unit

→ 1 third of a unit

→ 1 sixth of a unit

→ 1 twelfth of a unit

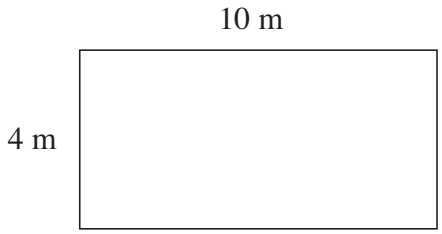
→ 1 third of a unit

2

This is my garden.

I have already dug up part of it.

How much of the garden do I still have to dig? Complete the table.



Part already dug	1 fifth	3 quarters	1 quarter	3 fifths	1 half	2 tenths	6 tenths	4 fifths
Part remaining	4 fifths	1 quarter	3 quarters	2 fifths	1 half	8 tenths	4 tenths	1 fifth

3

I have already drunk 3 quarters of a 2 litre bottle of lemonade.

a) What part of the lemonade is left?

1 quarter

b) How many cl of the lemonade is left?

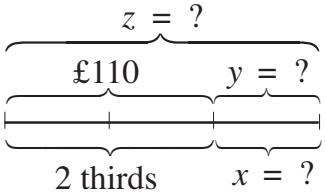
50 cl

c) How many cl of lemonade have I drunk?

150 cl

4

Write a context for the plan. Solve it.



E.g: I spent £110, which was 2 thirds of my money.

a) What part of it do I have left? (x)

b) How much money do I have left? (y)

c) How much money did I have to begin with? (z)

Answer: a) I have 1 third left.

b) I have £55 left

c) I had £165 to begin with.

1 Complete the drawings.

If this is : 1 whole →

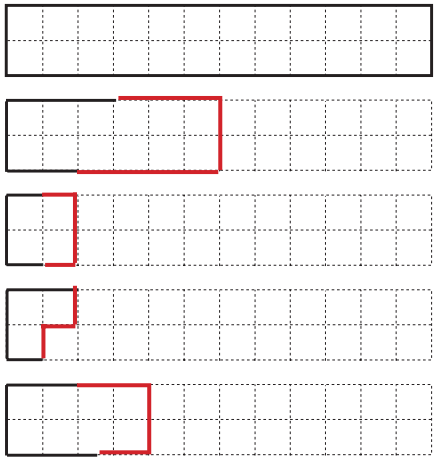
then this is:

1 half →

1 sixth →

1 eighth →

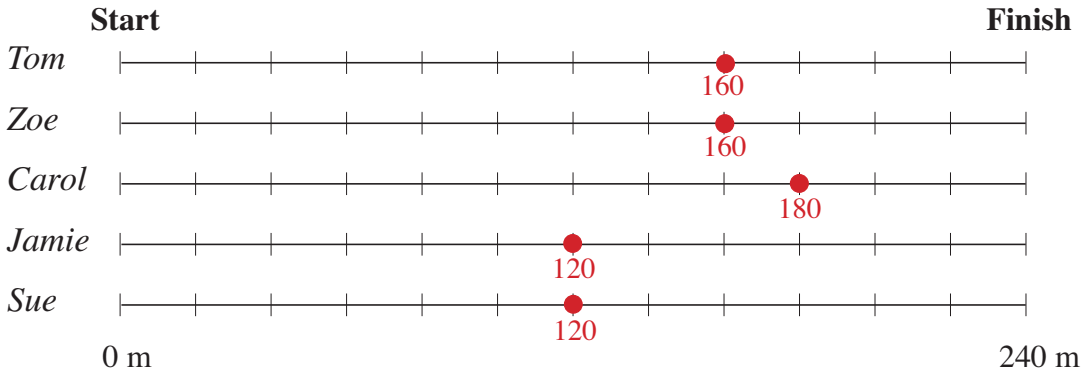
1 third →



2 Five children are running in a 240 m race. At this moment in time:

- *Tom* has run 4 sixths of the distance.
- *Zoe* has run 2 thirds of the distance.
- *Carol* has run 3 quarters of the distance.
- *Jamie* has run 3 sixths of the distance.
- *Sue* has run half way.

Mark where each child is on the running track.



3 Gerry spent £140 on his holiday. Joe spent 1 seventh more than Gerry.

a) How much money did Joe spend on his holiday?

140 ÷ 7 + 140 = 160

Answer: Joe spent £160.

b) How much money did Gerry and Joe spend altogether?

140 + 160 = 300

Answer: They spent £300 altogether.

1 Each number is the **sum** of the two numbers directly below it.
Fill in the missing numbers.

a)

		200		
	123		77	
65		58		19
18	47		11	8

b)

		200		
	60		140	
20		40		100
0	20		20	80

2 Each number is the **product** of the two numbers directly below it.
Fill in the missing numbers.

a)

		500		
	10		50	
2		5		10
2	1		5	2

b)

		120		
	6		20	
3		2		10
3	1		2	5

3 In a school, each lesson starts on the hour and lasts for 45 minutes.

a) What part of an hour is:

i) each lesson — 3 quarters

ii) each break? — 1 quarter

b) The lessons start at 09:00 and lunch is at 13:00.
How many lessons are there during the morning? — 4 lessons

c) How many hours and minutes do pupils spend:

i) in lessons — 3 hours

ii) in breaks? — 1 hour

4 Fill in the missing items.

a) 100 —(1 fifth)→ 20 —(1 half)→ 10; 1 tenth

b) 100 —(2 fifths)→ 40 —(1 half)→ 20; 1 fifths

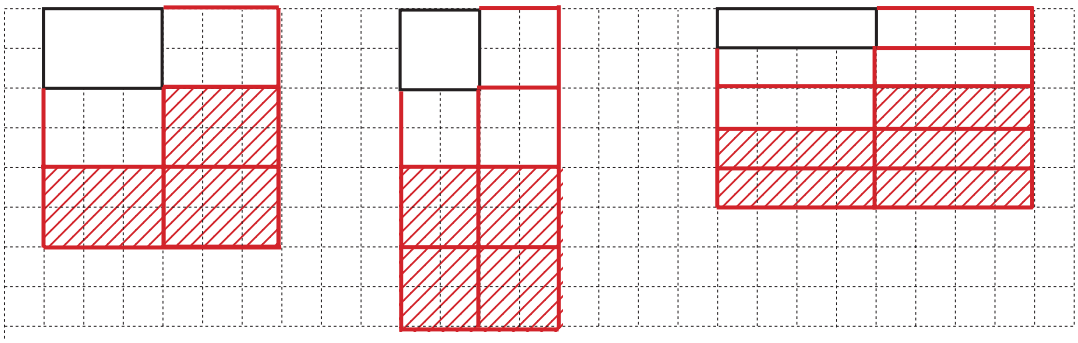
c) 200 —(1 fifth)→ 40 —(1 half)→ 20; 1 tenth

d) 100 —(2 tenths)→ 20 —(1 half)→ 10; 1 tenths

1 Complete each given part to make 2 whole units.

E.g:

a) 1 third b) 1 quarter c) 1 fifth



2 How much of their money did they each spend?

a) *Irene* had 100 50 20 20 10 and spent 1 fifth of half of her money.

Irene spent 20 p.

b) *George* had 50 50 50 20 10 and spent half of 1 third of his money.

George spent 30 p.

c) *Nick* had 100 100 50 50 20 20 20 and spent 1 third of a half.

Nick spent 60 p.

d) *Jane* had 50 20 20 20 20 10 10 10 and spent 1 eighth of a quarter.

Jane spent 5 p.

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

E.g:

a) 2 quarters > 1 eighth

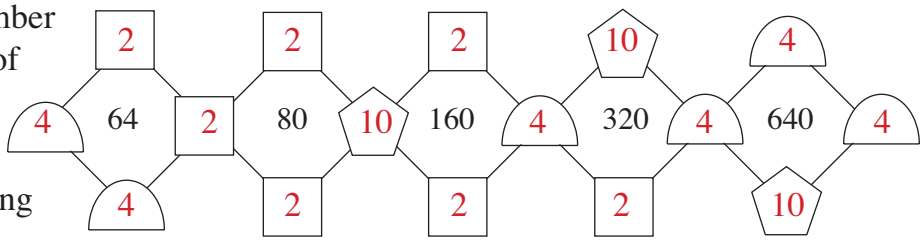
b) 1 third = 2 sixths

c) 3 sixths < 5 sixths

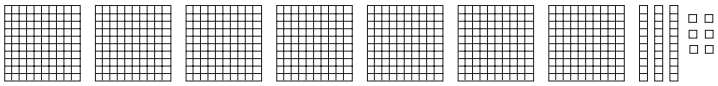
d) 4 fifths = 8 tenths

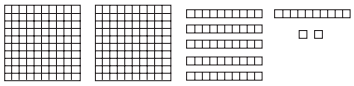
4 The middle number is the **product** of the 4 numbers around it.

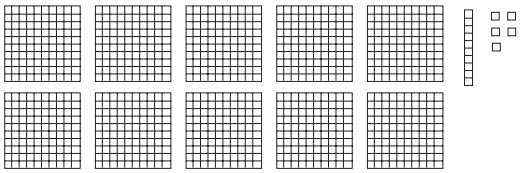
Fill in the missing numbers.



1 How many small squares are in the drawings? Write the numbers in the table.

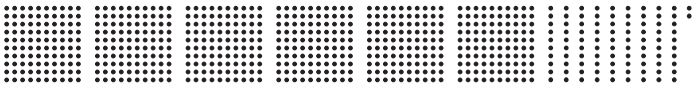
a) 

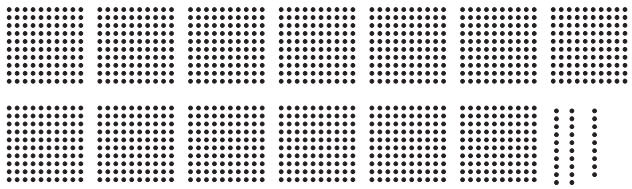
b) 

c) 

	Th	H	T	U
a)		7	3	6
b)		2	6	2
c)	1	0	1	5
Total	2	0	1	3

2 How many dots are in the drawings? Write the numbers in the table.

a) 

b) 

	Th	H	T	U
a)		6	9	2
b)	1	3	2	9
Total	2	0	2	1

3 Write these numbers as digits. List them in increasing order.

six hundred and five, 605 nine hundred and twenty, 920 two hundred and fifty three, 253

nine hundred and ninety nine, 999 six hundred and fifty one, 651 five hundred and sixty two, 562

253 < 562 < 605 < 651 < 920 < 999

4 Write these numbers in words.

a) 304 Three hundred and four

b) 430 Four hundred and thirty

c) 403 Four hundred and three

d) 910 Nine hundred and ten

e) 109 One hundred and nine

f) 901 Nine hundred and one

1 *Barry Bear* tried to write the same number in different ways but he made some mistakes.

Cross out the mistakes and correct them.

9 hundreds, 4 tens and 5 units

945

$9 \times 100 + 4 \times 10 + 5 \times 1$

~~900 + 50 + 4~~ 900 + 40 + 5

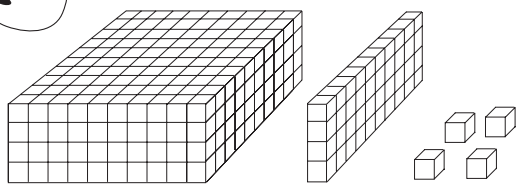
~~90 + 45~~ 900 + 45

800 + 100 + 45

2 Create as many different 3-digit numbers as you can from the digits 1, 2, 3 and 4. Do not use a digit more than once in any number.

123	213	312	412
132	231	321	421
124	214	314	413
142	241	341	431
134	234	324	423
143	243	342	432

3 Which numbers was *Daffy Duck* thinking about?

a)  = 444

b) If □ = 100, | = 10, and • = 1

i) □ □ | ••• = 213

ii) □ □ □ |||||||||| ••••• = 415

iii) □ □ □ □ ||||| •••••••••• = 559

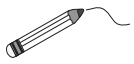
iv) □ □ □ □ •••••••••••• = 412

v) □ □ □ ||| ••• = 333

1 What is the rule? Continue the sequence for another 10 terms. Rule: subtract 6

700, 694, 688, 682, 676, 670, 664, 658, 652, 646, 640, 634, 628,

2 Colour with the same colour or join up the equal numbers.



3 hundreds + 8 units

94

480

2 hundreds + 108 units

5 hundreds + 2 tens + 10 units

531

50 + 10 + 34

900 – 1

2 hundreds + 200 units + 8 tens

500 + 20 + 10

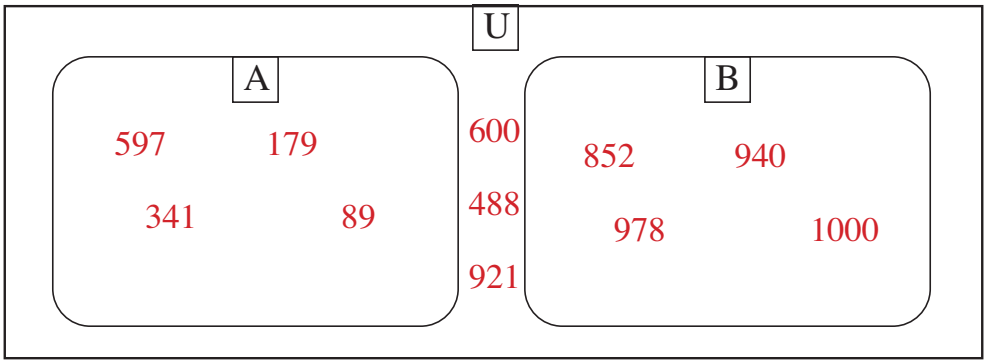
8 hundreds + 8 tens + 19 units

5 hundreds + 3 tens + 1 unit

3 Write the odd numbers smaller than 600 in set **A**.
Write the even numbers greater than 800 in set **B**.

Choose from the numbers in set **U**.

U = { 488, 852, 597, 921, 940, 179, 600, 978, 341, 89, 1000 }



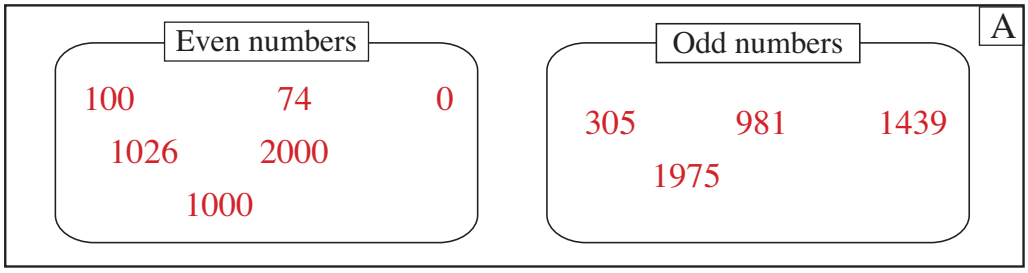
4 Complete the table.

		Th	H	T	U
568	5 × 100 + 6 × 10 + 8 × 1		5	6	8
173	1 × 100 + 7 × 10 + 3 × 1		1	7	3
902	9 × 100 + 0 × 10 + 2 × 1		9	0	2
430	4 × 100 + 3 × 10 + 0 × 1		4	3	0
1245	1 × 1000 + 2 × 100 + 4 × 10 + 5 × 1	1	2	4	5
1050	1 × 1000 + 0 × 100 + 5 × 10 + 0 × 1	1	0	5	0

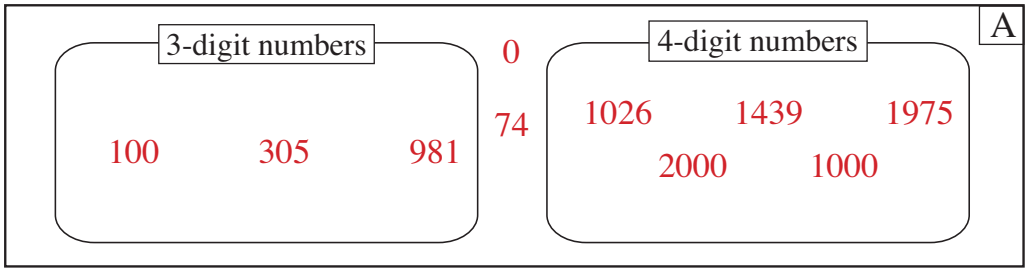
1 Write the numbers from set **A** in the correct boxes.

$$A = \{\ 100,\ 305,\ 74,\ 0,\ 981,\ 1026,\ 1439,\ 1975,\ 2000,\ 1000\ \}$$

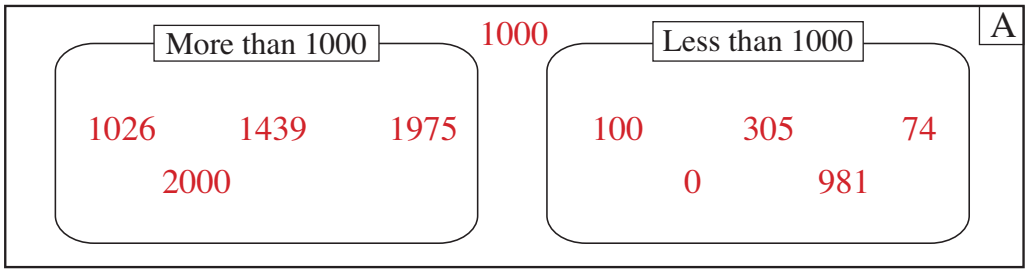
a)



b)



c)



2 a) Add 12 to each number in **A** and write the result in **B**.

b) Decide whether the statements are true or false. Write ✔ or ✕ in the box.

A		**B**
111	+ 12 →	123
112	+ 12 →	124
113	+ 12 →	125
122	+ 12 →	134
123	+ 12 →	135
133	+ 12 →	145
222	+ 12 →	234
223	+ 12 →	235
233	+ 12 →	245
333	+ 12 →	345

i) **A** contains all 3-digit numbers with digits 1, 2 and 3. ✕
Some missing - e.g. 311, 322

ii) **B** contains all 3-digit numbers with different digits from the set

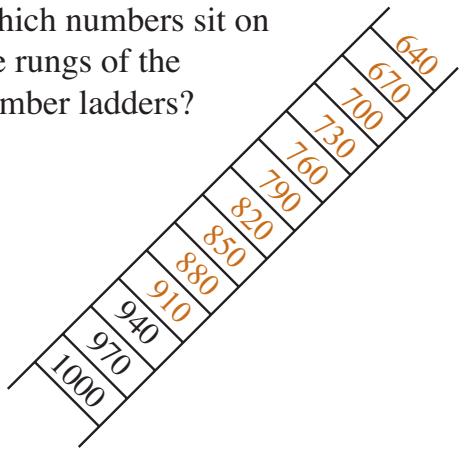
$$\{\ 1, 2, 3, 4, 5\ \}$$

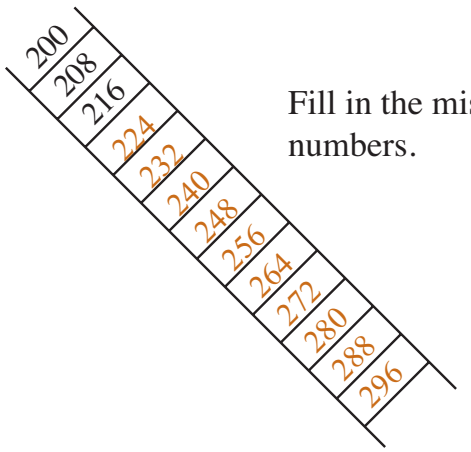
and the digits are increasing. ✔

iii) None of the numbers in **A** have digits which are decreasing. ✔

1

Which numbers sit on the rungs of the number ladders?





Fill in the missing numbers.

2

Practise calculation. Write the digits in the correct boxes.

a)	$2 + 5 =$ 7	$20 + 50 =$ 70	$200 + 500 =$ 700
b)	$7 + 8 =$ 15	$70 + 80 =$ 150	$700 + 800 =$ 1500
c)	$14 + 3 =$ 17	$140 + 30 =$ 170	$1400 + 300 =$ 1700
d)	$6 - 4 =$ 2	$60 - 40 =$ 20	$600 - 400 =$ 200
e)	$11 - 5 =$ 6	$110 - 50 =$ 60	$1100 - 500 =$ 600
f)	$20 - 8 =$ 12	$200 - 80 =$ 120	$2000 - 800 =$ 1200

3

Practise multiplication and division.

a)	$7 \times 2 =$ 14	$7 \times 20 =$ 140	$7 \times 200 =$ 1400
b)	$12 \div 3 =$ 4	$120 \div 3 =$ 40	$1200 \div 3 =$ 400
c)	$8 \times 6 =$ 48	$8 \times 60 =$ 480	$80 \times 6 =$ 480
d)	$42 \div 7 =$ 6	$420 \div 7 =$ 60	$420 \div 70 =$ 6
e)	$5 \times 4 =$ 20	$5 \times 40 =$ 200	$50 \times 40 =$ 2000
f)	$27 \div 9 =$ 3	$270 \div 9 =$ 30	$270 \div 90 =$ 3

4

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

$\mathbf{A} = \{ 152, 125, 72, 34, 909, 999, 450 \}$

E.g:

a) All these numbers . . . are whole numbers. . . . . .

b) Not all these numbers . . are even numbers. . . . . .

c) None of these numbers . . is a 1-digit number. . . . . .

d) There is at least one number which . . is less than 100. . . . . .

1 Calculate:

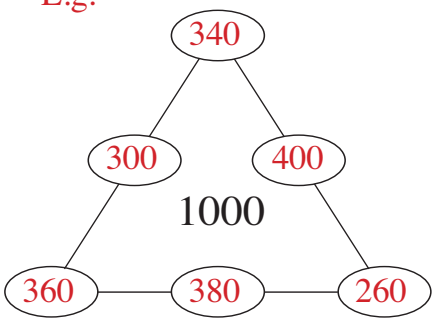
26 + 13 = 39	260 + 130 = 390	58 – 32 = 26	580 – 320 = 260
18 + 42 = 60	180 + 420 = 600	70 – 21 = 49	700 – 210 = 490
56 + 44 = 100	560 + 440 = 1000	100 – 59 = 41	1000 – 590 = 410
135 + 48 = 183	1350 + 480 = 1830	146 – 18 = 128	1460 – 180 = 1280
164 + 36 = 200	1640 + 360 = 2000	200 – 35 = 165	2000 – 350 = 1650

2 Calculate:

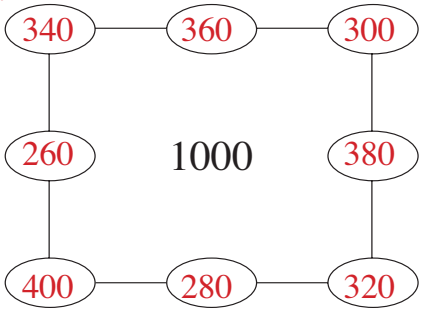
a)	7 × 1 = 7	11 × 1 = 11	b)	19 × 10 = 190	119 × 10 = 1190
	7 × 10 = 70	11 × 10 = 110		7 × 100 = 700	10 × 70 = 700
	7 × 100 = 700	11 × 100 = 1100		19 × 100 = 1900	10 × 190 = 1900
c)	900 ÷ 1 = 900	1000 ÷ 1 = 1000	d)	600 ÷ 100 = 6	600 ÷ 10 = 60
	900 ÷ 10 = 90	1000 ÷ 10 = 100		800 ÷ 100 = 8	800 ÷ 10 = 80
	900 ÷ 100 = 9	1000 ÷ 100 = 10		1200 ÷ 100 = 12	1200 ÷ 10 = 120

3 Write numbers in the circles so that the sum of the 3 numbers along each line is 1000. Choose from: 260, 280, 300, 320, 340, 360, 380, 400.

a) E.g:

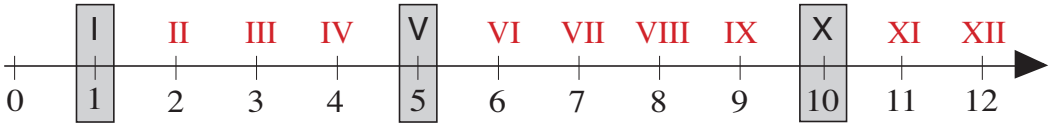


b) E.g:

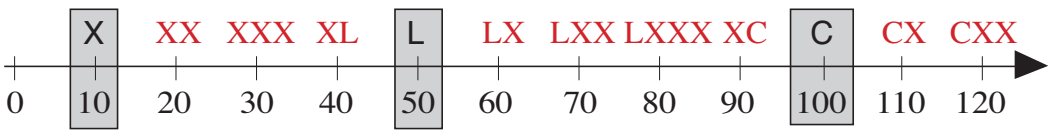


4 Write the numbers as Roman numerals.

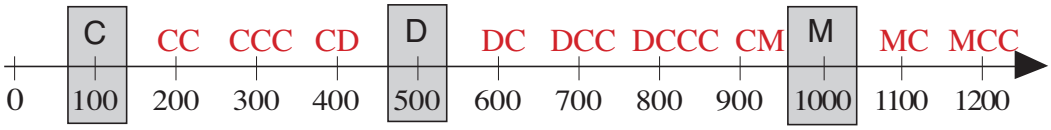
a)



b)



c)



1 Write these numbers as Roman numerals.

a) 100 + (50 + 10) + (1 + 1) — C + LX + II = CLXII

b) (500 + 100) + (50 – 10) + (1 + 1) — DC + XL + II = DCXLII

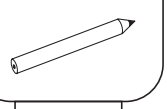
c) 1000 + (500 + 100) + 1 — M + DC + I = MDCI

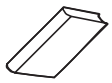
d) (1000 – 100) + (50 + 10) + 5 — CM + LX + V = CMLXV

e) 1000 + (100 + 100) + (5 + 1) — M + CC + VI = MCCVI

f) (500 + 100 + 100) + (10 + 10 + 10) — DCC + XXX = DCCXXX

2 How many pence do these items cost? Write the amounts as Arabic numbers.

a) XXIV  24

b) DLV  555 = £5.55

c) LXXIII  73

d) CLXXXII  182 = £1.82

e) XL  40

f) CCXIV  214 = £2.14

g) MCCXII  1212 = £12.12

h) CLXXIX  179 = £1.79

3 Write these numbers as Roman numerals. For example:

628 = (500 + 100) + (10 + 10) + (5 + 1 + 1 + 1) = DCXXVIII
DC XX VIII

a) 756 = (500 + 100 + 100) + 50 + (5 + 1) = DCCLVI
DCC L VI

b) 435 = (500 – 100) + (10 + 10 + 10) + 5 = CDXXXV
CD XXX V

c) 263 = (100 + 100) + (50 + 10) + (1 + 1 + 1) = CCLXIII
CC LX III

d) 974 = (1000 – 100) + (50 + 10 + 10) + (5 – 1) = CMLXXIV
CM LXX IV

4 Which is more? How many more?

a) CLIV 154 <2 156 CLVI

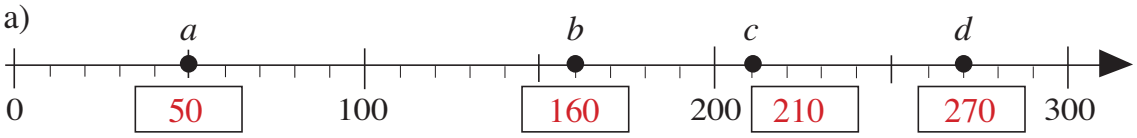
b) DXXIX 529 <3 532 DXXXII

c) M 1000 >190 810 DCCCX

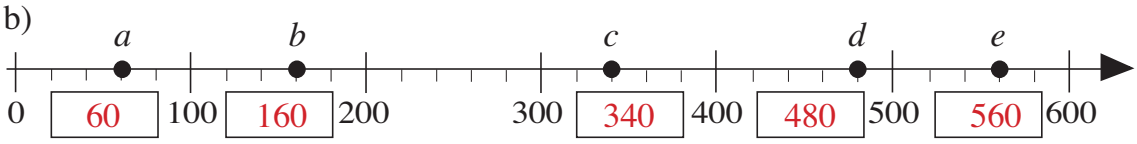
d) CCCL 350 >30 320 CCCXX

1 Which numbers do the letters stand for? Write the numbers in the boxes.

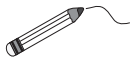
a)

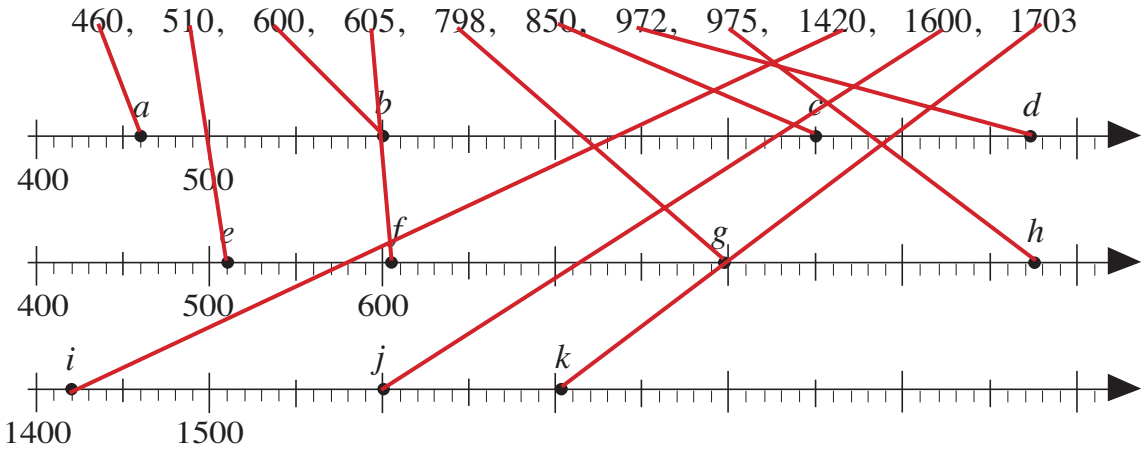


b)



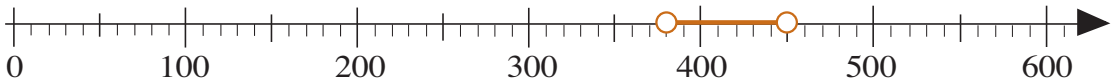
2 Join up the letters to the matching numbers.



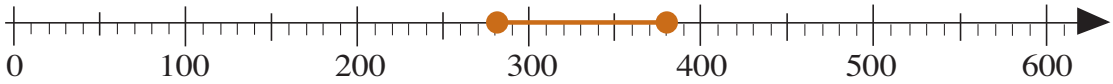


3 Which whole numbers make each statement true? Mark them on the number line. Write down the highest and lowest possible numbers.

a) $380 < \square < 450$ $\square$: 381 to 449



b) $280 \leq \square \leq 380$ $\square$: 280 to 380



4 Continue the sequences.

a) 1, 2, 4, 8, 16, 32, 64, 128, 256, 512, ...

b) 1, 4, 9, 16, 25, 36, 49, 64, 81, 100, ...

c) 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, ...

d) 1, 3, 6, 10, 15, 21, 28, 36, 45, 55, ...

1 List the whole numbers which have these numbers as their nearest whole ten.

a) 60: 55, 56, 57, 58, 59, 60, 61, 62, 63, 64

b) 100: 95, 96, 97, 98, 99, 100, 101, 102, 103, 104

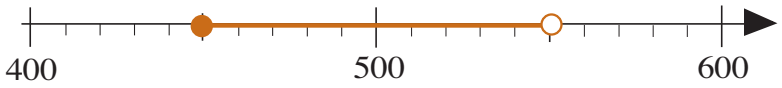
c) 580: 575, 576, 577, 578, 579, 580, 581, 582, 583, 584

d) 1500: 1495, 1496, 1497, 1498, 1499, 1500, 1501, 1502, 1503, 1504

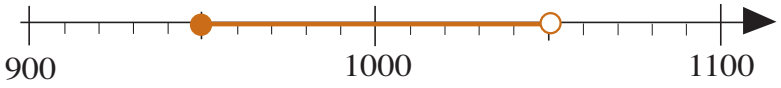
e) 0: (−5, −4, −3, −2, −1), 0, 1, 2, 3, 4

2 Mark on the number line the numbers which have these numbers as the nearest whole hundred:

a) 500:



b) 1000:



3 Decide whether the quantities in the answers are **exact** or **approximate**.

Write = or ≈ in the boxes.

a) Ann asked the shop assistant about the price of a computer.
The shop assistant said, "It is £400." [=]

b) Brian asked a policeman how far it was to the Library.
The policeman said, "It is 400 metres further on." [≈]

c) Cindy asked her mother how many buttons were in her button box.
Her mother said, "There must be 100 buttons in the box." [≈]

d) Dennis asked the storeman how many screws were in a packet.
The storeman said, "There are 150 screws in a packet." [= or ≈]

4 Round these numbers to the nearest

a) ten:

138 ≈ 140	134 ≈ 130	135 ≈ 140	574 ≈ 570
577 ≈ 580	575 ≈ 580	1405 ≈ 1410	1404 ≈ 1400
1408 ≈ 1410	992 ≈ 990	999 ≈ 1000	995 ≈ 1000

b) hundred:

992 ≈ 1000	999 ≈ 1000	995 ≈ 1000	138 ≈ 100
134 ≈ 100	135 ≈ 100	574 ≈ 600	577 ≈ 600
575 ≈ 600	1405 ≈ 1400	1404 ≈ 1400	1408 ≈ 1400

1 List the whole numbers which :

a) round to 500 as the nearest hundred and have 5 as the tens digit.

450, 451, 452, 453, 454, 455, 456, 457, 458, 459

b) round to 500 as the nearest hundred and have 4 as the tens digit.

540, 541, 542, 543, 544, 545, 546, 547, 548, 549

c) round to 500 as the nearest hundred and also as the nearest ten.

495, 496, 497, 498, 499, 500, 501, 502, 503, 504

2 Which digits can the letters represent so that if the numbers are rounded to:

a) the nearest ten, the value is 360

$\boxed{a}56$	$\boxed{b}64$	$3\,\boxed{c}\,5$	$3\,\boxed{d}\,3$	$35\,\boxed{e}$	$36\,\boxed{f}$
3	3	5	6	5, 6, 7, 8, 9	0, 1, 2, 3, 4

b) the nearest hundred, the value is 400?

$\boxed{g}50$	$\boxed{h}49$	$3\,\boxed{i}\,1$	$4\,\boxed{j}\,9$	$35\,\boxed{k}$	$44\,\boxed{l}$
3	4	5, 6, 7, 8, 9	0, 1, 2, 3, 4	0, 1, ..., 9	0, 1, ..., 9

3 Round these numbers to:

a) the nearest ten

1006 ≈ 1010
1005 ≈ 1010
1001 ≈ 1000
1753 ≈ 1750
1759 ≈ 1760
1750 ≈ 1750

b) the nearest hundred.

1006 ≈ 1000
1005 ≈ 1000
1001 ≈ 1000
1753 ≈ 1800
1759 ≈ 1800
1750 ≈ 1800

4 Two different numbers round to 300 as the nearest hundred. Is it possible that:

a) both numbers are less than 300 ..... Yes ...

b) the smaller number is 100 less than the other number ..... No. ...

c) one number has 5 and the other has 0 as the tens digits ..... Yes ...

d) both numbers are whole hundreds? ..... No. ...

1 Estimate the length of the routes in the drawings first, then measure them.

How long are the routes really if 1 cm in the drawing means 10 m in real life?

a) D L

Estimate: ..... cm

Length: 50 mm = 5 cm

Length in real life: 50 m

b) B L

Estimate: ..... cm

Length: 65 mm = 6 and a half cm

Length in real life: 65 m

c) G L

Estimate: ..... cm

Length: 45 mm = 4 and a half cm

Length in real life: 45 m

d) H L

Estimate: ..... cm

Length: 70 mm = 7 cm

Length in real life: 70 m

2 Write these lengths in millimetres.

a) 2 cm = [20] mm, 11 cm = [110] mm, 105 cm = [1050] mm

b) 5 cm = [50] mm, 20 cm = [200] mm, 132 cm = [1320] mm

c) 9 and a half cm = [95] mm, 57 and a half cm = [575] mm,

half a cm = [5] mm, 123 and a half cm = [1235] mm

3 Change the units of length.

a) 25 mm = [2] cm [5] mm

125 mm = [12] cm [5] mm

82 mm = [8] cm [2] mm

382 mm = [38] cm [2] mm

b) 2 m = [200] cm [0] mm

2 and a half m = [250] cm

12 m = [1200] cm

642 cm = [6] m [42] cm

1 Round these lengths to:

a) the nearest 10 mm

184 mm ≈ . . 180 mm . .

687 mm ≈ . . 690 mm . .

185 mm ≈ . . 190 mm . .

205 mm ≈ . . 210 mm . .

100 mm ≈ . . 100 mm . .

372 mm ≈ . . 370 mm . .

b) the nearest 100 mm

184 mm ≈ . . 200 mm . .

687 mm ≈ . . 700 mm .

185 mm ≈ . . 200 mm .

205 mm ≈ . . 200 mm .

100 mm ≈ . . 100 mm .

372 mm ≈ . . 400 mm .

2 The length of a line is about 12 cm, rounded to the nearest cm.
How long could the actual length of the line be?

Draw 4 possible lines accurately. Write the actual length below each line.

4 lines of different lengths, each one

11 cm 5 mm ≤ length < 12 cm 5 mm

(115 mm ≤ length < 125 mm)

Correct lengths written below each line.

3 a) Write these lengths in millimetres.

i)
12 cm = [120] mm
1 cm 2 mm = [12] mm
10 cm 2 mm = [102] mm
102 cm = [1020] mm
120 cm = [1200] mm
1 m 2 cm = [1020] mm
1 m 2 mm = [1002] mm

ii)
3 cm 3 mm = [33] mm
30 cm 3 mm = [303] mm
3 m 30 cm = [3300] mm
3 m 3 cm = [3030] mm
3 m 3 mm = [3003] mm
33 cm 3 mm = [333] mm
30 cm 30 mm = [330] mm

b) List them in increasing order.

i) 12 mm < 102 mm < 120 mm < 1002 mm < 1020 mm = 1020 mm < 1200 mm

ii) 33 mm < 303 mm < 330 mm < 333 mm < 3003 mm < 3030 mm < 3300 mm