

1. Here are four number cards.

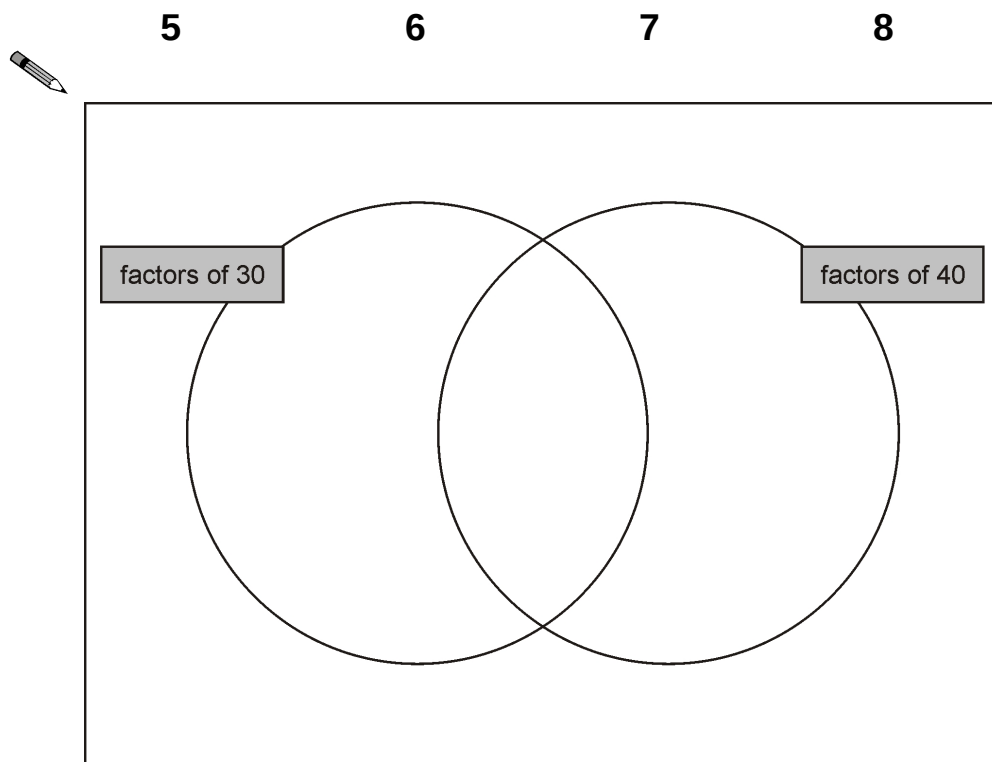


Which two number cards are **factors of 42**?



1 mark

2. Write these numbers in the correct places on the diagram.



2 marks

3. Write the missing numbers.

Factors of 20 = {1,,,,, 20}

1 mark

4. Write all the factors of 30 which are **also** factors of 20

.....

2 marks

5.

Circle all the **multiples of 8** in this list of numbers.

18 32 56 68 72

1 mark

6.

Here is a sorting diagram with four sections, **A**, **B**, **C** and **D**.

	multiple of 10	not a multiple of 10
multiple of 20	A	B
not a multiple of 20	C	D

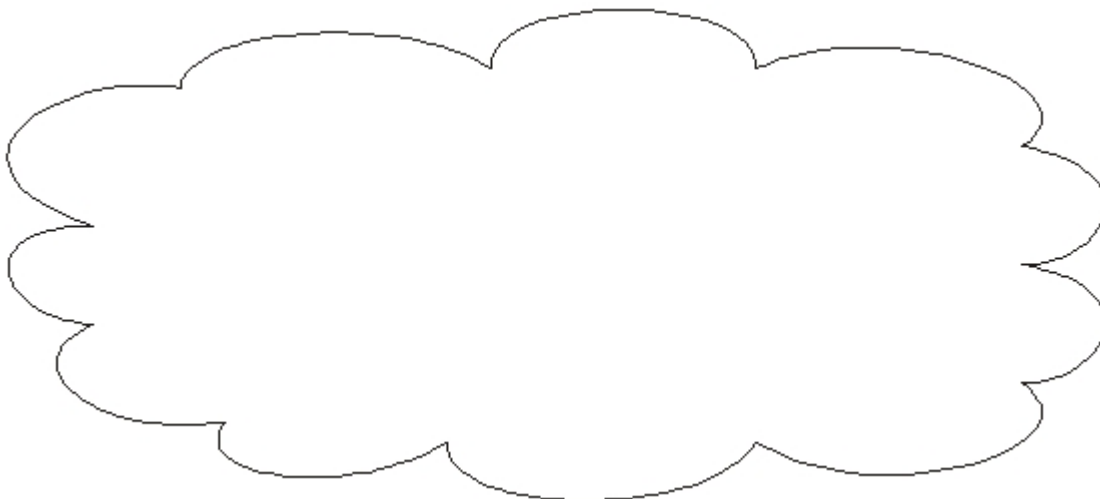
Write a number that could go in section **C**.



1 mark

Section **B** can never have any numbers in it.

Explain why.



1 mark

7.

Here are six digit cards.



Use **all six** digit cards to make three multiples of 3



1 mark

8.

Here is a number chart.

Circle the **smallest** number on the chart that is a multiple of **both** 2 and 7



71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1 mark

Here is the same number chart.

Circle the **largest** number that is **not** a multiple of 2 or 3 or 5



71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1 mark

9. Here are four labels.

even	multiples of 9	not even	not multiples of 9
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Write each label in the correct position on the sorting diagram below.

Handwritten: 1. 1000000

	72	56
	54	84
	63	49
	45	75

1 mark

10. Here is a diagram for sorting numbers.

Write **one number** in each white section of the diagram.

Handwritten: 1. 1000000

	less than 1000	1000 or more
multiples of 20		
not multiples of 20		

2 marks

11.

The numbers in this sequence increase by 3 each time.

3 6 9 12 ...

The numbers in this sequence increase by 5 each time.

5 10 15 20 ...

Both sequences continue.

Write a number **greater than 100** which will be in **both** sequences.

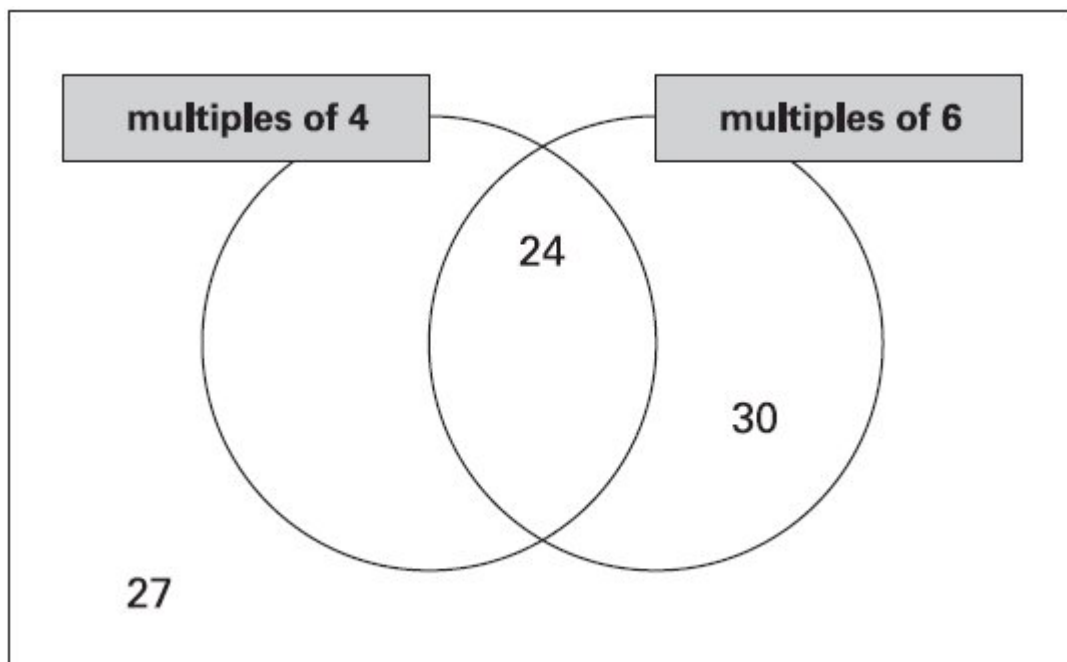
Show
your
method

2 marks

12.

Write these numbers in the correct places on this sorting diagram.

16 26 36



2 marks

13.

Circle **one number** on the grid which can be **divided by 9** with a **remainder of 1**.



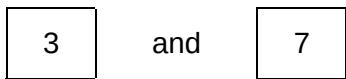
97	98	99
107	108	109
117	118	119

1 mark

Mark schemes

1.

Cards completed as shown:

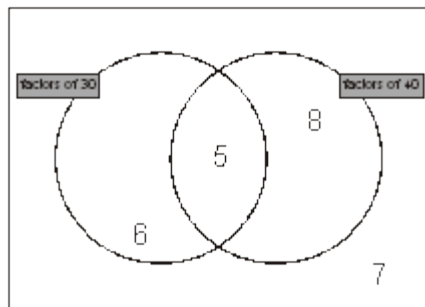


Accept answers in either order.

[1]

2.

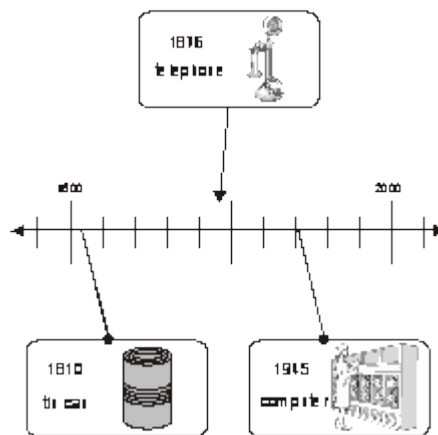
Award **TWO** marks for numbers written in the correct regions as shown:



If the answer is incorrect, award **ONE** mark for any three numbers written in the correct regions.

Do not accept numbers written in more than one region.

Accept alternative indications such as lines drawn from the numbers to the appropriate regions of the diagram.



Lines need not touch the time line provided the intended accuracy is clear.

Up to 2

[2]

3.

2, 4, 5, 10

*All correct, in any order for **1 mark**.*

[1]

4.

Award **TWO** marks for all four factors, as shown:

1, 2, 5, 10

If the answer is incorrect, award **ONE** mark for:

- three factors correct and none incorrect

OR

- four factors correct and one incorrect.

Accept factors written in any order.

*All four factors and no incorrect numbers must be given for the award of **TWO** marks.*

Up to 2

[2]

5.

All three numbers circled as shown:

18 **32** **56** 68 **72**

Do not award the mark if additional incorrect numbers are circled.

Accept unambiguous alternatives, eg ticks, numbers crossed or underlined.

[1]

6.

Any odd numbered multiple of 10, ie 10 **OR** 30 **OR** 50 **OR** 70 **OR** 90 **OR** any number ending with any of the pairs of digits above.

1

An explanation which recognises that all multiples of 20 are also multiples of 10, eg:

- 'Because all the numbers in the 20 times table are also in the 10 times table'
- 'Because all multiples of 20 are multiples of 10'
- 'Because 20 is in the 10 times table'
- 'All multiples of 20 go in box A because 10 goes into them'
- '20 is a multiple of both 20 and 10, and so is 40, 60, etc'
- 'Because if it's not a multiple of 10, it can't be a multiple of 20'
- 'Because if it is a multiple of 20, it has to be a multiple of 10'
- 'Because 10 is a factor of 20'.

Do not accept vague or arbitrary explanations, eg:

- 'Because 40 is a multiple of 10'
- 'Because they would be in box A instead'
- 'Because all the multiples of 10 are multiples of 20'
- 'Because 10 is a multiple of 20'.

1

[2]

7.

Three multiples of 3, eg:

3	6	2	4	5	7
---	---	---	---	---	---

OR

6	3	7	2	5	4
---	---	---	---	---	---

Multiples may be given in any order.

Digits may be in either order, eg 24 **OR** 42

Do not accept digits used more than once.

Do not accept digits other than those shown.

U1

[1]

8.

(a)

71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1

(b)

71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Do not award the mark if more than one number is circled.

Accept alternative unambiguous indications, eg numbers ticked, crossed or underlined.

1

[2]

9.

Diagram completed as shown:

	multiples of 9	not multiples of 9
even	72 54	56 84
not even	63 45	49 75

*Accept recognisable misspellings.**Accept 'odd' for 'not even'.**Accept alternative unambiguous indications, eg lines drawn from the labels to the appropriate parts of the diagram.*

[1]

10.

Award **TWO** marks for one correct number written in each white section of the table, eg

	less than 1000	1000 or more
multiples of 20	100	2000
not multiples of 20	19	1001

If the answer is incorrect, award **ONE** mark for three sections completed correctly.*Accept more than one number in each section as long as **all** are correct.*

Up to 2

[2]

11.

Award **TWO** marks for a multiple of 15 which is greater than 100, eg

105 **OR** 120 **OR** 135 **OR** 150 **OR** 300

Accept more than one answer if all are correct.

If the answer is incorrect, award **ONE** mark for evidence of appropriate method, eg:

*Accept for **ONE** mark 30, 45, 60, 75 **OR** 90*

• 90 93 96 99 102 105 108 ...
90 95 100 105 110 115 ...

← Not spotting matching number (105)

• 90 93 96 98 101 104 107 110 ...
90 95 100 105 110 115 ...

← One step size incorrect (96 to 98)

• 15 30 45 60 75 80 95 110 125

← One step size incorrect (75 to 80)

• $3 \times 5 \times 20$
OR
 15×10

← Multiple greater than 100 but not calculated

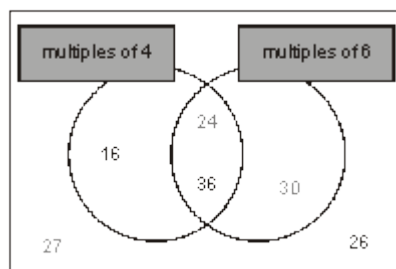
*Answer need not be obtained for the award of **ONE** mark.*

Up to 2

[2]

12.

Award **TWO** marks for all three numbers correctly placed in the regions as shown:



Do not accept a number repeated in different regions.

Do not penalise answers which offer additional numbers (other than 16, 26 and 36) on the diagram, whether correctly placed or not.

If the answer is incorrect, award **ONE** mark for two numbers correctly placed.

Up to 2

[2]

13.

109 **OR** 118 circled.

Accept both 109 and 118 circled.

[1]