1 Here is part of a number sequence.

The numbers in the sequence increase by 25 each time.

| 50 | 75 | 100 | 125 | … |

Circle **all** of the numbers below that will appear in the sequence.

255   650   735   900   995

2 Complete this **three-digit** number so that it is a **multiple of 9.**

| 2 | | |

3 A car costs **more** than **£8600** but **less** than **£9100**

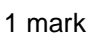Tick (✔) the prices that the car could cost.

£8569 ☐

£9090 ☐

£9130 ☐

£8999 ☐

4 Draw **two more** lines to match **3500** to numbers with the same value.

35 hundreds

3500 ones

3500

35 tens

350 tens

350 hundreds

1 mark

5 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

6 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

7 Here are four labels.

even	multiples of 9	not even	not multiples of 9

Write each label in the correct position on the sorting diagram below.

	72 54	56 84
	63 45	49 75

1 mark

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

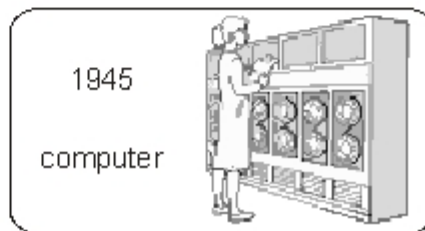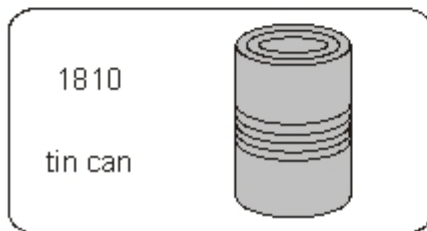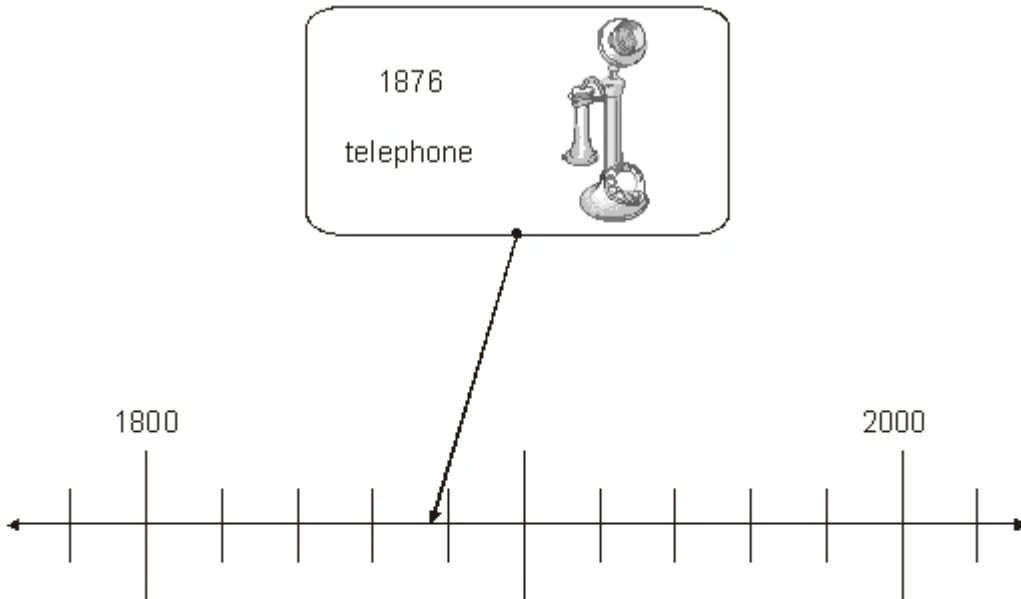|		
97	98	99
107	108	109
117	118	119

1 mark

9 Here is part of a time line.

Draw a line from each invention to the correct point on the time line.

One has been done for you.

1876

telephone

1800   2000

1810

tin can

1945

computer

2 marks

Mark schemes

1 Two numbers circled as shown:

255 (650) 735 (900) 995

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

[1]

2 Any three-digit number that is a multiple of 9, eg:

2 0 7

> *If correct, the sum of the digits will be 9 or 18.*
>
> *If boxes are blank, accept answer elsewhere on the page.*

[1]

3 Boxes completed as shown:

£ 8569 ☐

£ 9090 ☑

£ 9130 ☐

£ 8999 ☑

> ***Both*** *answers must be correct for the award of the mark.*
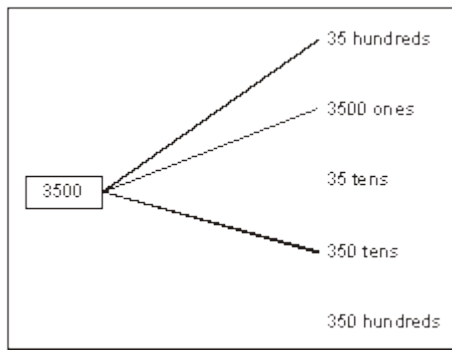>
> *Accept alternative unambiguous indications, such as 'Yes'.*
>
> *Ignore crosses or 'No' in the other boxes, provided it is clear that the correct two prices have been chosen.*

[1]

4 | Diagram completed as shown:

> **Both** lines must be drawn correctly for the award of the mark.
>
> Lines need not touch the numbers exactly, provided the intention is clear.

[1]

5 | 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 × 5 × 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]

6 | (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]

7 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]

8 109 **OR** 118 circled.

Accept both 109 and 118 circled.

[1]

9 (a) Answer for tin can joined to the time line in the range 1805 to 1815 exclusive.

1

(b) Answer for computer joined to the time line in the range 1940 to 1950 exclusive.

1

[2]