Edexcel GCSE

Mathematics

Foundation Tier

Number: Integers

Information for students

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 108 questions in this selection.

Advice for students

Show all stages in any calculations.
Work steadily through the paper. Do not spend too long on one question.
If you cannot answer a question, leave it and attempt the next one.
Return at the end to those you have left out.

Information for teachers

The questions in this document are taken from the 2009 GCSE Exam Wizard and include questions from examinations set between January 2003 and June 2009 from specifications 1387, 1388, 2540, 2544, 1380 and 2381.

Questions are those tagged as assessing "Integers" though they might assess other areas of the specification as well. Questions are those tagged as "Foundation" so could have (though not necessarily) appeared on either a Foundation or Intermediate tier paper.

GCSE Mathematics

Formulae: Foundation Tier

You must not write on this formulae page.

Anything you write on this formulae page will gain NO credit.

Area of trapezium = $(a + b)h$
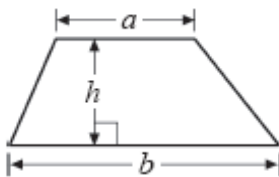
Volume of prism = area of cross section × length
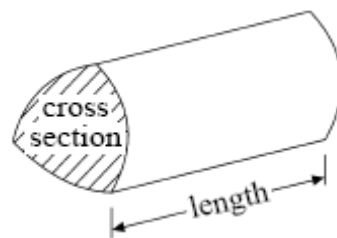
1.
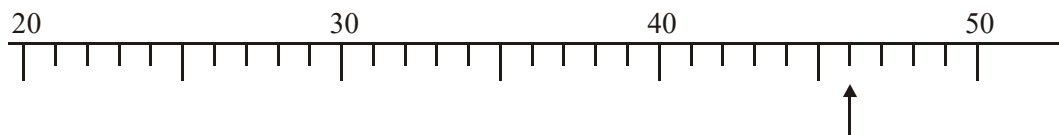
20　　　　　　　　30　　　　　　　　40　　　　　　　　50

(a)　Write down the number marked with an arrow.

....

(1)

2　　　　　　　　3　　　　　　　　4　　　　　　　　5

(b)　Write down the number marked with an arrow.

....

(1)

200　　　　　　　　300　　　　　　　　400　　　　　　　　500
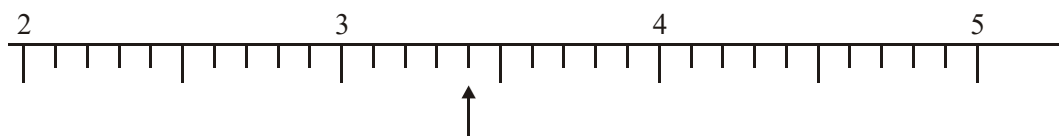
(c)　Find the number 430 on the number line.
　　Mark it with an arrow (↑).

(1)

2　　　　　　　　3　　　　　　　　4　　　　　　　　5

(d)　Find the number 3.7 on the number line.
　　Mark it with an arrow (↑).

(1)
(Total 4 marks)

2. Write these numbers in order of size.
Start with the smallest number.

(i)   75, 56, 37, 9, 59

....

(ii)   0.56, 0.067, 0.6, 0.65, 0.605

....

(iii) 5, – 6, – 10, 2, – 4

....

(iv) $\dfrac{1}{2}, \dfrac{2}{3}, \dfrac{2}{5}, \dfrac{3}{4}$

....

(Total 5 marks)

3.
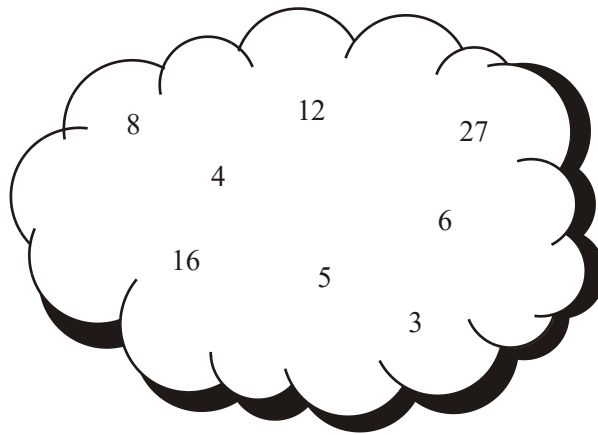
Using only the numbers in the cloud, write down

(i)   all the multiples of 6,   …………………………….

(ii)   all the square numbers,   …………………………….

(iii)   all the factors of 12,   …………………………….

(iv)   all the cube numbers.   …………………………….

(Total 4 marks)

4. Here is a map of the British Isles.

The temperatures in some places, one night last winter are shown on the map.
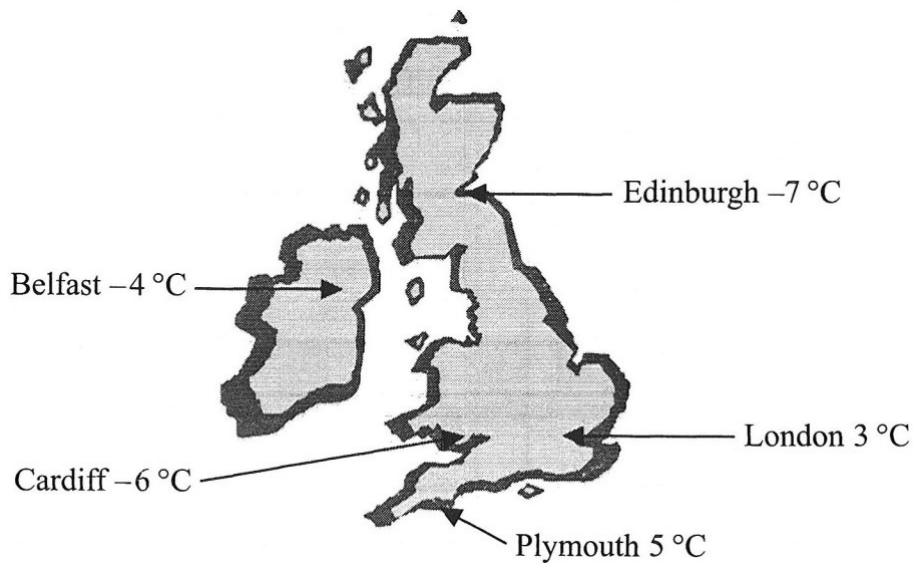
(a) (i) Write down the names of the two places that had the biggest difference in temperature.

....

(ii) Work out the difference in temperature between these two places.

...........................°C

(3)

(b) Two pairs of places have a difference in temperature of 2 °C.
Write down the names of these places.

(i) .... and ....

(ii) .... and ....

(2)
(Total 5 marks)

5.   Every day, a quarter of a million babies are born in the world.

(a)   Write a quarter of a million using figures.

....

(1)

(b)   Work out the number of babies born in 28 days.
Give your answer in millions.

.... million

(2)
(Total 3 marks)

6.   Write these numbers in order of size.
Start with the smallest number.

(i)   0.56, 0.067, 0.6, 0.65, 0.605

....

(ii)   5, – 6, – 10, 2, – 4

....

(iii) $\frac{1}{2}, \frac{2}{3}, \frac{2}{5}, \frac{3}{4}$

....
(Total 4 marks)

7.   A litre of petrol costs 84p.
Work out the cost of 26 litres of petrol.
Give your answer in pounds.

£ …………………………
(Total 3 marks)

8. Ken had   **one thousand and twenty pounds**.
    Lisa had   **eight pounds and six pence**.

    Write down, in figures, how much money Ken and Lisa each had.

    Ken £ ....

    Lisa £ ....

    (Total 2 marks)

9. Nick takes 26 boxes out of his van.
    The weight of each box is 32.9 kg.

    (a)   Work out the **total** weight of the 26 boxes.

    .... kg

    (3)

    Then Nick fills the van with large wooden crates.
    The weight of each crate is 69 kg.
    The greatest weight the van can hold is 990 kg.

    (b)   Work out the greatest number of crates that the van can hold.

    ....

    (4)
    (Total 7 marks)

10. Sally wrote down the temperature at different times on 1st January 2003.

Time	Temperature
midnight	– 6 °C
4 am	–10 °C
8 am	– 4 °C
noon	7 °C
3 pm	6 °C
7 pm	–2 °C

(a) Write down

(i)   the **highest** temperature,

.......................°C

(ii) the **lowest** temperature.

(2)

(b) Work out the difference in the temperature between

(i)   4 am and 8 am,

.......................°C

(ii) 3 pm and 7 pm.

.......................°C

(2)

At 11 pm that day the temperature had fallen by 5 °C from its value at 7 pm.

(c) Work out the temperature at 11 pm.

.......................°C

(1)
(Total 5 marks)

11.   Fiona has four cards.
Each card has a number written on it.

$$\boxed{4}\quad\boxed{9}\quad\boxed{1}\quad\boxed{5}$$

Fiona puts all four cards on the table to make a number.

(a)   (i)   Write the numbers on the cards to show the smallest number Fiona can make with the four cards.

$$\square\quad\square\quad\square\quad\square$$

(ii)   Write the numbers on the cards to show the largest number Fiona can make with the four cards.

$$\square\quad\square\quad\square\quad\square$$

(2)

Fiona uses the cards to make a true statement.

(b)   Write the number on the cards to make this true.
Use each of Fiona's cards **once**.

$$\square + \square = \square\ \square$$

(1)

A fifth card is needed to show the result of the multiplication 4915 × 10. She needs a fifth card

(c)   Write the number that should be on the fifth card.

$$\square$$

(1)
(Total 4 marks)

12. Enzo makes pizzas.

One day he makes 36 pizzas.
He charges £2.45 for each pizza.

(a) Work out the total amount he charges for 36 pizzas.

£ ....

(3)

Mario delivers pizzas.
He is paid 65p for each pizza he delivers.
One day he was paid £27.30 for delivering pizzas.

(b) How many pizzas did Mario deliver?

.... pizzas

(3)
(Total 6 marks)

13.   (a)   Write the number **seventeen thousand, two hundred and fifty-two** in figures.

……………………..
(1)

(b)   Write the number 5367 correct to the nearest hundred.

……………………..
(1)

(c)   Write down the value of the 4 in the number 274 863

……………………..
(1)
(Total 3 marks)

14.

Cat facts

- 40% of people named cats as their favourite pet.

- 98% of women said they would rather go out with someone who liked cats.

- About $7\frac{1}{2}$ million families have a cat.

- $\frac{1}{4}$ of cat owners keep a cat because cats are easy to look after.
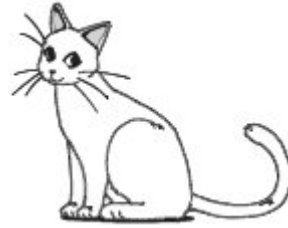
(a) Write 40% as a fraction.
Give your fraction in its simplest form.

……………………..

(2)

(b) Write 98% as a decimal.

……………………..

(1)

(c) Write $7\frac{1}{2}$ million in figures.

……………………..

(1)

(d) Write $\frac{1}{4}$ as a percentage.

……………………%

(1)

(e) What percentage of people did **not** name cats as their favourite pet?

……………………%

(1)
(Total 6 marks)

15.   Write these numbers in order of size.

Start with the smallest number.

(a)   76,   103,   13,   130,   67

…………………………………………………………
                                                                (1)

(b)   −3,   5,   0,   −7,   −1

…………………………………………………………
                                                                (1)

(c)   0.72,   0.7,   0.072,   0.07,   0.702

…………………………………………………………
                                                                (1)

(d)   70%, $\frac{3}{4}$,   0.6, $\frac{2}{3}$

…………………………………………………………
                                                                (2)
                                                        (Total 5 marks)

16.
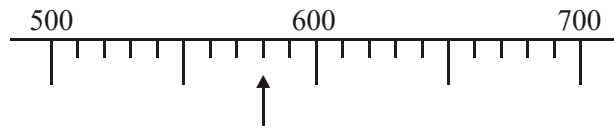
(a)   Write down the number marked with an arrow.

……………………..

(1)
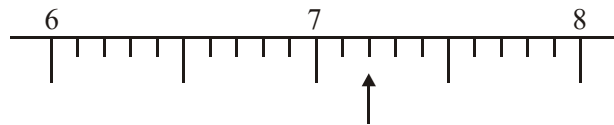
(b)   Write down the number marked with an arrow.

……………………..

(1)
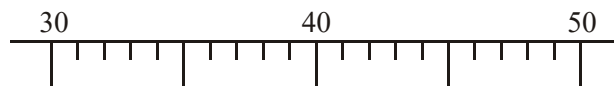
(c)   Find the number 48 on the number line

(Mark it with an arrow (↑).

(1)
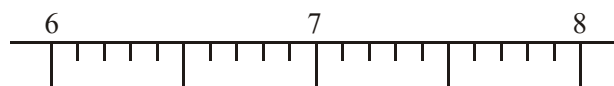
(d)   Find the number 6.7 on the number line.
Mark it with arrow (↑).

(1)
(Total 4 marks)

17.   The table below shows the cost of each of three calculators.

Compact	£2.30
Studio	£2.15
Basic	£2.80

Barbara buys one Studio calculator and one Compact calculator.

She pays with a £10 note.

(a)   How much change should she get?

£……………………

(4)

Mrs Brown wants to buy some Basic calculators.

She has £60 to spend.

(b)   Work out the greatest number of Basic calculators she can buy.

……………………..

(2)

Mrs Brown gets a 25% reduction if she spends £120 or more.

(c)   Work out 25% of £120

£……………………

(2)

(Total 8 marks)

18.   The table shows the temperature on the surface of each of five planets.

Planet	Temperature
Venus	480 °C
Mars	– 60 °C
Jupiter	– 150 °C
Saturn	– 180 °C
Uranus	– 210 °C

(a)   Work out the difference in temperature between Mars and Jupiter.

…………………°C

(1)

(b)   Work out the difference in temperature between Venus and Mars.

…………………°C

(1)

(c)   Which planet has a temperature 30 °C higher than the temperature on Saturn?

…………………….

(1)

The temperature on Pluto is 20 °C lower than the temperature on Uranus.

(d)   Work out the temperature on Pluto.

…………………°C

(1)

(Total 4 marks)

19.   Pat writes down two sums.

$$1 + 2 = 3$$

$$7 + 8 = 15$$

Pat says

'The sum of two whole consecutive numbers is never a square number'.

Give an example to show that Pat is wrong.

....
(Total 2 marks)

20.   33 people were on a bus.

19 people got off.
15 people got on.

How many people are now on the bus?

(Total 2 marks)

21.   (a)   Write the number 5067 in words.

    ....
     .

(1)

(b)   Write the number 1392 to the nearest hundred.

………………………….
(1)
(Total 2 marks)

22. Work out

   (i) $2 \times 3 + 4$

   ……………………….

   (ii) $10 - 2 \times 5$

   ……………………….

   (iii) $16 \div (2 \times 4)$

   ……………………….
   (Total 3 marks)

23. At midnight, the temperature was –5°C.

By 9 am the next morning, the temperature had increased by 3°C.

   (a)   Work out the temperature at 9 am the next morning.

   ……………………….°C
   (1)

At midday, the temperature was 7°C.

   (b)   Work out the difference between the temperature at midday and the temperature at midnight.

   ……………………….°C
   (2)

   (c)   Work out the temperature which is halfway between –5°C and 7°C.

   ……………………….°C
   (1)
   (Total 4 marks)

24.   (a)   Write one pound thirty pence in figures.

£………………………
(1)

(b)   Write one pound five pence in figures.

£………………………
(1)
(Total 2 marks)

25.
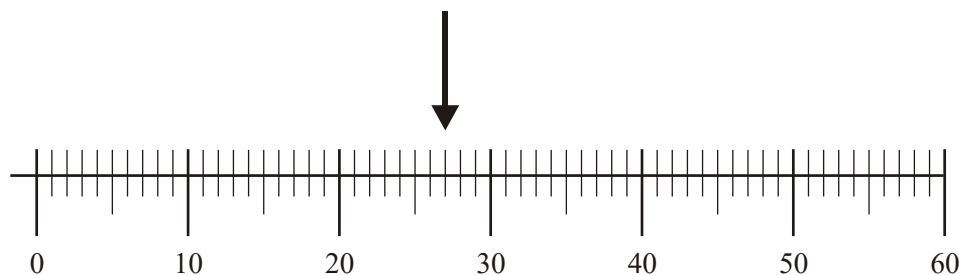
(a)   Write down the number marked by the arrow.

………………………

(1)
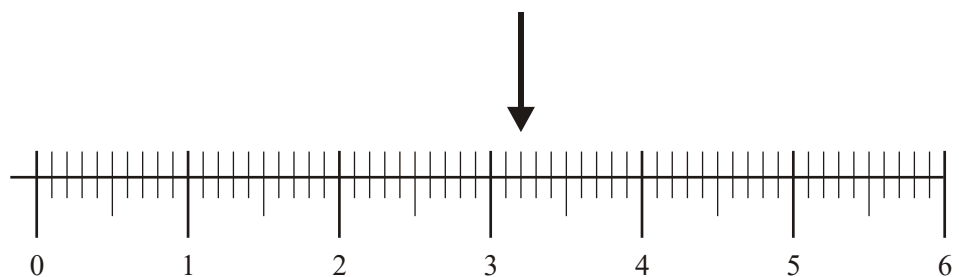
(b)   Write down the number marked by the arrow.

………………………

(1)
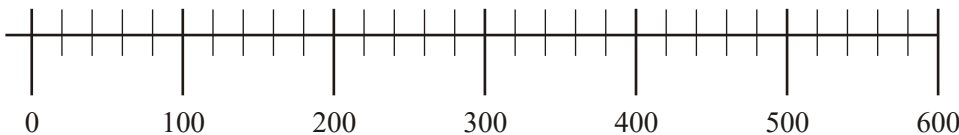
(c)   Find the number 460 on the number line.
Mark it with an arrow (↓).

(1)
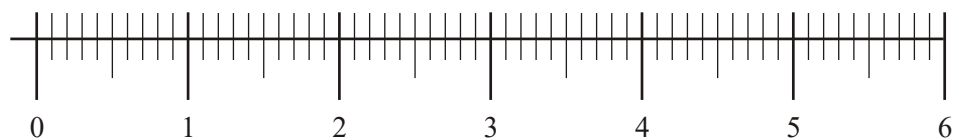
(d)   Find the number 2.8 on the number line.
Mark it with an arrow (↓).

(1)
(Total 4 marks)

26.

Pete's Café
Price List
Cup of Tea   75p
Cup of Coffee   85p
Can of Cola   75p
Roll   £1.70
Sandwich   £1.35

Joe buys a can of cola and a roll.

(a) Work out the total cost.

£………………………

(1)

Susan buys **two** cups of tea and **one** sandwich,

(b) Work out the total cost.

£………………………

(2)

Kim buys a cup of coffee and a roll.

She pays with a £5 note.

(c) How much change should she get?

£………………………

(2)
(Total 5 marks)

27.   Complete this bill.

Description	Number	Cost of each item	Total
Spark plug	4	£2.50	£10.00
Wiper blade	2	£1.50	£ ....
Light bulb	2	£	£ 5.00
Labour charge 1½ hours at £ 16.00 an hour			£ ....
		Total cost	£ ....

Gary's Auto Repairs

(Total 4 marks)

28.   Write these numbers in order of size.
Start with the smallest number.

35   67   27   118   42

....

(Total 1 mark)

29. (a) Write the number **seven thousand**, **two hundred and fifty two** in figures.

....
(1)

(b) Write the number 3086 in words.

....
..
(1)

(c) Write the number 4637 to the nearest hundred.

....
(1)

(d) Write the value of 2 in the number 5271

....
(1)
(Total 4 marks)

30. The table shows the distances, in miles, between 4 cities.

London

74	Portsmouth		
39	58	Reading	
97	41	57	Salisbury

(a) Write down the distance between London and Salisbury.

.... miles

(1)

(b) Which two cities are the shortest distance apart?

.... and ....

(1)

Nazim drives from Portsmouth to Salisbury.
He then drives from Salisbury to Reading.
Finally he drives from Reading to Portsmouth.

(c) Work out the total distance Nazim drives.

.... miles

(3)
(Total 5 marks)

31.
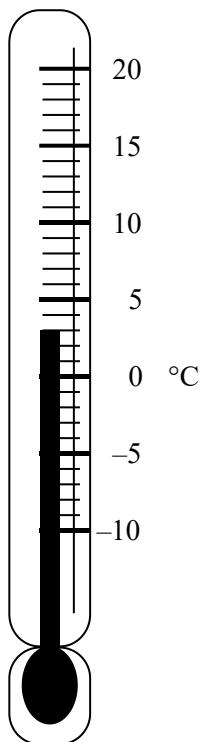
(a)   Write down the temperature shown on the thermometer.

.... °C

(1)

The temperature falls by 8°C.

(b)   Work out the new temperature.

.... °C

(1)
(Total 2 marks)

32.   Beth says $20 − 5 × 3$ is 45

Pat says $20 − 5 × 3$ is 5

(a)   Who is right?
Give a reason for your answer.

.... is right

(1)

(b)   Work out $(12 + 9) ÷ 3$

....

(1)
(Total 2 marks)

33. The table shows the highest and lowest temperatures one day in London and Moscow.

	Highest	Lowest
London	8°C	–6°C
Moscow	–3°C	–8°C

(a) Work out the difference between the **lowest** temperature in London and the **lowest** temperature in Moscow.

.... °C

(1)

(b) Work out the difference between the **highest** and **lowest** temperature in London.

.... °C

(1)
(Total 2 marks)

34. (a) Write the number 5250 in words.

....
.

(1)

(b) Write 23 250 to the nearest thousand.

....

(1)

(c) Write down the value of the 3 in the number 42 350

....

(1)

(d) Write **six thousand three hundred and seventy four** in figures.

....

(1)
(Total 4 marks)

35. (a)   Work out 500 – 107

....
(2)

(b)   Work out 327 × 4

....
(2)
(Total 4 marks)

36.   Kalim thinks of a number.
He multiplies the number by 2
He then adds 3

His answer is 27

(a)   What number did Kalim think of?

....
(2)

Emma uses the formula $P = 2a + b$
to find the perimeter P of this triangle.
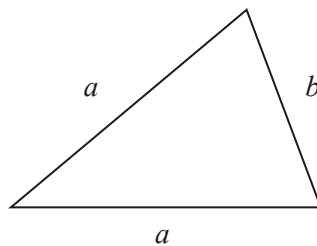
(b)   Find the value of P when $a = 5$ and $b = 3$

$P = $ ....
(2)
(Total 4 marks)

37.
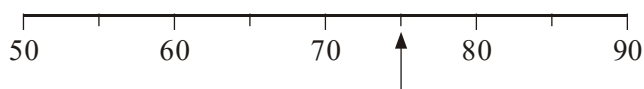
(a) Write down the number marked by the arrow.

………………...

(1)

(b) Find the number 530 on the number line.

Mark it with an arrow (↑).

(1)

(c) Put these numbers in order of size.
Start with the smallest.

52   31   1007   180

…………………….……………...

(1)
(Total 3 marks)

38.

| factor | multiple | square | square root | half |

(a)   Use a word from the list above to complete the following sentence.

10 is a .... of 5

(1)

(b)   From the list below, write down the odd number.

10   15   18   20   24

………………...

(1)

(c)   From the list below, write down the square number.

10   12   14   16   18   20

………………...

(1)

(Total 3 marks)

39. The table shows the midday temperatures in 4 different cities on Monday.

City	Midday temperature (°C)
Belfast	5
Cardiff	–1
Glasgow	–6
London	–4

(a)   Which city had the lowest temperature?

………………...

(1)

(b)   Work out the difference between the temperature in Cardiff and the temperature in Belfast.

……………….. C

(1)

By Tuesday, the midday temperature in London had risen by 7 °C.

(c)   Work out the midday temperature in London on Tuesday.

……………….. C

(1)
(Total 3 marks)

40.
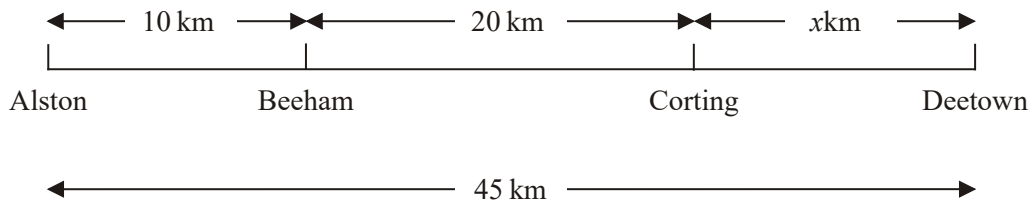
Diagram **NOT**
accurately drawn

The diagram represents a straight road that joins 4 towns.

Beeham is 10 km from Alston.
Corting is 20 km from Beeham.
Deetown is x km from Corting.
Deetown is 45 km from Alston.

(a)   Work out the distance from Alston to Corting.

………………. km

(1)

(b)   Work out the value of x.

x = ………………...

(1)

Emma walks from Alston to Corting.
Josh walks from Beeham to Deetown.

(c)   Who walks further?

………………...

You must explain your answer.

....
.

....
.

(2)

Kyle walks from Alston to Beeham.
He starts from Alston at 9:30
He takes one hour 30 minutes to get to Beeham.

(d)   At what time does Kyle get to Beeham?

………………...
(1)

The diagram below shows the straight road from Alston to Deetown.
This diagram has been drawn accurately using a scale of 1 cm to represent 5 km.

×———————————————————×
Alston   Deetown

(e)   Mark accurately with crosses (×), the positions of Beeham and Corting.
(1)
(Total 6 marks)

41.   800 students are going on a school trip by bus.

Each bus can carry 34 students.

Work out the smallest number of buses needed to carry all the students.

………………...
(Total 2 marks)

42. (a) Write these numbers in order of size.
Start with the smallest number.

17   6   168   24

....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

1.8   3.71   0.5   12.4

....

(1)
(Total 2 marks)

43.   The table shows the temperatures in three cities at noon one day.

Oslo	New York	Cape Town
–13°C	–5°C	9°C

(a)   Work out the difference in temperature between Oslo and New York.

.... °C

(1)

(b)   Work out the difference in temperature between Cape Town and Oslo.

.... °C

(1)
(Total 2 marks)

44. (a) Write the number **nine thousand, three hundred and seventy four** in figures.

....
(1)

(b) Write the number 62 500 in words.

....
.
(1)

(c) Write down the value of the **8** in the number 3285

....
(1)

(d) Write the number 2174 to the nearest hundred.

....
(1)

(e) Write the number 7362 to the nearest thousand.

....
(1)
(Total 5 marks)

45. (a) Write the number 4117 in words.

....
.
(1)

(b) Write the number 4117 to the nearest hundred.

....
(1)
(Total 2 marks)

46.

City	Temperature
Cardiff	–2 °C
Edinburgh	–4 °C
Leeds	2 °C
London	–1 °C
Plymouth	5 °C

The table gives information about the temperatures at midnight in 5 cities.

(a)   Write down the lowest temperature.

.... °C

(1)

(b)   Work out the difference in temperature between Cardiff and Plymouth.

.... °C

(1)

(c)   Work out the temperature which is halfway between –1°C and 5°C.

.... °C

(1)
(Total 3 marks)

47. The table shows the temperature in each of 6 cities on 1st January 2003.

City	Temperature
Cairo	15 °C
Copenhagen	–1 °C
Helsinki	–9 °C
Manchester	3 °C
Moscow	–14 °C
Sydney	20 °C

(a) Write down the name of the city which had the **lowest** temperature.

…………………………

(1)

(b) Work out the difference in temperature between Copenhagen and Cairo.

…………………………°C

(1)

On 2nd January 2003, the temperature in Moscow had increased by 4 °C.

(c) Work out the new temperature in Moscow.

…………………………°C

(1)
(Total 3 marks)

48. Here is a map of the British Isles.

The temperatures in some places, one night last winter are shown on the map.

(i) Write down the names of the two places that had the biggest difference in temperature.

....
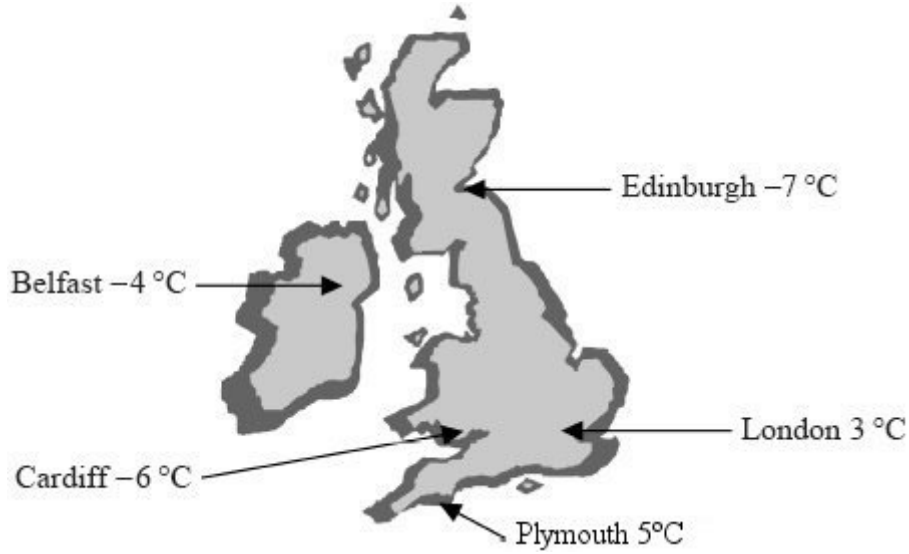
(ii) Work out the difference in temperature between these two places.

............................°C

(Total 3 marks)

49. Write these numbers in order of size.
Start with the smallest number.

(i)   0.56, 0.067, 0.6, 0.65, 0.605

....

(ii)   5, – 6, – 10, 2, – 4

....

(iii) $\dfrac{1}{2}, \dfrac{2}{3}, \dfrac{2}{5}, \dfrac{3}{4}$

....
                                                        (Total 4 marks)

50. This table shows the heights, in metres, of six mountains.

Mountain	Height in metres
Lhotse 1	8516
Kanchenjunga	8586
Makalu 1	8463
Everest	8850
Dhanlagiti	8172
K2	8611

Write the heights in order of size.

Start with the least height.

....
                                                              (Total 2 marks)

51. The diagram shows the distances, in miles, between some service areas on the M1 motorway.

Toddington	Scratchwood	Watford Gap	Woodall	Trowell

| | 26 | | 44 | | 39 | | 28 | |
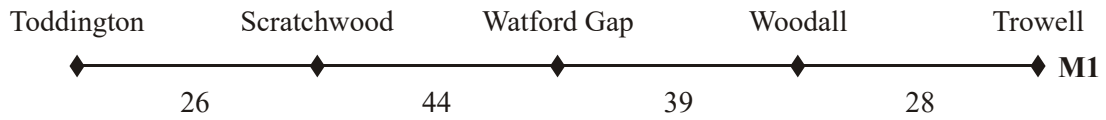
For example, the distance between Toddington and Watford Gap is 70 miles.

Complete the table.

Toddington				
26	Scratchwood			
70		Watford Gap		
	83	39	Woodall	
	111		28	Trowell

(Total 3 marks)

52.
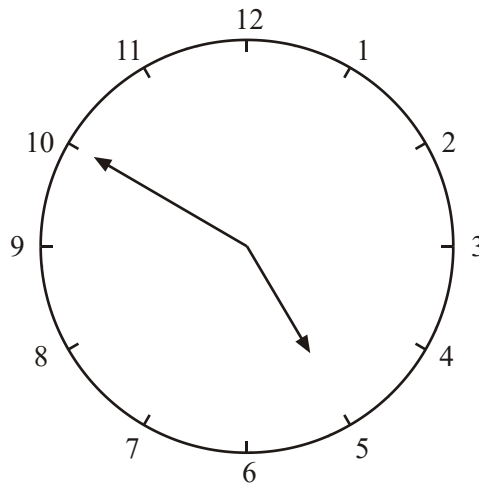
(a)   Write down the time shown on the clock.

..……………..

(1)
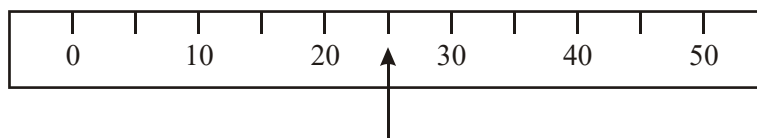
(b)   Write down the reading shown by the arrow (↑).

…………………..

(1)

(Total 2 marks)

53. (a) Write **three hundred and fifty thousand** in figures.

…………….

(1)

(b) (i) Write 25 400 in words.

……………………………………………………………………………

(ii) Write down the value of the **5** in 25 400.

………………….

(2)

(c) (i) Write 25 730 correct to the nearest thousand.

………………….

(ii) Write 25 730 correct to the nearest hundred.

………………….

(2)
(Total 5 marks)

54. Nick fills his van with large wooden crates.
The weight of each crate is 69 kg.
The greatest weight the van can hold is 990 kg.

Work out the greatest number of crates that the van can hold.

....
(Total 4 marks)

55.   Richard paid 56p for 7 pencils.
The cost of each pencil was the same.
Work out the cost of 4 of these pencils.

.... p

(Total 2 marks)

56.

Mr Snow stayed some time at the South Pole.

The highest temperature there was –30 °C.
The lowest temperature there was –57 °C.

(a)   Work out the difference between the highest temperature and the lowest
       temperature at the South Pole.

.... °C

(1)

Mr Snow returned to his house in London.
The temperature outside his house was –2 °C.
The temperature inside his house was 12 °C higher.

(b)   Work out the temperature inside his house.

.... °C

(1)
(Total 2 marks)

57. Write these numbers in order of size.
Start with the smallest number.

(a)   76,   103,   13,   130,   67

…………………………………………………………

(1)

(b)   –3,   5,   0,   –7,   –1

…………………………………………………………

(1)

(c)   70%, $\frac{3}{4}$,   0.6, $\frac{2}{3}$

………………………………………………………

(2)
(Total 4 marks)

58.

Cat facts

- 40% of people named cats as their favourite pet.

- 98% of women said they would rather go out with someone who liked cats.

- About $7\frac{1}{2}$ million families have a cat.

- $\frac{1}{4}$ of cat owners keep a cat because cats are easy to look after.
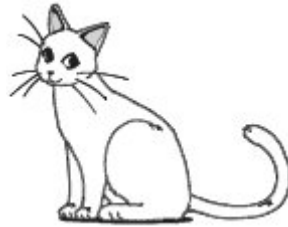
(a)   Write 40% as a fraction.
      Give your fraction in its simplest form.

                                                        …………..……
                                                                            (2)

(b)   Write $7\frac{1}{2}$ million in figures.

                                                        …………………………..
                                                                            (1)

(c)   What percentage of people did **not** name cats as their favourite pet?

                                                        …………... %
                                                                            (1)
                                                                (Total 4 marks)

59.
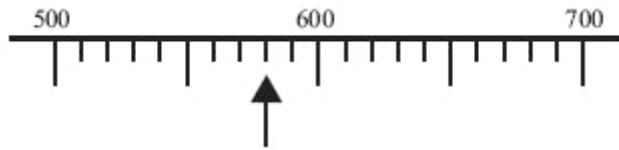
(a)   Write down the number marked with an arrow.

………………..

(1)
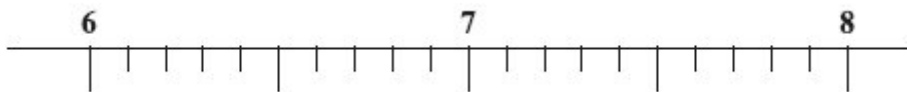
(b)   Find the number 6.7 on the number line.

Mark it with an arrow (↑).

………………..

(1)
(Total 2 marks)

60.   (a)   Write down the number **fifty thousand, three hundred and seventy eight** in
figures.

....

(1)

(b)   Write down the value of the **4** in the number 7643

....

(1)

(c)   Write 7643 to the nearest 100

....

(1)
(Total 3 marks)

61. (a) Write 2725 to the nearest hundred.

…………………………

(1)

(b) Write **ten thousand three hundred and sixty** in figures.

…………………………

(1)

(c) Write the number **3007** in words.

....

.

(1)
(Total 3 marks)

62. The table shows the lengths, in kilometres, of 5 rivers.

River	Length in kilometres
Volga	3700
Missouri	3726
Rio Grande	3034
Mississippi	3780
Yukon	3185

Write these lengths in order of size.
Start with the shortest length.

…………..km   …………..km   …………..km   …………..km   …………..km
(Total 2 marks)

63.   Susan is decorating her bedroom.
She buys

        1 paint brush costing £2.46
        1 paint roller costing £3.08
        2 tins of paint costing £5.95 **each**

She pays with a £20 note.
Work out how much change she should get.

£.....................................
(Total 3 marks)

64.   33 people were on a bus.

19 people got off.
15 people got on.

How many people are now on the bus?

………………….
(Total 2 marks)

65.   Work out

(i) $2 \times 3 + 4$

………………….

(ii) $16 \div (2 \times 4)$

………………….
(Total 2 marks)

66.   At midnight, the temperature was –5°C.

By 9 am the next morning, the temperature had increased by 3°C.

(a)   Work out the temperature at 9 am the next morning.

……………………….°C

(1)

At midday, the temperature was 7°C.

(b)   Work out the difference between the temperature a midday and the temperature at midnight.

……………………….°C

(2)
(Total 3 marks)

67.   Write one pound thirty pence in figures.

£…………………….

(Total 1 mark)

68.   A train travels from London to Manchester.

It leaves London at 16 55
It arrives in Manchester at 19 45

Work out the number of minutes this train takes to travel from London to Manchester.

…………………….minutes
(Total 3 marks)

69. (a)   Write the number **nineteen thousand, four hundred and eighty two** in figures.

....
(1)

(b)   Write the number 7824 correct to the nearest hundred.

....
(1)

(c)   Write down the value of the 3 in the number 2387

....
(1)
(Total 3 marks)

70.   Write these numbers in order of size.
Start with the smallest number.

(a)   −6,   2,   −1,   0,   −3

....
(1)

(b)   0.6,   0.64,   0.06,   0.604,   0.064

....
(1)
(Total 2 marks)

71. Here is a list of numbers.

> 2   5   7   8   9   12

Write down a number from the list which is

(i)   a multiple of 6,

....

(ii)   a factor of 15,

....

(iii)   a square number.

....
(Total 3 marks)

72. Work out 362×54
You **must** show all your working.

....
(Total 3 marks)

73.   (a)   Write the number 5264 in words.

....

.

(1)

(b)   Write the number 5264 to the nearest hundred.

....

(1)

(c)   Write down the value of the **6** in the number 5264

....

(1)
(Total 3 marks)

74.
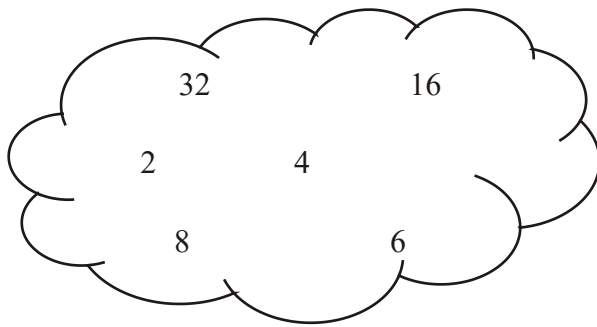
From the numbers in the cloud, write down

(a)   a square number,

....
(1)

(b)   the square root of 16,

....
(1)

(c)   the cube of 2,

....
(1)

(d)   the prime number.

....
(1)
(Total 4 marks)

75.

The map shows the temperature in 5 cities, at midnight, one night last year.

(a)   Write down the name of the city with the highest temperature.

....

(1)

(b)   Write down the name of the city with the lowest temperature.

....

(1)
(Total 2 marks)

76.   (a)   Write the number **five thousand and thirty six** in figures.

....
                                                                              (1)

(b)   Write the number 3478 to the nearest hundred.

....
                                                                              (1)
                                                                       (Total 2 marks)

77. At **midnight**, the temperature was –8°C.
By 10 00, the temperature had increased by 6°C.

    (a)   Work out the temperature at 10 00

                                        ....°C

                                                                     (1)

By midday, the temperature was 4°C.

    (b)   Work out the difference between the temperature at midday and the temperature at **midnight**.

                                        ....°C

                                                                      (2)
                                                          (Total 3 marks)

78. Write down the value of

    (a) 5^2

                                        ....

                                                                       (1)

    (b) $\sqrt{49}$

                                        ....

                                                                        (1)

    (c) $5 + 2 \times 4$

                                        ....

                                                                        (1)
                                                          (Total 3 marks)

79. A café had 23578 customers last year.

Round the number 23578 to the nearest ten.

23572	23570	23580	23500	23600
A	B	C	D	E

(Total 1 mark)

80. What is the 7th odd number?

7	9	11	13	15
A	B	C	D	E

(Total 1 mark)

81. There are 48 packets of crisps in each box of crisps.
Work out the total number of packets of crisps in 234 boxes.

2808	10000	11196	11232	11238
A	B	C	D	E

(Total 1 mark)

82. What is the number 3020 in words?

Thirty thousand and twenty   Three thousand and twenty

A   **B**

Three thousand and two   Three hundred and twenty

C   **D**

Three hundred and two

E

(Total 1 mark)

83.   What is –7 added to –3?

–4	+4	+10	+21	–10
A	**B**	**C**	**D**	**E**

(Total 1 mark)

84.   Here is a list of temperatures.

   3°C   8°C   1°C   –7°C   –4°C

Bob is going to write these temperatures in order.
He writes down the lowest temperature.

Which temperature should he write down next?

3°C	8°C	1°C	–7°C	–4°C
A	**B**	**C**	**D**	**E**

(Total 1 mark)

85.   What is –5 added to +3?

–8	–2	–15	+8	+2
A	**B**	**C**	**D**	**E**

(Total 1 mark)

86. (a) Write the number 867 to the nearest 100

....

(1)

(b) Write the number 2805 in words.

....

.

(1)

(c) Write the number **five thousand four hundred and sixty** in figures.

....

(1)

(Total 3 marks)

87. (a) Write these numbers in order of size.

Start with the smallest number.

2501   5201   5210   1250

....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

0.705   0.75   0.7

....

(1)

(Total 2 mark)

88. The table shows the temperatures at midnight in 6 cities during one night in 2006

City	Temperature
Berlin	5°C
London	10°C
Moscow	–3°C
New York	2°C
Oslo	–8°C
Paris	7°C

(a) Write down the city which had the lowest temperature.

....

(1)

(b) Work out the difference in temperature between London and Moscow.

.................................°C

(2)
(Total 3 marks)

89.   Work out 745×23

You **must** show **all** your working.

....
(Total 3 marks)

90.   (a)   Work out $-2 + 5$

....
(1)

(b)   Work out $-3 - 5$

....
(1)

(c)   Work out -2×4

....
(1)
(Total 3 marks)

91.   The table shows the temperatures in four cities at noon one day.

Oslo	−13°C
New York	−5°C
Cape Town	9°C
London	2°C

(a)   Write down the **highest** temperature.

.... °C

(1)

(b)   Work out the difference in temperature between Oslo and New York.

.... °C

(1)

At 8 pm the temperature in London was 3°C lower than the temperature at noon.

(c)   Work out the temperature in London at 8 pm.

.... °C

(1)
(Total 3 marks)

92.   Here is a list of numbers.

            3   8   11   25   33   41

Write down a number from the list which is

(a)   an even number,

....

(1)

(b)   a square number,

....

(1)

(c)   a multiple of 11

....

(1)
(Total 3 marks)

93.   (a)   Write the number **three thousand four hundred and twenty five** in figures.

....
(1)

(b)   Write down the value of 4 in the number 2840

....
(1)

(c)   Write the number 279 to the nearest hundred.

....
(1)
(Total 3 marks)

94.   (a)   Write these numbers in order of size.
Start with the smallest number.

–5   3   –1   0   8

....
(1)

(b)   Work out $7 + 3 \times 5$

(1)
(Total 2 marks)

95. (a) Work out $2 - 5$

....
(1)

(b) Work out -2×-4

....
(1)

(c) Work out $-12 \div 3$

....
(1)
(Total 3 marks)

96. The first odd number is 1

What is the seventh odd number?

7	11	13	15	14
A	**B**	**C**	**D**	**E**

(Total 1 mark)

97. Which list of numbers is in order of size?

A	1	2	–3	–4	5
B	5	–4	–3	2	1
C	–3	–4	1	2	5
D	–4	–3	1	2	5
E	–4	–3	5	2	1

(Total 1 mark)

98. $325 \times 23 =$

7475	1625	675	6500	7575
A	**B**	**C**	**D**	**E**

(Total 1 mark)

99.   Frankie says that $15 - 3 \times 2 = 24$

Frankie is wrong.
Explain why.

....
(Total 1 mark)

100.   At 8 am, the temperature was –2°C.
At midday, the temperature was 6°C higher.

What was the temperature at midday?

–8°C	4°C	6°C	2°C	8°C
A	**B**	**C**	**D**	**E**

(Total 1 mark)

101. $20 - (4 + 10) =$

6	–6	26	14	–34
A	**B**	**C**	**D**	**E**

(Total 1 mark)

102. There were 34 coins in a bag.
Jim took 15 coins out of the bag.
Rose put 17 coins into the bag.

How many coins are now in the bag?

....
(Total 2 marks)

103. Here is a list of numbers.

        84   32   162   85   60

Ben is going to write the numbers in order of size.
He writes the smallest number first.

What number should he write next?

        84   32   162   85   60

        A   **B**   **C**   **D**   **E**
                                                                          (Total 1 mark)

104. What is the number four thousand eight hundred and six written in figures?

        4806   4086   486   40 086   40 806

        A   **B**   **C**   **D**   **E**
                                                                          (Total 1 mark)

105. $106 - 38 =$

62	72	68	78	66
A	**B**	**C**	**D**	**E**

(Total 1 mark)

106. $63 \times 1 + 63 \times 9 =$

630	810	3060	801	815
A	**B**	**C**	**D**	**E**

(Total 1 mark)

107. (a) Work out   400 – 193

....

(2)

(b) Work out   4 – 9

....

(1)

(c) Work out   –3 × 5

....

(1)

(d) Work out   300 ÷ 50

....

(1)
(Total 5 marks)

108. The table shows temperatures at midnight and midday on one day in five cities.

City	Midnight temperature	Midday temperature
Belfast	−3 °C	4 °C
Cambridge	−1 °C	4 °C
Edinburgh	−7 °C	−1 °C
Leeds	−6 °C	3 °C
London	−2 °C	6 °C

(a)   Which city had the lowest midnight temperature?

....

(1)

(b)   How many degrees higher was the midnight temperature in Cambridge than the midnight temperature in Leeds?

.... °C

(1)

(c)   Which city had the greatest rise in temperature from midnight to midday?

....

(1)
(Total 3 marks)

01. (a) 46   1
                    B1 cao

(b) 3.4   1
                    B1 oe

(c) Arrow at 430   1
                    B1 allow ± half graduation

(d) Arrow at 3.7   1
                    B1 allow ± half graduation
                    Accept indications other than arrows as long as they are
                    clear

[4]

02. (i) 9, 37, 56, 59, 75   5
                    B1 cao

(ii) 0.067, 0.56, 0.6, 0.605, 0.65
                    B1 cao Ignore trailing zeros

(iii) –10, –6, –4, 2, 5
                    B1 cao

(iv) $\frac{2}{5}, \frac{1}{2}, \frac{2}{3}, \frac{3}{4}$

                    B2 for all 4 correct
                    (B1 for any 3 in correct order)
                    SC B1 for all 4 in reverse order (applies to(iv) only)

[5]

03. (i) 6, 12   4
                    B1 cao

(ii) 4, 16
                    B1 cao

(iii) 3, 4, 6 or 3, 4, 6, 12
                    B1 Condone omission of 12

(iv) 8, 27
                    B1 cao

[4]

04. (a) (i)   Edinburgh and Plymouth   3
               B1 for Edinburgh or −7
               B1 for Plymouth or 5

        (ii)   12
               B1ft from (i) if one positive and one negative

    (b)   Cardiff and Belfast
          London and Plymouth   2
               B1 for Cardiff and Belfast OR −6 and −4
               B1 for London and Plymouth OR 3 and 5

                                                                                                [5]

05. (a)   250 000   1
               B1 cao

    (b)   7   2

          $\dfrac{28}{4}$

               M1 for $\dfrac{28}{4}$ oe or "250000" × 28

               A1 cao
               ***SC** B1 for 7 000 000*

                                                                                                [3]

06. (i)   0.067, 0.56, 0.6, 0.605, 0.65   1
               B1 cao Ignore trailing zeros

        (ii)   −10, −6, −4, 2, 5   1
               B1 cao

        (iii) $\dfrac{2}{5}, \dfrac{1}{2}, \dfrac{2}{3}, \dfrac{3}{4}$ 2

               B2 all four correct
               (B1 any three in correct order)
               SC: B1 all 4 in reverse order

                                                                                                [4]

07.   21.84   3

  504   or   104
  1680   2080

> *M1 for complete correct method with relative place value*
> *correct, condone 1 arithmetical error*
> *A2 cao*
>
> *(A1 for digits 2184 seen or ft if M1 awarded)*

                                                                                              [3]

08.   K: 1020
       L: 8.06   2

> *B1 for 1020 or 1,020*
> *B1 for 8.06   Accept £8.06p and £8,06*

                                                                                              [2]

09.   (a)   855.4   3

       1974
       6580
       ─────
       8554

> *M1 for complete method with relative place value correct,*
> *condone 1 error in multiplication*
> *A2 cao*
> *(A1 for digits 8554 seen or A1 for "855.4" dependent on 1*
> *arithmetic error)*

       (b)   14   4

     990 ÷ 69 = 14.3…. or 14 rem 24
> *Method 1 - Everything excluding long division*
> *M2 for a valid method with no errors ...need to see 966 or*
> *1035*
> *(M1 for a valid method, including estimation, that reaches*
> *an answer between 901 and 1099 inclusive. Ignore*
> *errors.)*
> *A2 for 14 with a fully correct method*
>
> *(A1 (dep on 1st M1) for an answer between 14 and 15*
> *inclusive. Ignore errors. Cannot have used estimation.)*
> *Note: Estimation can only score a maximum of M1 unless*
> *accompanied by another method or 966 or 1035 see*
> *(award M2)*
> *Method 2 – long division method*
> *M2 for 990 ÷ 69 = integer answer between 12 and 19*
> *inclusive and rem 30 seen*
> *(M1 for 990 ÷ 69 with 1 in tens column.)*
> *A2 for 14 with fully correct method*
>
> *(A1 (dep on 1st M1) for an answer between 14 and 15*
> *inclusive.)*

                                                                                              [7]

10. (a) (i) 7   2

                 B1 for 7

        (ii) − 10

                 B1 for –10

    (b) (i) 6   2

                 B1 for 6 (accept –6)

        (ii) 8

                 B1 for 8 (accept –8)

    (c) –7   1

              B1 for –7 cao

                                                           [5]

11. (a) (i) 1459   1

                 B1 cao

        (ii) 9541   1

                 B1 cao

    (b) 9 + 5 = 14   1

                 B1 cao

    (c) 0   1

                 B1 cao

                                                           [4]

12. (a) £88.20   3

        245

          36 ×

        ‾‾‾‾‾

        1470

        7350
        ‾‾‾‾‾
        8820

                M1 for complete method with relative place value correct,
                condone one error in a single digit multiplication
                A2 cao
                (A1 for either "8820" or a correct conversion of their
                total into pounds)

    (b) 42   3

        27.30 – 0.65
        2730 – 65

                M1 for intention to divide £27.30 by 65p
                M1 for complete method for dividing £27.30 by 65p,
                condone one arithmetic error
                A1 for 42 cao

                                                           [6]

13. (a) 17252   1

B1 cao

(b) 5400   1

B1 cao

(c) thousands, 1000, 4000   1

B1 cao

[3]

14. (a) $\dfrac{2}{5}$ 2

$\dfrac{40}{100}$

B2 for $\dfrac{2}{5}$

B1 for $\dfrac{40}{100}$ *or* $\dfrac{4}{10}$ *or* $\dfrac{20}{50}$ *or* $\dfrac{8}{20}$

(b) 0.98   1

B1 cao

(c) 7 500 000   1

B1 cao

(d) 25   1

B1 cao

(e) 60   1

B1 cao

[6]

15. (a)   13, 67, 76, 103, 130   5
          B1 cao

   (b) $-7, -3, -1, 0$ 5
          B1 cao

   (c)   0.07, 0.072, 0.7, 0.702, 0.72
          B1 cao

   (d)   0.6, $\frac{2}{3}$, 70%, $\frac{3}{4}$
          B2 (B1 for any 3 in correct order)

                                                                                                                        [5]

16. (a)   580   1
          B1 for 580 ($\pm$ 2) could be written on line

   (b)   7.2   1
          B1 for 7.2 $\pm$ 0.02 could be written on line

   (c)   Arrow at 48   1
          B1 allow $\pm$ half graduation

   (d)   Arrow at 6.7   1
          B1 allow $\pm$ half graduation

                                                                                                                        [4]

17. (a) 5.55   4

£10 – (£2.15 + £2.30)
M1 £2.15 + £2.30
A1 for 4.45
M1 £10 – "4.45"
A1 cao

(b) 21   2

£60 ÷ £2.80 = 21.42857
M1 for £60 ÷ £2.80 or sight of digits 214…
A1 for 21

(c) 30   2

120 × 25 ÷ 100
M1 1/4 of £120 (oe)
A1 cao
SC B2 for £90

[8]

18. (a) 90   1
B1 accept –90

(b) 540   1
B1 accept –540

(c) Jupiter   1
B1 accept –150

(d) – 230   1
B1 cao

[4]

19. eg gives an example that demonstrates that the
addition of two consecutive numbers can be a square
number 4 + 5 = 9   2
B1 shows addition of two consecutive numbers
B1 shows their choice of numbers adds to a square
number
(do not need to demonstrate it is square)

[2]

20. 33 – 19 = 14
14 + 15
29   2

M1 for 33 – 19   or 33 + 15   or 19 – 15
or 14 seen   or 48 seen   or 4 seen

A1 cao

[2]

21. (a) Five thousand and sixty seven   1
B1 cao (accept 5) condone omission of "and"

(b) 1400   1
B1 cao

[2]

22. (i) 10
B1 cao

(ii) 0
B1 cao

(iii) 2
B1 cao

[3]

23. (a) –2   1
B1 cao

(b) 7 – –5 or – 5 – 7
12   2
M1 for 7– –5 or –5 – 7
A1 cao (accept –12)

(c) 1   1
B1 cao (accept +1)

[4]

24. (a) 1.30   1
                 B1cao

         (b) 1.05   1
                 B1cao
                                                                                          [2]

25. (a) 27   1
                 B1 ignore any units

         (b) 3.2   1
                 B1 ignore any units

         (c) 460 marked   1
                 B1 for arrow between 455 and 465 inclusive

         (d) 2.8 marked   1
                 B1 for arrow between 2.75 and 2.85 inclusive
                                                                                          [4]

26. (a) 75p + £1.70
              2.45   1
                 B1 cao

         (b) 2 × 75p + 1.35
              2.85   2
                 M1 for 2 × 75p + £1.35 or digits 285 seen
                 A1 for 2.85
                 (SC B1 for 2.10 or 210p)

         (c) £5 – (85p + £1.70)
              £5 – £2.55
              2.45   2
                 M1 for £5 – (85p + £1.70) or digits 245 seen (ignore
                 units)
                 A1 cao
                 (SC B1 for £5 –"total" correctly calculated)
                                                                                          [5]

27. (i)   2 × £1.50
          £3   1
               B1 cao

     (ii) £5 ÷ 2
          £2.50   1
               B1 cao

     (iii) £16 × ½
          £24   1
               B1 cao

     (iv) Total =
          £42   1
               B1 ft from their results

                                                                   [4]

28. 27, 35, 42, 67, 118   1
               B1 cao

                                                                   [1]

29. (a)   7252   1
               B1 cao

     (b)   Three thousand and eighty six   1
               B1 accept 3 thousand and eighty six (condone 0 hundred)

     (c)   4600   1
               B1 accept 4600

     (d)   200   1
               B1 for 200 or 2 hundred or 100 or hundred

                                                                   [4]

30. (a) 97   1

B1 cao

(b) London Reading   1

B1 cao

(c) 41 + 57 + 58
= 156   3

M1 for two of 41, 57, 58
M1(dep) for '41' + '57' + '58'
A1 cao

[5]

31. (a) 3   1

B1 cao allow ± 0.2

(b) −5   1

B1 cao allow ± 0.2

[2]

32. (a) (Pat +) reason   1

B1 correct comment (Pat may be implied)

(b) 21 ÷ 3
7   1

B1 cao

[2]

33. (a) 2   1

B1 for 2 or –2

(b) 14   1

B1 for 14 or –14

[2]

34. (a)   Five thousand two hundred and fifty   1
                     B1 accept 5 thousand 2 hundred and 50

   (b)   23 000   1
                     B1 cao

   (c)   300   1
                     B1 accept 3 hundred or hundred but not 3

   (d)   6 374   1
                     B1 cao

                                                                              [4]

35. (a)

   491   107 + 3
   ~~500~~   110 + 90
   107 –   200 + 300   2

   393
                     M1 for decomposing correctly or counting on A1 for 393

   (b)

   327   327
    4 x   327
              327
              327 +

   = 1308   2
                     M1 for method for multiplying that could lead to a correct answer.
                     Condone one error in × or in carrying
                     A1 cao

                                                                              [4]

36. (a) $(27 - 3) \div 2$ 2

     12

          M1 for (27 – 3) ÷ 2
          A1 for 12

   (b) $2 \times 5 + 3$ 2

     13

          M1 for 2 × 5 + 3
          A1 for 13

[4]

37. (a) 75   1

          B1 cao

   (b) correct place   1

          B1(tol ± 1mm)

   (c) 31, 52, 180, 1007   1

          B1 cao

[3]

38. (a) Multiple   1

          B1 cao

   (b) 15   1

          B1 cao

   (c) 16   1

          B1 cao

[3]

39. (a) Glasgow   1

          B1 cao (accept –6)

   (b) 6   1

          B1 cao (accept –6)

   (c) 3   1

          B1 cao

[3]

40.   (a)   30   1
                        B1 cao

        (b)   45 – (10 + 20)   1

              = 15
                        B1 ft on 45 – '30'

        (c)   Distance AC is 30

              Distance BD is 35

              = Josh   2
                        B1 for 'Josh'
                        B1 for correct reasoning

        (d)   11.00   1
                        B1 cao

        (e)   Correct diagram   1
                        B1 (tol ± 2mm)

                                                                                              [6]

41.   800 ÷ 34 = 24   2
                        M1 800 ÷ 34 or 23.5 ...seen
                        A1 cao
                        SC: B1 23 only on answer line.

                                                                                              [2]

42.   (a)   6, 17, 24, 168   1
                        B1 for 6, 17, 24, 168

        (b)   0.5, 1.8, 3.71, 12.4   1
                        B1 for 0.5, 1.8, 3.71, 12.4

                                                                                              [2]

43.   (a)   8   1
                        B1 cao Accept negative answers.

        (b)   22   1
                        B1 cao Accept negative answers.

                                                                                              [2]

44. (a) 9374   1
                B1 cao

    (b) sixty two thousand five hundred   1
                B1 cao

    (c) 80   1
                B1 for 80, accept 8 tens, tens

    (d) 2200   1
                B1 cao

    (e) 7000   1
                B1 cao

                                              [5]

45. (a) Four thousand, one hundred and seventeen   1
                B1 for four thousand, one hundred and seventeen oe

    (b) 4100   1
                B1 for 4100 in figures or words or 41 hundred

                                              [2]

46. (a) –4   1
                B1 for –4°C or Edinburgh

    (b) 7   1
                B1 for 7 (accept –7)

    (c) 2   1
                B1 for 2 or Leeds

                                              [3]

47. (a) Moscow   1
                B1 (or –14)

    (b) 16   1
                B1

    (c) –10   1
                B1

                                              [3]

48. (i) Edinburgh and Plymouth

                B1 for Edinburgh or −7
                B1 for Plymouth or 5

    (ii) 12   3

                B1 ft from (i) if one positive and one negative

[3]

49. (i) 0.067, 0.56, 0.6, 0.605, 0.65

                B1 cao

    (ii) −10, −6, −4, 2, 5

                B1 cao

    (iii) $\frac{2}{5}, \frac{1}{2}, \frac{2}{3}, \frac{3}{4}$ 4

                B2 for all 4 correct
                (B1 for any 3 in correct order)
                SC: B1 for all 4 in reverse order

[4]

50. order   2

8172, 8463, 8516
8586, 8611, 8850

                B2 fully correct
                (B1 for 1 out of order, or fully correct but reversed,
                or 1 missing)

[2]

51.

	44	
109		
137		67

                                             3

                B3 for all 4
                (B2 for 2 or 3 correct)
                (B1 for 1 correct)

[3]

52. (a) 4 : 50, 10 to 5, 16 50, oe   1
              B1 for 4 : 50 oe

(b) 25   1
      B1 accept 24 ≤ ans ≤ 26

                                                                                          [2]

53. (a) 350 000   1
              B1

(b) (i) Twenty five thousand four hundred   1
                  B1 (accept 25 thousand 4 hundred)

(ii) 5 000   1
      B1 (accept 5 thousand, thousand, 1000)

(c) (i) 26 000   1
                  B1

(ii) 25 700   1
      B1

                                                                                          [5]

54. 14   4
990 ÷ 69 = 14.3…. or 14 rem
24

> *Method 1 – Everything excluding long division*
> *M2 for a valid method with no errors… need to see 966 or 1035*
> *(M1 for a valid method, including estimation, that reaches an answer between 901 and 1099 inclusive. Ignore errors.)*
> *A2 for 14 with a fully correct method*
>
> *(A1 (dep on 1st M1) for an answer between 14 and 15 inclusive. Ignore errors. Cannot have used estimation.)*
> *Note: Estimation can only score a maximum of M1 unless accompanied by another method or 966 or 1035 see (award M2)*
> *Method 2 – long division method*
> *M2 for 990 ÷ 69 = integer answer between 12 and 19 inclusive and rem 30 seen*
> *(M1 for 990 ÷ 69 with 1 in tens column.)*
> *A2 for 14 with fully correct method*
>
> *(A1 (dep on 1st M1) for an answer between 14 and 15 inclusive.)*

                                                                                          [4]

55.   32   2

$56 \div 7 \times 4$

M1 for $56 \div 7 \times 4$
A1 cao

[2]

56. (a)   27   1

B1 accept – 27

     (b)   10   1

B1

[2]

57. (a)   13, 67, 76, 103, 130   1

B1 cao

     (b)   – 7, – 3, – 1, 0, 5   1

B1 cao

     (c)   0.6, 2/3, 70%, ¾   2

B2 (B1 for any 3 in correct order)

[4]

58. (a)   2/5   2

         40/100

B2 for 2/5
(B1 for 40/100 or 4/10 or 20/50 or 8/20 or 10/25)

     (b)   7 500 000   1

B1

     (c)   60   1

B1

[4]

59. (a)   580   1

B1 for 580 (± 2) could be written on line

     (b)   Arrow at 6.7   1

B1 allow ± half graduation

[2]

60. (a)   50378   1

                B1

     (b)   40 oe   1

                B1 for 40 or tens o.e. in words or figures

     (c)   7600   1

                B1

                                                              [3]

61. (a)   2700   1

                B1

     (b)   10360   1

                B1

     (c)   Three thousand and seven   1

                B1

                                                               [3]

62. 3034, 3185, 3700, 3726, 3780   2

                B2

                (B1 if 1 out of order or reverse order)

                                                               [2]

63. $2.46 + 3.08 + 2 \times 5.95$ (= 17.44)
     $20 -$ "17.44"
     2.56   3

                M1 for $2.46 + 3.08 + 2 \times 5.95$ or digits 1744
                M1 (indep) for $20 -$ "17.44"
                A1 cao
                [SC M2A0 for digits 256
                M1A0 for 8.51]

                                                               [3]

64.   33 – 19 = 14
        14 + 15
        29   2

        M1 for 33 – 19 or 33 + 15 or 19 – 15 or 14 seen or 48
        seen or 4 seen
        A1 cao

                                                                            [2]

65.   (i)   10   2

                B1 cao

        (ii)   2

                B1 cao

                                                                            [2]

66.   (a)   –2   1

                B1 cao

        (b)   7 – –5 or –5 –7
                12   2

                M1 for 7– –5 or –5 –7
                A1 cao (accept -12)

                                                                            [3]

67.   1.30   1

                B1 cao

                                                                            [1]

68.   16 55 – 17 00 is 5min
        1700 – 19 45 is 2 45
        120 + 45
        170   3

                M1 for an attempt to partition, eg sight of 5 min, 2h 45
                min, ±10, 50 or 60,60,45
                A1 for 60+60+50, 2h50(min), 5 and 2h45(min), 3h and –
                10.
                or
                sight of 2–50, 2.50, 2 50 (not 250 or 2.5)
                A1 cao

                                                                            [3]

69. (a)   19 482   1

   B1 cao

   (b)   7800   1

   B1 accept seven thousand eight hundred

   (c)   3 hundred   1

   B1 accept 300 or three hundred

[3]

70. (a)   –6, –3, –1, 0, 2   1

   B1 cao

   (b)   0.06, 0.064, 0.6, 0.604, 0.64   1

   B1 cao

[2]

71. (a)   12   1

   B1 accept twelve

   (b)   5   1

   B1 accept five

   (c)   9   1

   B1 accept 9

[3]

72.   362
        × 54
        1448
      1810(0)
       19548

	3	6	2	
	1 / 5	3 / 0	1 / 0	5
	1 / 2	2 / 4	/ 8	4
1 9	5	4	8	

300	60	2	×
15 000	3 000	100	50
1 200	240	8	4

For traditional method
M1 for digits 1448 or 1810(0) seen, condone one error in multiplication
M1 for multiplying by 50 or 18100 seen
A1 cao for 19 548

For Napier's Bones
M1 for correct structure
M1 for cell contents correct, condone 1 error in mult.
A1 cao for 19 548

For partitioning method
M1 for correct partitioning of 300, 60, 2 or 50, 4
M1 for cell contents correct, condone 1 error in mult.
A1 cao for 19 548

[3]

73. (a)   Five thousand two hundred and sixty four   1
                B1 accept 5 thousand 2 hundred and 60 four oe

  (b)   5 300   1
                B1 cao

  (c)   60   1
                B1 for 60 or sixty

[3]

74. (a) 4 or 16   1
         B1 for either 4 or 16 or both

         (b) 4   1
         B1 cao

         (c) 8   1
         B1 cao

         (d) 2   1
         B1 cao

                                                                         [4]

75. (a) Plymouth   1
         B1 for Plymouth accept 2℃

         (b) Edinburgh   1
         B1 for Edinburgh accept –7℃

                                                                         [2]

76. (a) 5036   1
         B1 cao

         (b) 3500   1
         B1 cao

                                                                         [2]

77. (a) –2   1
         B1 cao

         (b) 4 – –8   2
              = 12 or –12
         *M1 for 4 – –8 or -8-4or a number line going from at least
         –8 to +4*
         A1 for 12 or –12

         *At times, some number lines drawn are partially out of
         clip and it is impossible to determine the range. In such
         cases, if the answer is incorrect, please SEND TO
         REVIEW.*

                                                                         [3]

78. (a) 25   1
             B1 cao

         (b) 7   1
             B1 for 7 or 7 and −7 or ±7 or −7 alone

         (c) 13   1
             B1 cao

                                                                                                 [3]

79. C
                                                                                                 [1]

80. D
                                                                                                 [1]

81. D
                                                                                                 [1]

82. B
                                                                                                 [1]

83. E
                                                                                                 [1]

84. E
                                                                                                 [1]

85. B
                                                                                                 [1]

86. (a) 900   1
             B1 for 900 (accept 9 hundred, nine hundred)

         (b) Two thousand eight hundred and five   1
             B1 accept twenty eight hundred and five

         (c) 5460   1
             B1 cao

                                                                                                 [3]
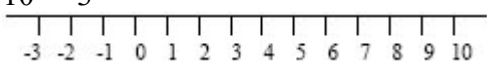
87. (a)   1250, 2501, 5201, 5210   1
                  B1 cao

(b)   0.7, 0.705, 0.75   1
                  B1 for 0.7, 0.705, 0.75 (accept 70%, 70.5%, 75% or
                  $\dfrac{7}{10}, \dfrac{705}{100}, \dfrac{75}{100}$)

                                                                                            [2]

88. (a)   Oslo   1
                  B1 (accept -8)

(b)   10 – -3

13 or −13   2
                  B2 for 13 (accept −13)
                  [B1 for 10- − 3 oe or −3 −10 oe or a number line drawn
                  from at least -3 to +10]

                                                                                            [3]

89.

```
   745          23
   ×23         ×745
  2235          115
 14900+         920
 17135        16100+
              17135
```


	700	40	5	X
	14000	800	100	2
	2100	120	15	0
				3

$14000 + 800 + 100 + 2100 + 120 + 15 = 17135$ 3

M1 for a complete method with relative place value correct, condone 1 multiplication error, addition not necessary.

M1 intent to add. (dep on 1st M1)
A1 cao

OR

M1 for a completed grid condone multiplication error, addition not necessary.

M1 intent to add. (dep on 1st M1)
A1 cao

OR

M1 for sight of a complete partitioning method, condone 1 multiplication error, final addition not necessary.

M1 intent to add. (dep on 1st M1)
A1 cao

[SC: M1 only for a list of 23 lots of 745]

[3]

90. (a)   3   1

B1 for 3 or + 3

(b)   –8   1

B1 for –8 cao

(c)   –8   1

B1 for –8 cao

[3]

91. (a) 9

          B1 (accept Cape Town)

   (b) 8

          B1 (accept –8)

   (c) –1

          B1 cao

          [3]

92. (a) 8   1

          B1 for 8 cao

   (b) 25   1

          B1 for 25 cao

   (c) 33   1

          B1 for 33 (or 11)

          [3]

93. (a) 3425   1

          B1 for 3425 cao

   (b) 40   1

          B1 for 40 or forty or 4 tens or tens

   (c) 300   1

          B1 for 300 or 3 (hundred)

          [3]

94. (a) –5, –1, 0, 3, 8   1

          B1 for –5, –1, 0, 3, 8 cao

   (b) 7 + 15

      22   1

          B1 for 22 cao

          [2]

95.   (a)   −3   1
              B1cao

       (b)   (+) 8   1
              B1 accept + 8 or 8

       (c)   −4   1
              B1cao

                                                                                          [3]

96.   C

                                                                                          [1]

97.   D

                                                                                          [1]

98.   A

                                                                                          [1]

99.   explanation   1
              B1 for explanation with Bidmas
              e.g. Brackets needed (15 – 3) or Answer should be 9
              Note:- brackets needed is insufficient

                                                                                          [1]

100. B

                                                                                          [1]

101. A

                                                                                          [1]

102. 34 – 15 + 17
       36   2
              M1 34 – 15 + 17 or 34 + 2 or 34 + 17 – 15 oe or sight of
              19 or 51
              A1 cao (accept if 36p seen)
              B1 SC for 2 seen as their answer

                                                                                          [2]

103. A

[1]

104. E

[1]

105. C

[1]

106. A

[1]

107. (a) 207   2

M1 for a valid method (condone one error) or sight of 7 (as units) in working or answer OR '193 + 7' + 200 or '193 + 200' + 7
A1 cao

(b) –5   1

B1 cao

(c) –15   1

B1 cao

(d) 6   1

B1 cao

[5]

108. (a) Edinburgh   1

B1 for Edinburgh or –7

(b) 5   1

B1 cao

(c) Leeds   1

B1 for Leeds or –6 to 3 or 9 or –9

[3]

1. **Mathematics A Paper 1**

   This proved to be a straightforward start to the paper. 40.6 and 6 appeared occasionally in part (a) and the decimal point was sometimes omitted in part (b). 330 and 340 were seen with some regularity in part (c) but, overall, this question caused few problems and many candidates gained full marks.

   Mathematics B Paper 14

   Most candidates scored well on this question with the majority scoring all 4 marks. Common errors were 40.6 for part (a) and 34 for (b).

2. **Mathematics A Paper 1**

   The majority had little trouble ordering the natural numbers in the first part but all the remaining parts proved much more demanding. In the second part, only a minority appreciated that 0.067 was the smallest number and, of those who did, many thought that 0.605 was greater than 0.65. The most common error in the third part was to reverse the order of the negative numbers. A large number of candidates scored 1 mark out of 2 in the final part as three of the numbers were in the correct order in their list e. g. $\frac{1}{2}, \frac{2}{5}, \frac{2}{3}, \frac{3}{4}$ but there was rarely any indication that equivalent fractions or conversion to decimals had been used.

   Mathematics B Paper 14

   Most candidates scored some marks on this question but few scored the full 5 marks. Parts (i) and (iii) were successfully answered by most candidates, although a common error for (iii) was to reverse the negative numbers giving –4, –6, –10, 2, 5. Very few got the decimals in the correct order in (ii). Part (iv) caused the most problems, with many ordering the denominators and only giving $\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{2}{5}$ as their answer. Candidates mostly wrote their answer without any attempt to show working.

3. Answers to this varied widely both within and between centres. As far as any pattern was discernible, candidates appeared to be most familiar with multiples and factors and least familiar with cube numbers.

4. This was very well answered, full marks often being gained. It was noticeable that, after answering part (a)(i) correctly, some candidates gave 13 as the answer to part (ii), even when they had drawn a number line. Presumably, they had counted the numbers instead of the steps. The difference between two numbers is regarded as a strictly positive number and so an answer of – 12 received no credit.

5.   Part (a) was generally more successfully answered than part (b). In part (a) the most common wrong answer was 25000. In part (b) candidates lost a mark because they failed to notice the 'million' written on the answer line and wrote 7000000.
At least 20% of candidates failed to obtain a follow through mark on part (b) because they did not show their working.

6.   In general this question was well answered, with part (ii) usually correct. In part (i) some candidates had difficulty in placing 0.605 since they thought 0.065>0.65
In part (iii) most candidates gained at least 1, and many 2, marks. Methods varied, with some using equivalent fractions, and others making the conversion to decimals or percentages. It was very encouraging to see this done with much success.

7.   The traditional method of long multiplication was used by many candidates, often successfully. Simple arithmetic and place value errors, however, were quite common. Some candidates broke the calculation down into smaller steps and these attempts were often incorrect as well as being untidy and difficult to follow.

8.   This question was well understood with 60% of candidates obtaining full marks. Those candidates scoring 1 mark had difficulty with writing a sum of money from the information given.

9.   Candidates at the foundation tier find the processes of long multiplication and long division difficult to master. It was interesting to see a much wider range of methods being adopted to answer this question.

   (a)   Students coped far better with this question than compared with previous years. A range of methods was seen, long multiplication and Napier's bones being the most common. About 10% of students achieved full marks and 30% achieved partial marks for fully viable methods.

   (b)   This part was less successful. Again a large range of methods were seen, the most common being compensation and chunking. Compared to the previous year students were much more successful and about 14% of responses were fully successful.

10. **Mathematics A Paper 1**

   This question was well understood by candidates and nearly 70% of candidates obtained full marks.

   Mathematics B Paper 14

   Identifying the highest temperature produced an almost unanimous correct verdict with only a few hiccups in identifying the lowest temperature in (b)(i). The difference in the temperature was generally correct (85% of candidates) but in (ii) some found the difference in time giving 4 as their answer. Only 64% got (b)(ii) correct. For part (c) a significant number came up with the correct answer of –7 (65%) although the alternative responses were somewhat difficult to relate to the question being asked.

11. A small minority of candidates did not understand what was wanted but many scored full marks. If an error were made, it was often in the last part, where 10 was popular.

12. Part (a) was answered well with many candidates gaining 2 or 3 marks. The most successful candidates were those who used the conventional method of long multiplication. Candidates using build-up methods often made mistakes with place value or forgot to deal with part of the calculation. The working of these candidates was sometimes difficult to follow. In part (b), the majority of candidates realised that they needed to divide 2730 by 65 but less than half carried out this division successfully. Correct use of the long division algorithm was rare and some of those who obtained the correct answer showed little working. Many candidates used build-up methods. These frequently contained addition errors and even where they reached 2730 the number of 65s was often lost.

13. **Specification A**

   This was a gentle start to the paper for most candidates, although it was noticeable that some gave 7252 as the answer to the first part, presumably misreading the question. Rounding to the nearest hundred was well understood, as was place value.

   Specification B

   Many candidates scored some marks for this question. A common error in part (a) was to write 7252, missing out the initial 1. In part (b) many realised what was being asked but many rounded down to 5300.

14. Few candidates failed to score on this question. If one or two marks were gained, it was usually on parts (a) and (e), although fractions which were not in their simplest forms, such as $\frac{40}{100}$ and $\frac{40}{10}$, were not uncommon in part (a). Such answers gained 1 mark out of 2.

15. The majority of candidates were able to order the whole numbers in part (a) and the integers in part (b). The decimals in part (c) caused considerable problems, many not appreciating that 0.07 was the smallest. Some candidates also appeared to think that 0.72 was smaller than 0.702. Although only a minority of candidates gave completely correct answers to part (d), one mark was often gained for having three of the numbers in the correct order.

16. This question was very well understood by nearly all candidates. In parts (b), (c), (d) candidates were successful in over 90% of cases but this facility value dropped to 83% for part (a); this was usually because candidates wrote 508 rather than 580.

17. (a) 75% of candidates gained full marks for this question, mostly without showing any working. Candidates not using the correct prices caused the most common errors. If no working was shown it was a pity that part marks could not be awarded.
(b) 53% of the answers to this part of the question were correct. A good proportion of candidates used a trial and improvement method rather than division. Some candidates multiplied the two numbers 20 and 2.60 whilst others did not give a whole number answer.
(c) 56% of candidates answered this part correctly. £95 was a common incorrect response – presumably some candidates had taken £25 off £120. Allowance was made for candidates who took £30 from £120 and wrote down £90 as their answer.

18. Candidates found this question difficult. Part (a) was answered correctly by 87% but parts (b), (c) and (d) were only answered correctly by about 33% of candidates.

19. The majority of candidates understood the meaning of consecutive numbers. Many scored full marks, but a significant number misunderstood what was required, and aimed for a square number by a different method eg 2 + 7 = 9.

20. It was pleasing to see that most candidates were showing working and many scored method marks for 33 – 19 shown, with over 85% of the candidates scoring at least one mark. However, a common incorrect response was 41 achieved by 33 + 19 = 26 and 26 + 15 = 41.Others had problems with the arithmetic involved, often getting 24 as the difference between 33 and 19. Around 70% of the candidates went on to get the correct answer of 29.

21. Around 80% of the candidates were successful in each part.

22. It was evident that candidates worked from left to right in the first two parts. Where this coincided with 'BIDMAS', as in part (i), nearly all candidates obtained the correct answer. However, where this was not the case, as in part (ii), only 10% obtained the correct answer! In the third part, over 60% realised that the brackets should be calculated first and reached the correct answer of 2.

23. Nearly two thirds of the candidates were able to work out the temperature at 9 am the next morning. In part (b) many candidates drew number lines to help them with this question. In most cases, the number lines were drawn correctly, but on many occasions were accompanied by the answer 13. Candidates had clearly counted the numbers rather than the 'jumps'. Just over half the candidates scored both marks on this part of the question, with very few scoring just the method mark. Around 55% of the candidates were able to provide the correct temperature that was halfway between –5°C and 7°C.

24. This question was well understood, with about a 90% success rate in both parts.

25. Candidates gained success in this question also, as over 90% gained marks in each part. Interestingly part (d), marking 2.8 on the scale, was the most successful with 97% gaining the mark.

26. The context of this question was well understood by all candidates and more than 85% of candidates were successful in all of the three parts. Those candidates who lost marks mostly failed to mark the decimal point and working was very rarely seen. Marks were often lost in part (c) where candidates were unable to subtract correctly from £5.00. The attempts were often made without using a calculator.

27. This question was well understood by all candidates with all but 6% scoring marks. 50% of candidates scored full marks, but about 25% of candidates could not work out 1½ hours at £16 per hour.

28. This question was only rarely answered incorrectly.

29. This question was well answered with candidates gaining most success with parts (a), (b) and (d). Candidates often made mistakes with the rounding to the nearest hundred.

30.   Candidates achieved good success with part (a) but more limited success with reading the table in reverse to identify the cities that are the shortest distance apart. Part (c) was only correctly attempted by about a third of candidates. Candidates often used only two correct distances, for which they received some credit and sometimes 4 distances were used. There were frequent addition errors, which made this a question that candidates found very hard.

31.   This question was well understood and well answered by all candidates. Part (a) was almost always correct but they were slightly less successful in part (b) where the negative sign was omitted or candidates added 8° rather than subtracting it.

32.   In part (a) Beth was the most common response given by candidates with left to right working showing why. Only about 1⁄4 of responses were correct with correct working. It was good to see a significant number of candidates justifying the answer by explaining that multiplication had to be done first. Part (b) was almost always correct.

33.   The first part of this question, which demanded candidates to work out the difference between two negative integers, attracted a high proportion of correct answers. However, the second part which required the candidate to work out the difference between a negative integer and a positive integer was less well answered. Some candidates clearly found the larger "gap" between the numbers more difficult to deal with.

34.   This question was well understood with most candidates scoring full marks despite some unusual spellings. Part (b) caused a few problems in correcting to the nearest thousand and some candidates lost marks on part (d) by writing 6324 or 6364 etc.

35.   Candidates understood what they had to do but often made silly mistakes in carrying from 500 to deal with subtracting the 107. 407 was a very common wrong answer. In part (b) candidates gained a few more marks often from adding 327 four times.

36.   This question was poorly answered with about half the candidature gaining some success in part (a) though there were very few correct answers to part (b).

37.   This question proved to be a good introduction to the paper with nearly all candidates scoring full marks. Occasionally, candidates marked 330 rather than the 530 required.

38. In part (a) of this question recognition of the correct word proved to be beyond most candidates. "Factor" was chosen by more candidates than the correct answer. "Half" was also commonly seen. Most, but by no means all candidates, could identify 15 as the odd number in part (b). Part (c) was answered correctly by less than half of the candidates. "14" and "18" were commonly seen incorrect answers. Some candidates gave more than one number in their answers to (b) and (c), despite the question implying that only one number satisfied the criteria.

39. This was a well answered question leading to more than a half of candidates gaining all 3 marks. A small proportion of candidates gave Cardiff as the city with the lowest temperature in part (a) and "4" was commonly seen as the difference in temperatures in part (b). In the last part of the question "11" was the most commonly seen incorrect answer.

40. Most candidates scored well on this question, with the first four parts being answered successfully by a majority of candidates. Some candidates gave the answer "10" to part (b), maybe because in the diagram, the line segment between Corting and Deetown is about the same length as the line segment between Alston and Beeham. Part (e) on use of scale and accurate measurement proved to be more of a challenge to most candidates. Only a small proportion were able to place both Beeham and Corting accurately on the diagram.

41. The correct answer "24" was given by a significant number of candidates, with a similar number giving their answer as "23". Evidence seen suggested that the latter was usually obtained by truncating their answer to "800 ÷ 34". Examiners were able to award one mark here.

42. Very few candidates failed to answer part (a) correctly. It was not surprising that more mistakes were made in ordering the decimals in part (b). The two most common errors were ignoring the decimal point (so that 3.71 appeared at the end of the list) and ordering the numbers from largest to smallest.

43. The ability of candidates to work with directed numbers was a strength, with most candidates gaining the marks. Success in part (b) was less than in part (a).

44. All parts of this question were answered well with success rates of well over 90% for the first two parts and of over 80% for the last 3 parts. Tenths or ten were commonly seen incorrect answers to part (c). There was some incorrect rounding in parts (d) and (e). A small minority of candidates did not rounded to the accuracy required.

45.   Part (a) was, in the main, answered correctly; however in part (b), 4000 and 4120 were common errors.

46.   Most candidates were able to identify the lowest temperature as –4°C in part (a). Arithmetical errors prevented about 20% of the candidature gaining credit in part (b).

In part (c), very few candidates demonstrated any method; consequently many errors were made in finding the middle number. Had more candidates drawn and used number lines, many more would have been successful.

47.   Most candidates scored at least 2 marks on this question.
In part (a) – 14 and Moscow were common incorrect responses.
In Part (c) many omitted the negative sign.

48.   This was generally well answered. Most picked up a mark for identifying Edinburgh as the coldest city. A significant number of candidates looked at the numerical values and ignored the signs giving London and Edinburgh as the two extremes of temperature.

49.   Very few candidates failed to gain at least one mark in this question. Part (i) was perhaps the most poorly done, many candidates taking 0.605 to be greater than 0.65 or taking 0.067 as the highest number. Part (ii) was very well done indeed, the majority of candidates being comfortable ordering directed numbers. In part (iii) one mark was often gained and many times 2. Notable errors included placing the denominators in either ascending order (gaining 1 mark for 3 fractions correctly placed) or descending order (gaining 0 marks). Only a small number of candidates ordered the fractions in a correct descending order; 1 mark was awarded for this.

50.   The vast majority of the candidates answered this question correctly. A small percentage reversed the order and even fewer got one number out of place.

51.   There was a mixed response to this question. Most candidates got at least one entry correct with many getting two or three entries correct. However there were a few candidates who were unfamiliar with this type of table.

52.   About 60% of candidates scored both marks on this question. The common errors in (a) were 5:50 and 10:25 and in (b) the reading was often given as 20.5

53. Candidates performed better on all parts of this question than in previous years although the spelling in (b) made interesting reading!
In part (b)(ii) the vast majority of candidates wrote either 5000 or 1000 in figures or words scoring the available mark.
Approximately half the candidates made correct responses to (c). However some candidates were tempted to abbreviate their answers [26 in (i) and 700 in (ii)] which meant they were not awarded the available mark.

54. There were many varied methods with the majority realizing that a division was required. However only about 10% of candidates scored all 4 marks. There were very few attempts at traditional long division. Those using this method often got the 1 in the correct position and then floundered. Others got the 1 but then ended with a number over 100. Most candidates attempted to build a total around 990 with much inaccuracy. There were also some innovative ideas, which came from a single digit multiplication such as first evaluating $69 \times 10 = 690$ and then $69 \times (3$ or 4 or $5)$ in order to get close to 990. The less productive became swamped in a sea of figures in which desperation overcame logic. Multiple addition calculations were much in evidence which tended to fill up the answer space very quickly.

55. Paper 14

By disregarding the 56 many presented $7 \times 4 = 28$ as their answer. Others, using the 56 indicated that $56 \div 7$ was needed but did not always come up with the answer of 8. Those that showed a valid method (around 38% of candidates), generally went on to give the correct answer.

Paper 16

80% gained full marks here with again, arithmetic errors losing marks. $\dfrac{56}{7} = 7$ and $8 \times 4 = 24$ or 28 being the usual mistakes.

56. Over 80% of the candidates were able to correctly provide the difference in temperature at the South Pole which was encouraging, but only just over half the candidates were able to work out the temperature outside Mr Snow's house, with $12 - (-2) = 14$ being a common error.

57. Ordering numbers proved straightforward when the numbers were positive integers but proved to be a more challenging task when negative integers were introduced. Candidates seldom displayed any working in part (c) but over 75% of the candidates were able to score at least 1 mark by listing at least 3 in the correct order, with ¼ of the candidates scoring both available marks.

58.   Candidates were mostly able to write 40% as a fraction but had more difficulty giving it in its simplest form. Writing 7½ million in figures proved far more challenging with as assortment of responses many with multiple decimal points. It was disappointing to see how many incorrect responses there were to part (c) with many candidates writing '98%' as their answer.

59.   The number marked with the arrow was usually interpreted correctly as being "580" but "508" was also seen and scored no marks. Placing the number "6.7" on the prepared number line again produced many accurate results

60.   Candidates are becoming a bit more familiar with these type of questions with well over half the candidates scoring a mark on each of the 3 parts.

61.   Some two thirds of candidates were able to write '2725' correct to the nearest 'hundred'. Of the incorrect answers '2800' featured most of the time but '272500' indicated that the question had not been fully grasped. Greater confidence was shown in part (b) in translating from words to figures with '10360' being the correct response. In the final part a conversion from figures to words was well handled although some reasoned that '3007' represented 'three hundreds and seven'.

62.   This proved to be a good starter question which required the lengths of rivers to be put in order of size. Around 90% of the candidates scored both available marks. The main cause for loss of marks was difficulty in dealing with 'large' values but some tried to overcome this by the insertion of a decimal point. Some misreads of the values also occurred.

63.   This was the first challenging question on this section with less than half being able to score the full three marks. A common error was to ignore that there were two tins of paint which gave rise to an incorrect total of '£11.49'. One mark was awarded for a correct subtraction from £20. Considering that calculators were permitted on this paper there was considerable evidence of attempts to add and subtract which should have been dealt with by the use of the calculator. There were some less than competent subtraction methods which gave the idea of a '£21' pound note rather than the '£20' given in the question. Many candidates would have undoubtedly scored some method marks had they shown their working.

64. 71% of the candidates completed this question correctly. Of those candidates who did not earn both marks available about a half earned one mark for demonstrating a partially correct method. A surprising number of candidates who clearly showed the intention to subtract 19 from 33 were unable to carry out this operation successfully, recording "26" as their difference. Very few candidates used the "easier" method of calculating 33 – 4. This alternative method might have helped weaker candidates to complete the question successfully.

65. Part (a) was well answered with nearly all candidates giving the correct answer. Very few candidates carried out the operations in the wrong order. However, the success rate in (b) was lower at about 65% with the incorrect answers 32 and 0.5 commonly seen. Presumably this was reached by candidates who failed to appreciate the significance of the brackets or by those who worked out the bracket first but then worked out $8 \div 16$ rather than $16 \div 8$.

66. It was encouraging to see almost two thirds on the candidates answer part (a) of this question successfully. A large proportion of these candidates also went on to give 12 or -12 as their answer to part (b). Both of these were accepted for full marks. Incorrect responses included 13 and 11. These answers are likely to have been obtained by either misuse of a number line (counting numbers rather than gaps) or through carelessness. 2 and -2 also featured regularly as incorrect answers to part (b).

67. Nearly all candidates were able to correctly write one pound thirty pence in figures although candidates were not penalised for having both the pounds and pence symbols.

68. Most candidates showed good understanding of finding this time difference usually by partitioning into several time intervals; usually 5 mins, 60 mins, 60 mins and 45 mins. Often answers of 2 hours 50 mins were seen which lost one mark for not giving the answer in the required units. Many merely found the difference in the hours and minutes separately and gave an answer of 190 minutes (3 hours + 10 minutes). Weaker candidates often treated the times as decimal numbers and gave 290 (19.45 – 17.55) as their answer; some went further and read 290 as 2 hours 90 mins, giving a final answer of 210 minutes.

69. This question was well understood with candidates being about 80% successful in all three parts.

70. In part (a) about 90% of candidates were able to put the mixture of positive and negative numbers in order but in part (b) only 20% of candidates were able to put the decimal numbers in order with candidates often confusing 0.64 and 0.604

71. This question was well understood with 90% of candidates understanding the difference between a factor and a multiple, however only 40% of candidates could identify a square number.

72. This question was poorly attempted with only about a third of candidates obtaining full marks, another third of candidates gained no marks and the other third gaining partial marks for either showing a structured attempt or being able to remember their multiplication facts. It was interesting to note that the majority of candidates used a grid approach by breaking the numbers down into 300, 60, 2 and 50, 4 and then multiplying. Many of these candidates were very successful.

73. 93% of candidates were able to write 5264 in words but had a bit more difficulty when it came to rounding the number to the nearest hundred (76% success rate) with 5260, 5000 and 5200 being common incorrect answers to (b). 80% of the candidates could go on to write down the value of the 6 in the same number.

74. Only half candidates realized that 4 or 16 was a square number and just under a half of the candidates recognised that the square root of 16 was 4. Cubing 2 caused more problems with 6 being a common incorrect response. Just under 40% of the candidates knew that 2 was the prime number from the numbers in the cloud.

75. Few candidates found problems with writing down the city with the highest temperature (93%) and almost as many candidates were successful in providing the city with the lowest temperature.

76. (a) Most candidates correctly gave 5036 as their answer gaining the mark for this question. An incorrect answer of 500036 was sometimes seen.

(b) 500, 400 and 3400 were the most common errors, but the greater majority scored full marks.

77. Many candidates drew number lines to assist in answering both parts of this question. This usually produced the correct answer to part (a) but often led to incorrect answers of 11 or 13 in part (b). An incorrect answer of 2° and ±14° were common in part (a)

78. The most common error in part (a) was to give an answer of 10. In part (b) 7×7 was often seen. This gained no credit. In part (c) the understanding of the order of operations was poor resulting the incorrect answer of 28 being the most common offered.

79–85. No Reports available for these questions.

86. All parts were generally answered correctly. The most common incorrect answers were 800, 870 and 860 in part(a), two thousand and five in part (b) and part (c) was rarely incorrect.

87. Ordering of whole numbers in part (a) was confidently and accurately carried out. Occasionally 5201 and 5210 were reversed and sometimes one or two of the four numbers were placed under the answer line making the ordering ambiguous. In such cases the mark could not be awarded. Part (b) was less well done and often 0.7 was not seen to be the smallest number, however the most common incorrect order seen was 0.7, 0.75, 0.705; three decimal places being considered greater than a number with two or one.

88. Most candidates correctly quoted Oslo as the city with the lowest temperature in part (a), however in part (b) whilst ±13 was the modal answer, 7 (10 – 3) was the offering of many candidates. Many of those who failed to find the correct temperature difference were able to pick up one mark for showing a number line from -3 to 10.

89. The more traditional methods for long multiplication usually yielded a correct or near correct result, often one arithmetic slip only was made and thus just one mark lost; although, even here, confusion with place value lost all of the marks. The matrix (table) method was then the next most popular approach, however many mistakes were made in the multiplication of pairs of numbers in completing the table; 700 x 20 = 1400 was a common error. Addition errors, particularly using this latter method, often spoiled otherwise accurate work. Those candidates electing to use a Napier's bones approach often made errors in the setting up of their table.

90. Candidates at this level did struggle with the application of directed numbers but on the whole over 60% of the candidates scored all 3 available marks. Part (a) proved to have a higher success rate than the other two parts with a 76% success rate on part (a).

91. This question was also well understood with a success rate of 96% for part (a) with only a very small percentage of candidates writing –13 as the highest temperature. In part (b) the success rate was 88% and this showed a good understanding of temperature difference. Candidates that wrote –8 were also awarded the mark. In part (c) the success rate was only 81% with many candidates writing +1ºC rather than the –1ºC, which was the correct answer.

92. This question too was well understood with almost all candidates gaining full marks; however a small minority gave odd numbers instead of evens and 3 instead of a square number.

93. This question was very well answered with almost all candidates gaining the full 3 marks.

94. Part (a) was almost always correct but in part (b) the correct answer of 22 was rarely seen whilst the modal incorrect answer of 50 was seen frequently.

95. There were predictable problems with minus signs here. The numerical parts of the answer were usually correct, but signs were confused in the responses given by most candidates, most notably in (a) and (c).

96–98. No Reports available for these questions.

99. This question was not very well understood as many candidates were happy that the incorrect answer was, in fact, correct. Only 56% of candidates were able to correctly give a correct reason as to how 24 was in fact obtained or how to correctly calculate 15 – 3 × 2 as 9. Some candidates indicated that brackets were needed but gave no indication as to their placement to make a true statement.

100–101. No Reports available for these questions.

102. This question was well understood with 88% of candidates scoring full marks. A further 8% of candidates scored 1 mark either for showing a complete method or for sight of 19 or 51. Many candidates took away both 15 and 17 and got an answer of 2. They were awarded one mark for a misread of taking 15 and 17 away from 34.

103–106. No Reports available for these questions.

107. Many candidates were able to score at least one mark for part (a) of this question. This was usually for obtaining a 7 in the unit column of their answer. A significant number of candidates were unable to obtain the correct answer. Common incorrect answers here were 217, 117 and 393. In part (b), many candidates were able to take 9 from 4 to get –5. A very common incorrect answer here was 5. Part (c) was done well by most candidates. Common incorrect answers here were 15 and 2. Part (d) was done well by the majority of candidates It was rare to see this calculation set out as a long division; many just simply wrote down the answer. Common incorrect answers here were 60 and 250.

108. This question was done well by the vast majority of candidates.

Common errors in part (b) were –5 and –7. Common errors in part (c) were Edinburgh and London.