1. Look at these numbers written in Roman numerals.

MCMVII MMCD MDCCXLIII MMDX

Circle the **largest** number.

What is the value of the **smallest** number?

2 marks

2. The numbers in this sequence increase by 3 each time.

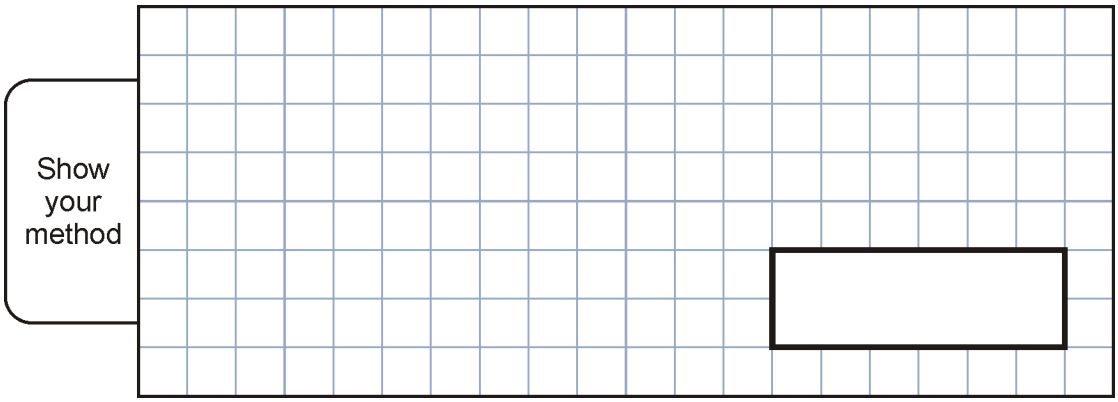
3 6 9 12 . . .

The numbers in this sequence increase by 5 each time.

5 10 15 20 . . .

Both sequences continue.

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



2 marks

3. Estimate the answer to this calculation

349.05 + 907.53

Circle the correct estimate

1000 1100 1200 1300 1400

1 mark

4. Liam makes a sequence of numbers starting with 300

He subtracts 125 each time.

Write the next two numbers in Liam's sequence.

300 175 50 ☐ ☐

2 marks

5. The numbers in this sequence increase by 7 each time.

1 8 15 22 29 ....

The sequence continues in the same way.

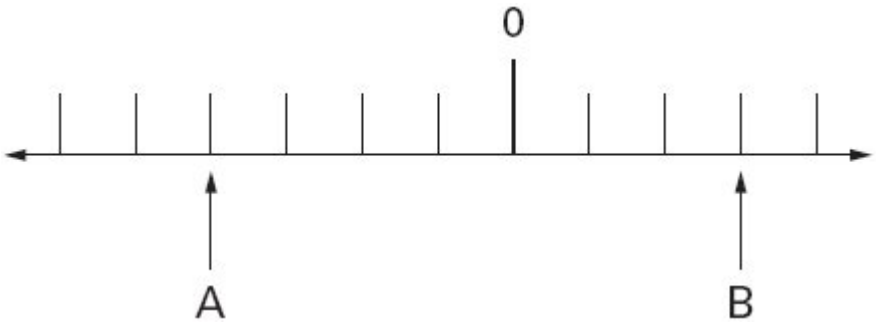
Will the number 777 be in the sequence?

Circle **Yes** or **No**. Yes / No

Explain how you know.

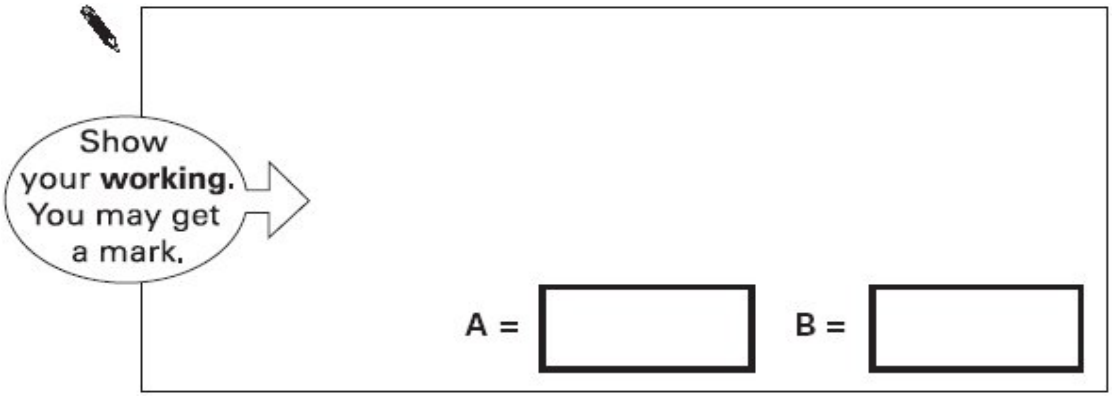
1 mark

6. **A** and **B** are two numbers on the number line below.



The **difference** between **A** and **B** is 140

Write the values of **A** and **B**.



2 marks

Mark schemes

1. MMDX indicated

Do not accept MDCCXLIII

1

1743

1

[2]

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

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

Accept more than one answer if all are correct.

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

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

- 90 93 96 99 102 105 108 …
  90 95 100 105 110 115 …
  ← *Not spotting matching number (105)*
- 90 93 96 98 101 104 107 (110) …
  90 95 100 105 (110) 115 …
  ← *One step size incorrect (96 to 98)*
- 15 30 45 60 75 80 95 110 (125)
  ← *One step size incorrect (75 to 80)*
- 3 × 5 × 20
  OR
  15 × 10
  ← *Multiple greater than 100 but not calculated*

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

Up to 2

[2]

3. (1300) indicated

Accept any unambiguous indication

[1]

4. (a) –75 in the first box

***Do not** accept 75–*

1

(b) –200 in the second box

***Do not** accept 200–*

Accept a number 125 less than the answer to (a), provided the answer to 18a is negative.

1

[2]

5. 'No' is circled **AND** one of the following:

an explanation which recognises that 777 is not one more than a multiple of 7, eg:

- 'All the numbers are one more than a multiple of 7'
- 'There are no multiples of 7 in the sequence'
- '778 is in the sequence'
- '771 works but 777 doesn't'

OR

an explanation which recognises that 777 is a multiple of 7, eg:

- '777 is a multiple of 7'
- '777 ÷ 7 = 111'

OR

an explanation which relies solely on the start of the sequence, eg:

- 'The sequence started at 1'
- 'The sequence doesn't start at 0'.

*'No' must be indicated for the award of the mark, unless a **complete** and correct explanation is given, eg:*

- *'777 is a multiple of 7, and the numbers in the sequence aren't'.*

No mark is awarded for circling 'No' alone.

***Do not** accept vague or incomplete explanations, eg:*

- *'It's adding 7 every time'*
- *'There are no 7s in the sequence'.*

U1

[1]

6. Award **TWO** marks for the correct answer as shown:

A = **–80** B = **60**

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

140 ÷ 7 = 20

Accept 'minus 80'

***Do not** accept '80–'*

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

*Accept for **ONE** mark:*

*A = –80 **AND** B = wrong answer **OR***

*A = –80 **AND** B = blank **OR***

*A = 80 **AND** B = 60 **OR***

*A = 80 **AND** B = –60 **OR***

*A = 60 **AND** B = –80*

Up to 2 (U1)

[2]