

Number Sequences - Questions

Key Stage 2: 2003 Paper A

1.

10

Here is a repeating pattern of shapes.

Each shape is numbered.



The pattern continues in the same way.

Write the numbers of the next two **stars** in the pattern.

 and

10a
1 mark

Complete this sentence.

Shape number 35 will be a circle because ...



.....
.....
.....

10b
1 mark

2.

17

The first two numbers in this sequence are 2.1 and 2.2

The sequence then follows the rule

'to get the next number, add the two previous numbers'

Write in the next two numbers in the sequence.



2.1

2.2

4.3

6.5

17i

17ii

2 marks

1.

7

Hayley makes a sequence of numbers.

Her rule is

'find half the last number then add 10'

Write in the next two numbers in her sequence.



36

28

24

7i

7ii

2 marks

2.

16

In this sequence each number is double the previous number.

Write in the missing numbers.

 3 6 12 24 48

16i
 16ii
2 marks

1.

23

A sequence of numbers starts at 11 and follows the rule

'double the last number and then subtract 3'

11 19 35 67 131 ...

The sequence continues.

The number 4099 is in the sequence.

Calculate the number which comes immediately before 4099 in the sequence.



Show your **method**.
You may get a mark.

23i
 23ii
2 marks

Key Stage 2: 2006 Paper A

1.

15

Here is a number chart.
Every third number in the chart has a circle on it.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22			

The chart continues in the same way.
Here is another row in the chart.

Draw the missing circles.

71	72	73	74	75
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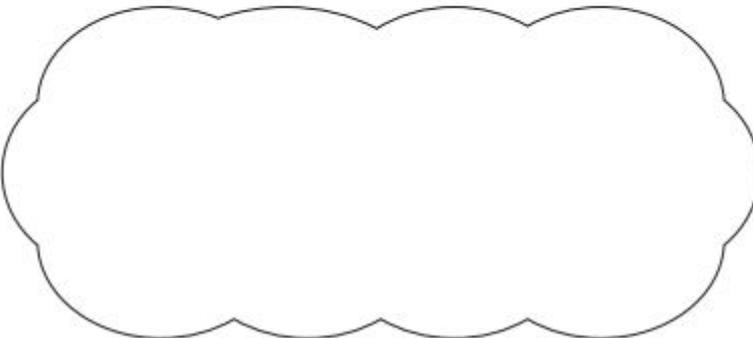
15a

1 mark

Will the number **1003** have a circle on it?
Circle **Yes** or **No**.

Yes / No

Explain how you know.



15b

1 mark

Key Stage 2: 2006 Paper B

1.

12

The numbers in this sequence increase by the same amount each time.

Write in the missing numbers.



12
1 mark

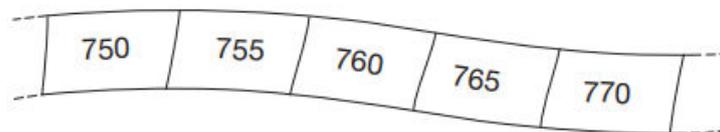
Key Stage 2: 2007 Paper A

1.

5

Here is part of a number sequence.

The numbers increase by the same amount each time.



The sequence continues.

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

840 905 989 1000 2051

5
1 mark

Key Stage 2: 2008 Paper A

1.

6

The numbers in this sequence increase by 75 each time.

Write in the two missing numbers.



725

800

875

950

6a

1 mark

6b

1 mark

Key Stage 2: 2008 Paper A

2.

23

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.



23

1 mark

Key Stage 2: 2010 Paper A

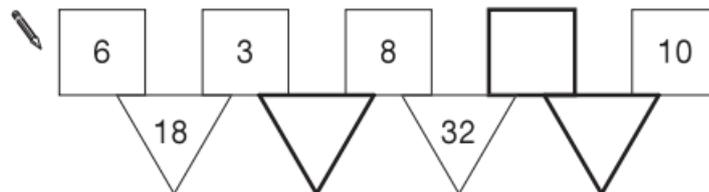
1.

6

In this diagram the rule is

***'to make the number in a triangle,
multiply the numbers in the two squares above it'.***

Write in the three missing numbers.



6i

6ii

2 marks

Key Stage 2: 2010 Paper A

2.

18

Liam makes a sequence of numbers starting with 300

He subtracts 125 each time.

Write the next two numbers in Liam's sequence.



18a

1 mark

18b

1 mark

Key Stage 2: 2011 Paper B L6

1.

2

The rule to get each number in a sequence is

subtract the previous number from 100, then **divide** the answer by 2

Here is part of the sequence.

Write the two missing numbers.



40 30 35 32.5 33.75

(2 marks)

Key Stage 2: 2011 Paper A

1.

9

Here is part of a number sequence.

The numbers in the sequence increase by 25 each time.

50 75 100 125 ...

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



255 650 735 900 995

9
1 mark

Key Stage 2: 2011 Paper B

1.

15

The numbers in this sequence increase by 3 each time.

3 6 9 12 ...

The numbers in this sequence increase by 5 each time.

5 10 15 20 ...

Both sequences continue.

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

 Show your method

15i

15ii

2 marks

Key Stage 2: 2012 Paper A L6

1.

1

Jon makes a sequence of numbers.

His rule is to add the **same amount** each time.

Write in the missing numbers.

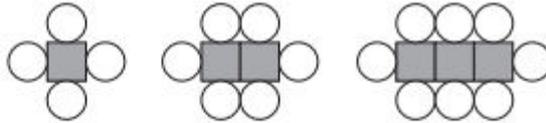
 -1 19 (1 mark)

1.

6

Here is a sequence of shapes.

Each time a square is added to a shape,
two more circles are added.



number of squares, **s**

1

2

3

number of circles, **c**

4

6

8

The sequence of shapes continues.

The formula for the sequence is $c = 2s + 2$

Calculate the number of circles when the
number of squares in a shape is **150**



circles

1 mark

How many squares are there in a shape that has **100** circles?

Show
your
working

squares

2 marks

1.

2

The numbers in this sequence increase by the same amount each time.

Write the two missing numbers.



610

650

690

2a

1 mark

2b

1 mark

1.

8

The numbers in this sequence increase by 10 each time.

3 13 23 ...

The sequence continues in the same way.

Write **two** numbers from the sequence that add to make a total of **96**



and

8a
1 mark

Explain why it is **not** possible to find **three** numbers from the sequence that add to make a total of **96**



8b
1 mark

Key Stage 2: 2015 Paper A

1.

7

The numbers in this sequence increase by 30 each time.

20 50 80 110 ...

The sequence continues in the same way.

Which number in the sequence will be **closest to 300**?

Show your working



7i
7ii
2 marks

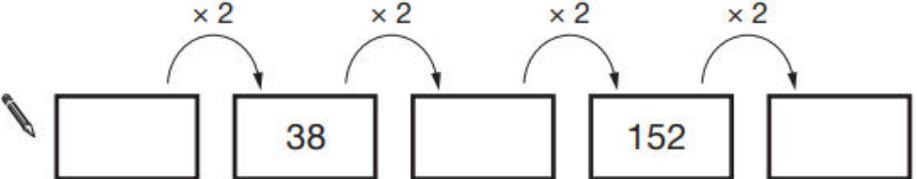
Key Stage 2: 2015 Paper B

1.

4

Here is a doubling sequence.

Write the three missing numbers.



4i
4ii
2 marks

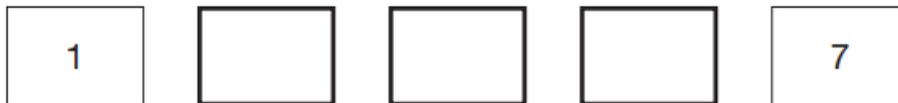
Key Stage 2: 2015 Paper B

2.

21

The numbers in this sequence increase by equal amounts each time.

Write in the three missing numbers.



21i

1 mark

21ii

1 mark

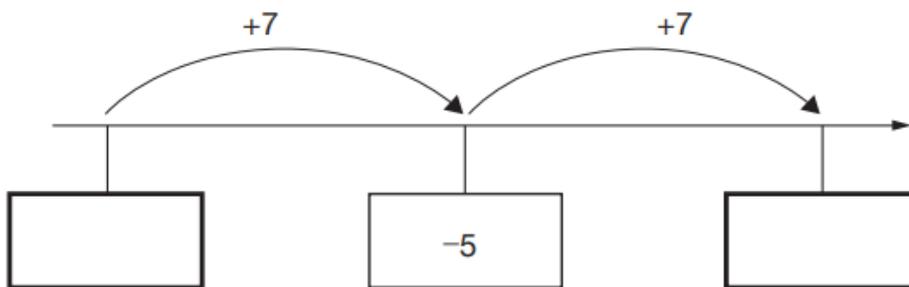
Key Stage 2: 2016 Paper 3 Reasoning - Sample

1.

2

Here is part of a number line.

Write the missing numbers in the boxes.



2 marks

Key Stage 2: 2016 Paper 3 Reasoning

1.

1

The numbers in this sequence increase by 14 each time.

Write the missing numbers.



2 marks

Key Stage 2: 2017 Paper 3 Reasoning

1.

21

The numbers in this sequence increase by the same amount each time.

Write the missing numbers.

<input type="text"/>	1	$1\frac{5}{8}$	$2\frac{1}{4}$	<input type="text"/>
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1 mark

1 mark

Key Stage 2: 2018 Paper 2 Reasoning

1.

6

The numbers in this sequence **decrease** by the same amount each time.

303,604 302,604 301,604 300,604 ...

What is the next number in the sequence?

1 mark

2.

9

The list below shows the years in which the Cricket World Cup was held since 1992:

1992, 1996, 1999, 2003, 2007, 2011, 2015

Adam says,



Adam is **not** correct.

Explain how you know.

1 mark

Key Stage 2: 2018 Paper 3 Reasoning

1.

1

The numbers in this sequence increase by the same amount each time.

Write the missing numbers.

<input type="text"/>	42	49	<input type="text"/>	63	<input type="text"/>
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2 marks

Key Stage 2: 2019 Paper 2 Reasoning

1.

5

The numbers in this sequence **increase** by 45 each time.

Write the missing numbers.

<input type="text"/>	155	200	245	<input type="text"/>	<input type="text"/>
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2 marks

Key Stage 2: 2019 Paper 2 Reasoning

2.

8

In this sequence, the rule to get the next number is

Multiply by 2, and then add 3

Write the missing numbers.

<input type="text"/>	25	53	<input type="text"/>
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1 mark

1 mark