

1. The numbers in this sequence increase by 75 each time.

Write in the two missing numbers.



725

800

875

950

2 marks

2. Here is a number chart.

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



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

1 mark

Here is the same number chart.

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



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

1 mark

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

1 8 15 22 29

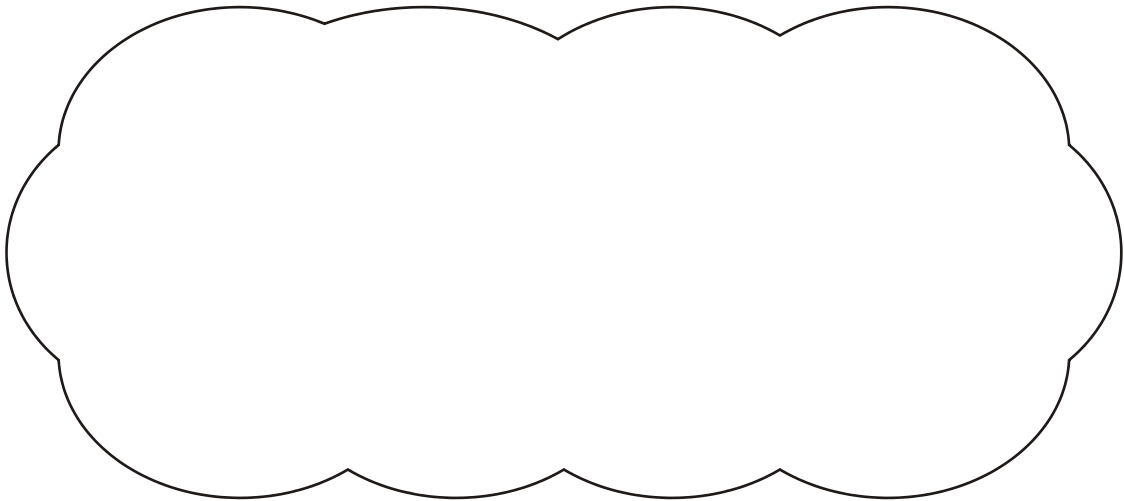
The sequence continues in the same way.

Will the number 777 be in the sequence?

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

 **Yes / No**

Explain how you know.



1 mark

4. Join each number to the set of numbers that it belongs to.

One has been done for you.

357

199

73

1000

224

1 to 100

101 to 200

201 to 300

301 to 400

401 to 500

greater than 500

2 marks

5. Nisha says,

***'When you halve any even number,
the answer is always an odd number'.***

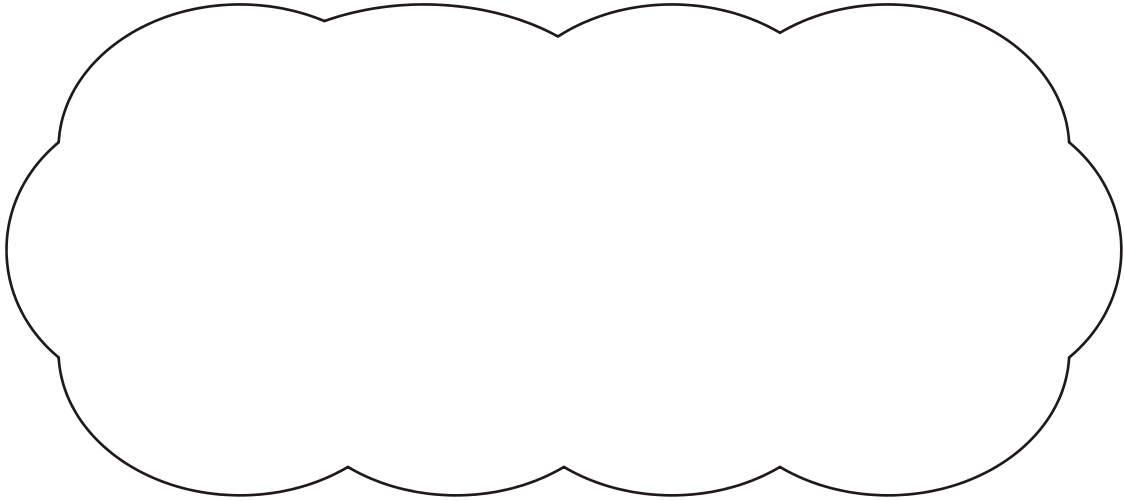


Is she correct?

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

 Yes / No

Explain how you know.

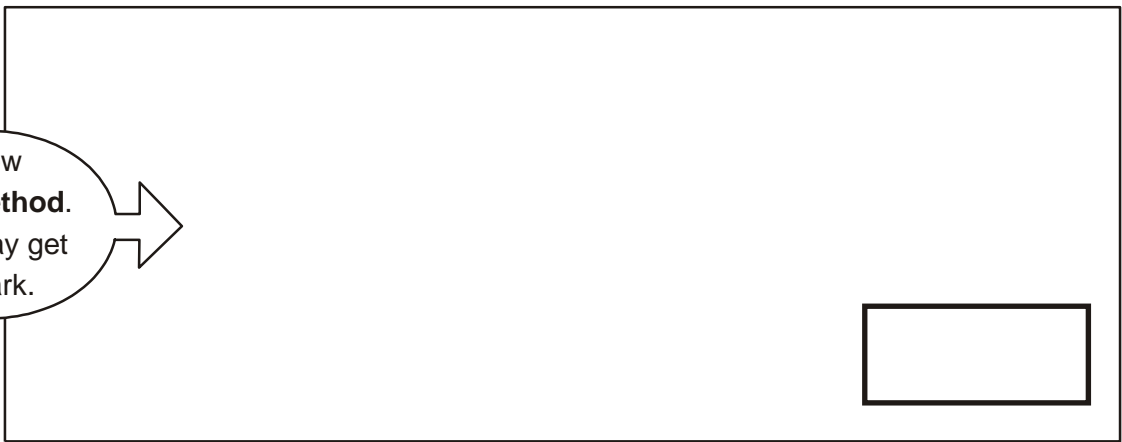


1 mark

6. Find the multiple of 45 that is closest to 8000



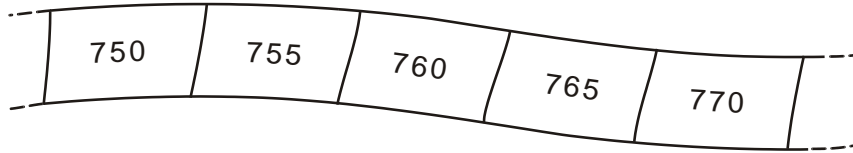
Show
your **method**.
You may get
a mark.



2 marks

7. 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.

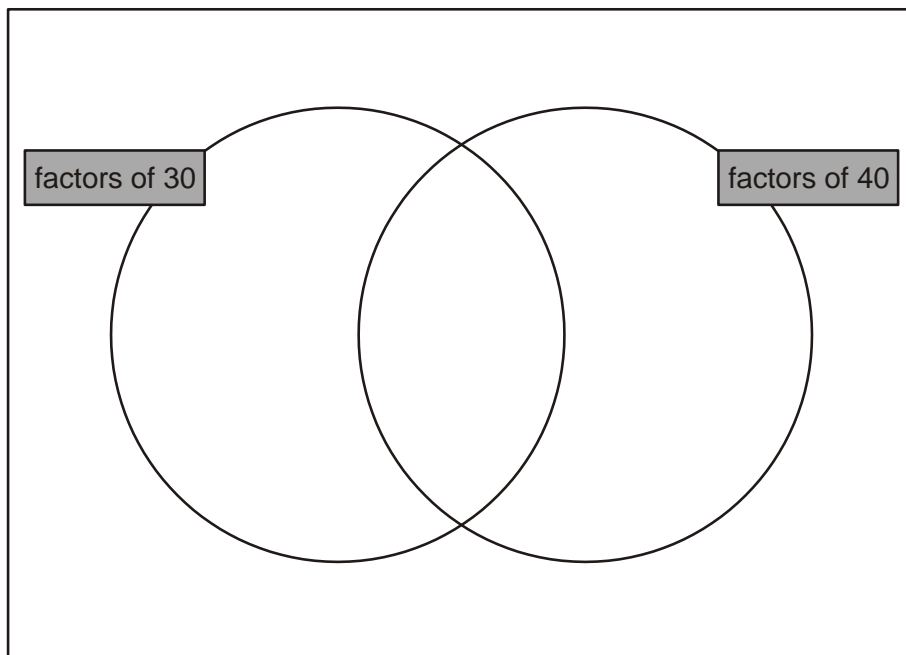


840 905 989 1000 2051

1 mark

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

5 **6** **7** **8**



2 marks

9. 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.



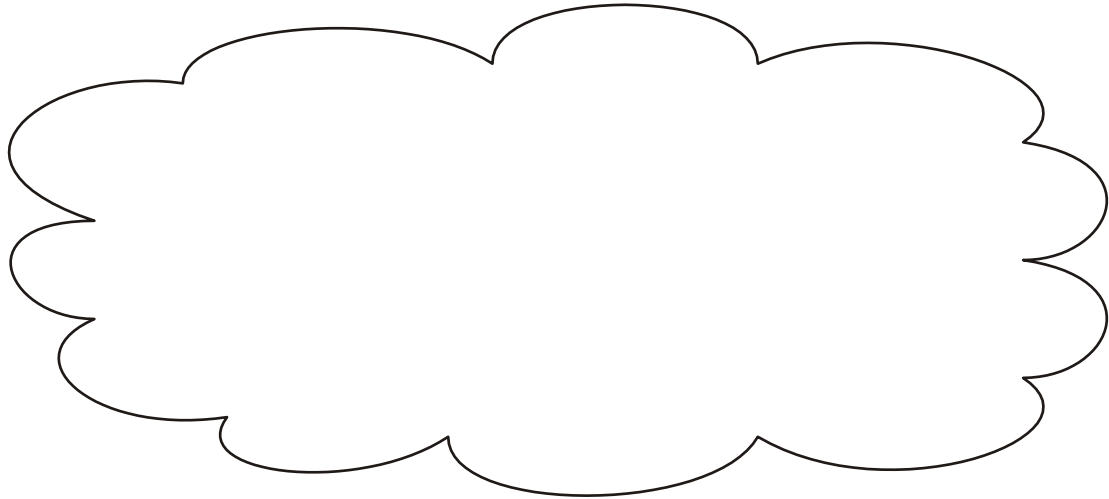
71	72	73	74	75
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1 mark

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

 Yes / No

Explain how you know.



1 mark

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

Write in the missing numbers




1			13
---	--	--	----

1 mark

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

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

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



1 mark

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

Explain why.



1 mark

12. Circle the **two** prime numbers.



29

39

49

59

69

1 mark

13. Find two **square numbers** that total 45



+

=

45

1 mark

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



.....

2 marks

15. Here is a sorting diagram for numbers.

Write a number **less than 100** in each space.



	even	not even
a square number		
not a square number		

2 marks

16. Julie says,

***'I added three odd numbers
and my answer was 50'***

Explain why Julie cannot be correct.



.....

.....

.....

1 mark

17. John says,

'Every multiple of 5 ends in 5'



Is he correct?

Circle Yes or No.

 Yes / No

Explain how you know.



.....

.....

.....

1 mark

18. 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.



2 marks

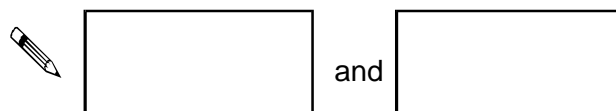
19. Here is a repeating pattern of shapes.

Each shape is numbered.



The pattern continues in the same way.

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



1 mark

Complete this sentence.

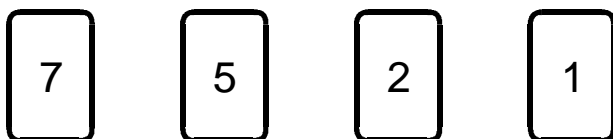
Shape number 35 will be a circle because ...



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

1 mark

20. Here are four digit cards.

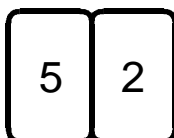


Choose two cards each time to make the following two-digit numbers.

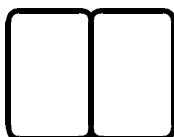
The first one is done for you.



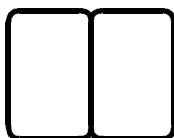
an even number



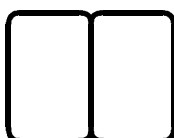
a multiple of 9



a square number



a factor of 96



2 marks

21. 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'

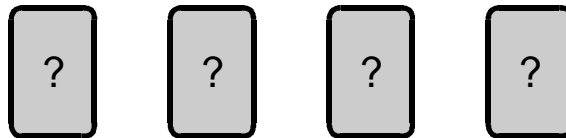
Write in the next two numbers in the sequence.

 2.1 2.2 4.3 6.5

2 marks

22. Debbie has a pack of cards numbered from 1 to 20

She picks four different number cards.




Exactly three of the four numbers are multiples of 5

Exactly three of the four numbers are even numbers.

All four of the numbers add up to less than 40

Write what the numbers could be.



1 mark

23. 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

2 marks

24. In this sequence each number is double the previous number.

Write in the missing numbers.

 3 6 12 24 48


2 marks

25. A sequence starts at 500 and 80 is **subtracted** each time.

500 420 340 ...

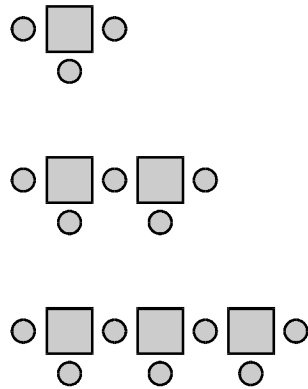
The sequence continues in the same way.

Write the **first two numbers** in the sequence which are **less than zero**.



2 marks

26. Here is a sequence of patterns made from squares and circles.



number of squares	number of circles
1	3
2	5
3	7

The sequence continues in the same way.

Calculate how many **squares** there will be in the pattern which has **25 circles**.



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

2 marks

27. The rule for this sequence of numbers is 'add 3 each time'.

1 4 7 10 13 16 ...

The sequence continues in the same way.

Mary says,

'No matter how far you go there will never be a multiple of 3 in the sequence'.

Is she correct?

Circle Yes or No.

 **Yes / No**

Explain how you know.



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

1 mark

28. This sequence of numbers **goes up by 40** each time.

40 80 120 160 200 ...

This sequence continues.

Will the number **2140** be in the sequence?

Circle Yes or No.

 **Yes / No**

Explain how you know.



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

1 mark

29. Megan makes a sequence of numbers starting with **100**.

She **subtracts 45** each time.

Write the next **two** numbers in the sequence.



100

55

10

2 marks

30. Halid makes a sequence of 5 numbers.

The first number is 2.

The last number is 18.

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

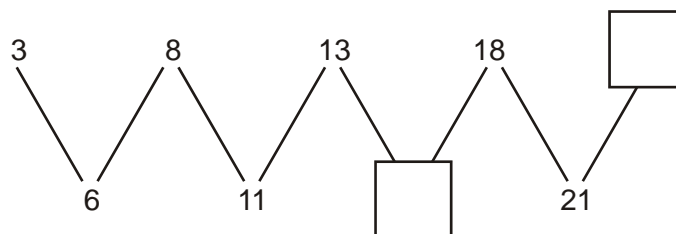
Write in the **missing** numbers.



1 mark

31. Here is a number sequence.

Write in the **missing** numbers.



2 marks

32. Here is a number sequence.

Write the **missing** number.



1 3 6 10

Explain how you worked it out.



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

2 marks

33. Fill in the **empty boxes** to complete the pattern.



$n + 6$	<input type="text"/>	$7n + 6$
<input type="text"/>	$4n + 3$	$7n + 3$
n	$4n$	<input type="text"/>

2 marks