1 Circle all the **multiples of 8** in this list of numbers.

[2002]

18 32 56 68 72

[1 mark]

2 Here is a number chart.

[2008]

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

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

[2 marks]

3

[2016S]

Here is a diagram for sorting numbers.

Write **one number** in each box.

One is done for you.

	multiple of 5	**not** a multiple of 5
multiple of 3	30	
not a multiple of 3		

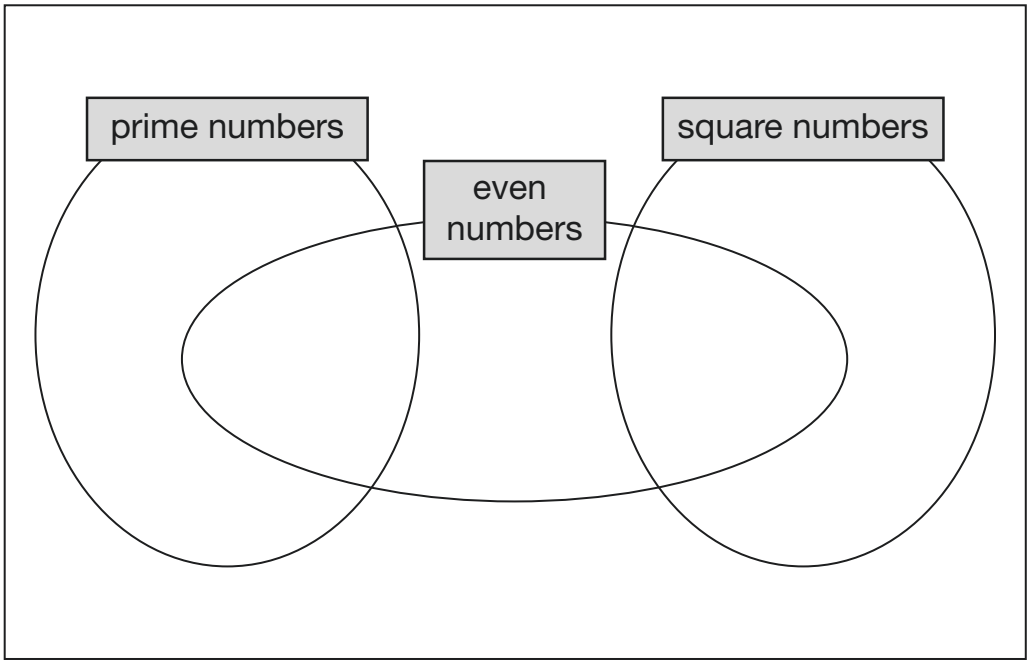
[2 marks]

4

[2016]

Write each number in its correct place on the diagram.

16 17 18 19



[2 marks]

5 [2017]

Write three factors of 30 that are **not** factors of 15

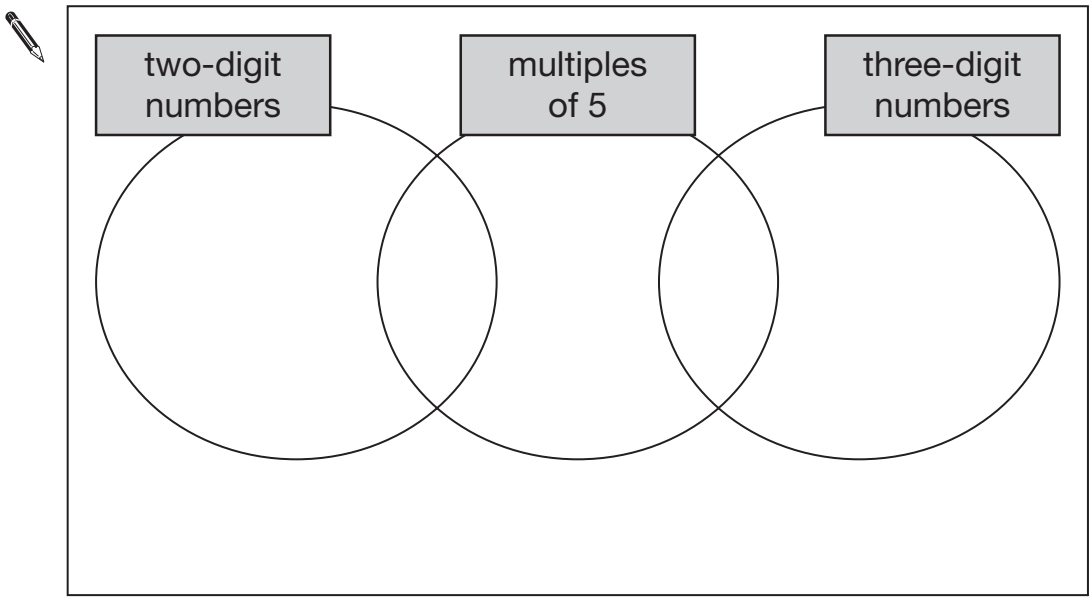
[2 marks]

6 [2014]

Here is a diagram for sorting numbers.

Write **each** number in its correct place on the diagram.

2 20 201 2000



[2 marks]

7 [2013]

36 and 64 are both square numbers.

They have a sum of 100

Find two **square** numbers that have a sum of **130**

and

[1 mark]

8 [2004]

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]

9 [2001]

Write the **three prime numbers** which multiply to make **231**

☐ × ☐ × ☐ = 231

[1 mark]

10 [2010]

Here are six digit cards.

2	3	4	5	6	7

Use **all six** digit cards to make three multiples of 3

☐☐ multiple of 3 ☐☐ multiple of 3 ☐☐ multiple of 3

[1 mark]

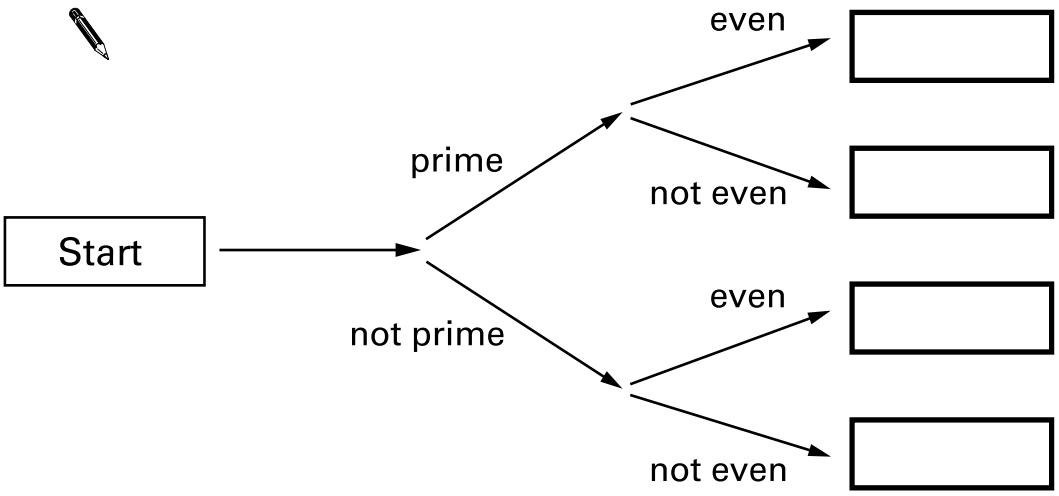
11 Here is a diagram for sorting numbers.

[2001]

Write these three numbers in the correct boxes.

You may not need to use all of the boxes.

9 17 20



[2 marks]

12 Here is a diagram for sorting numbers.

[2010]

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

25 247 7002 49 990

	odd	**not** odd
a 3-digit number		
not a 3-digit number		

[2 marks]

13 Write **all** the common multiples of 3 and 8 that are **less than 50**

[2016]

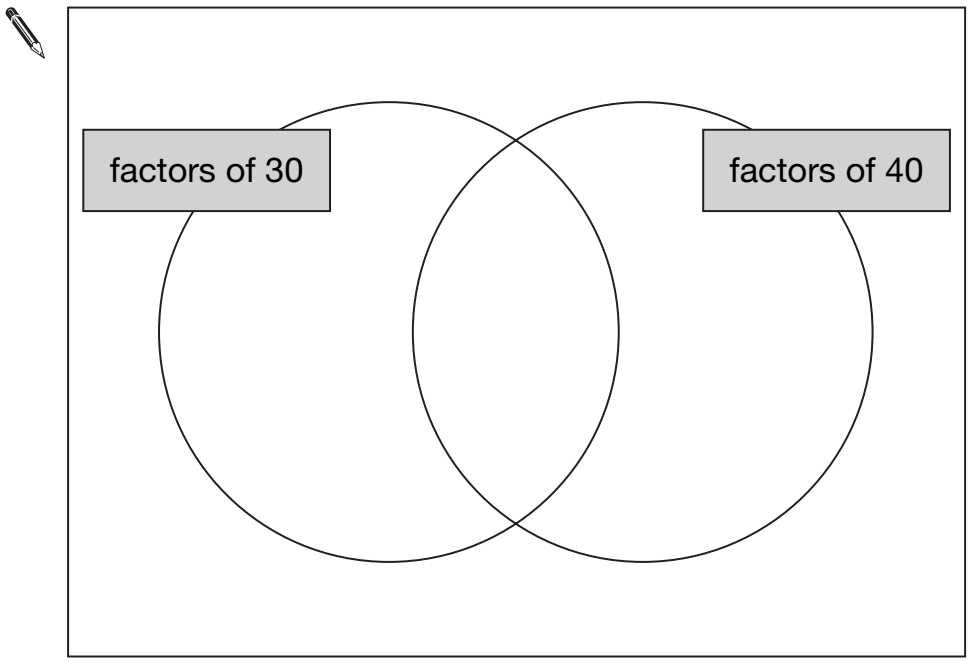
_____

[1 mark]

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

[2006]

5 6 7 8



[2 marks]

15 Circle the **two** prime numbers.

[2006]

29 39 49 59 69

[1 mark]

16 Write **all** the numbers between 50 and 100 that are **factors of 180**

[2009]

_____

[1 mark]

17 Here are four labels.

[2008]

even	multiples of 9	not even	not multiples of 9

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

	72, 54	56, 84
	63, 45	49, 75

[1 mark]

18 Find two **square numbers** that total 45

[2005]

☐ + ☐ = 45

[1 mark]

19

[2006]

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

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

Yes / No

Explain how you know.

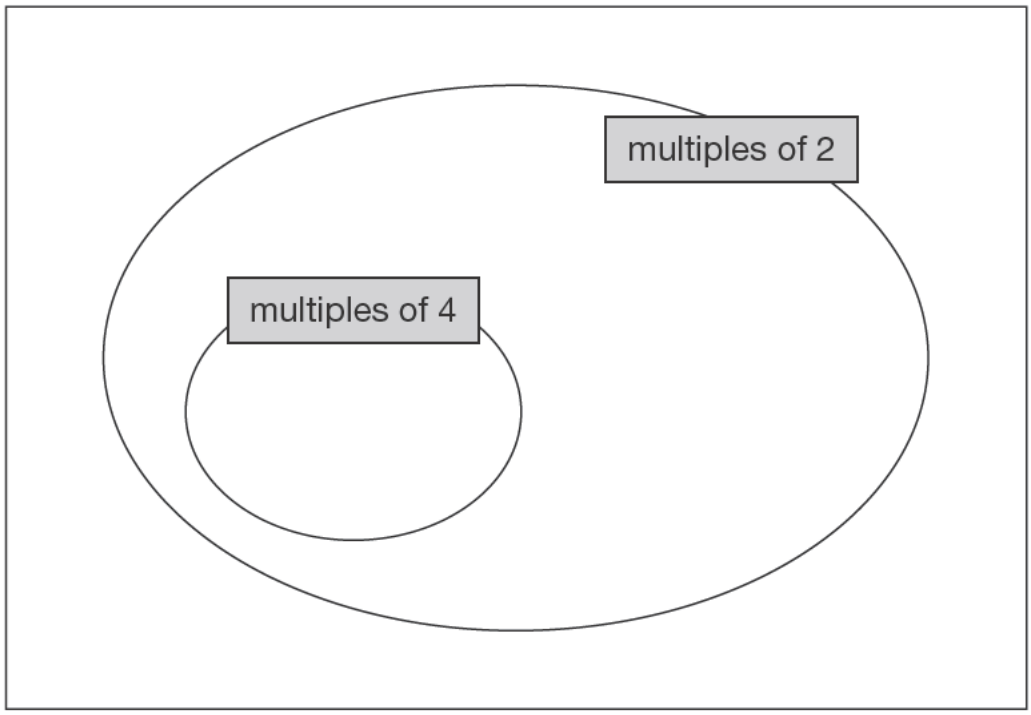
[2 marks]

20 Here is a diagram for sorting numbers.

[2012]

Write each number in its correct place on the diagram.

10 11 12 13



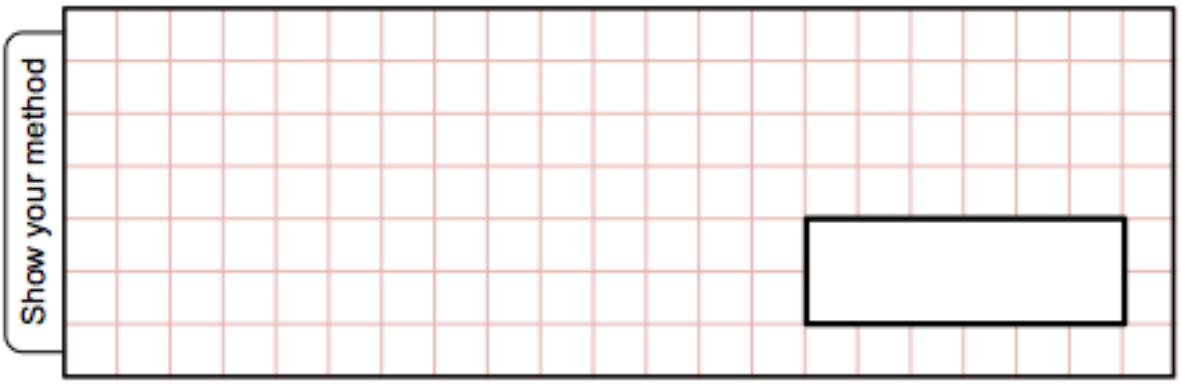
[2 marks]

21 364 is a multiple of 7 but not a multiple of 3

[2013]

384 is a multiple of 3 but not a multiple of 7

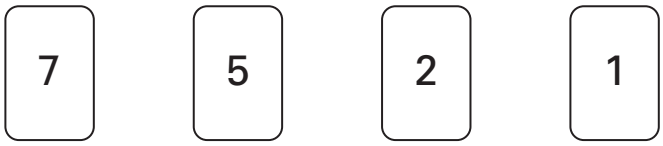
Find a number between 364 and 384 that is **both** a multiple of 7 **and** a multiple of 3



[1 mark]

22 Here are four digit cards.

[2003]



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

The first one is done for you.

an even number — 5 2

a multiple of 9 — ☐ ☐

a square number — ☐ ☐

a factor of 96 — ☐ ☐

[2 marks]

23 Write all the factors of 30 which are **also** factors of 20

[2005]

.....

[1 mark]

24 [2005]

17 multiplied by itself gives a **3-digit** answer.

1	7	×	1	7	=	2	8	9

What is the **smallest** 2-digit number that can be multiplied by itself to give a **4-digit** answer?

		×			=				

[2 marks]

25 [2017]

A **square** number and a **prime** number have a total of 22

What are the two numbers?

	+		= 22
square number		prime number	

[1 mark]

26 [2009]

Lara chooses a **square number**.

She rounds it to the nearest hundred.

Her answer is 200

Write **all** the possible square numbers Lara could have chosen.

_____

[1 mark]

27 Here are some number cards.

[2011]

9	10	11	12	13	14	15	16	17

Joe picks two **even** numbers.
Dev picks two **odd** numbers.

Joe gives one of his cards to Dev.
Dev gives one of his cards to Joe.

Joe says,

'Now my cards are both square numbers'.

Dev says,

'Now my cards are both multiples of 5'.

What numbers did they each start with?

Joe started with ☐ and ☐

Dev started with ☐ and ☐

[2 marks]

28 Circle **all** the cube numbers.

[New]

5 8 16 25 27 64

[1 mark]

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

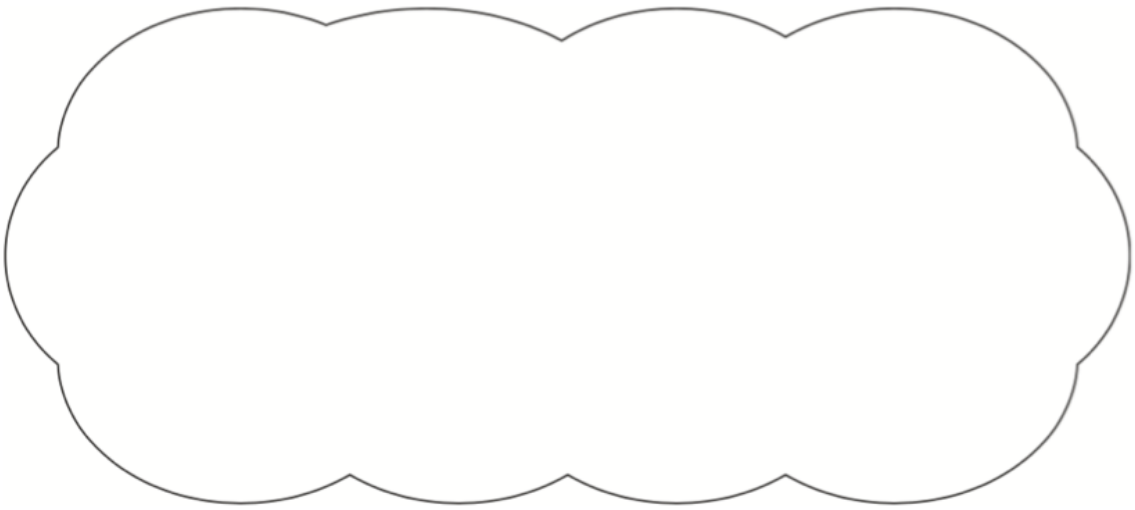
[2006]

	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**.

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

Explain why.



[2 marks]

30 This four digit number is a **square number**.

[2001]

Write in the missing digits.

[1 mark]

31 Write **one** number which fits **all three** of these statements.

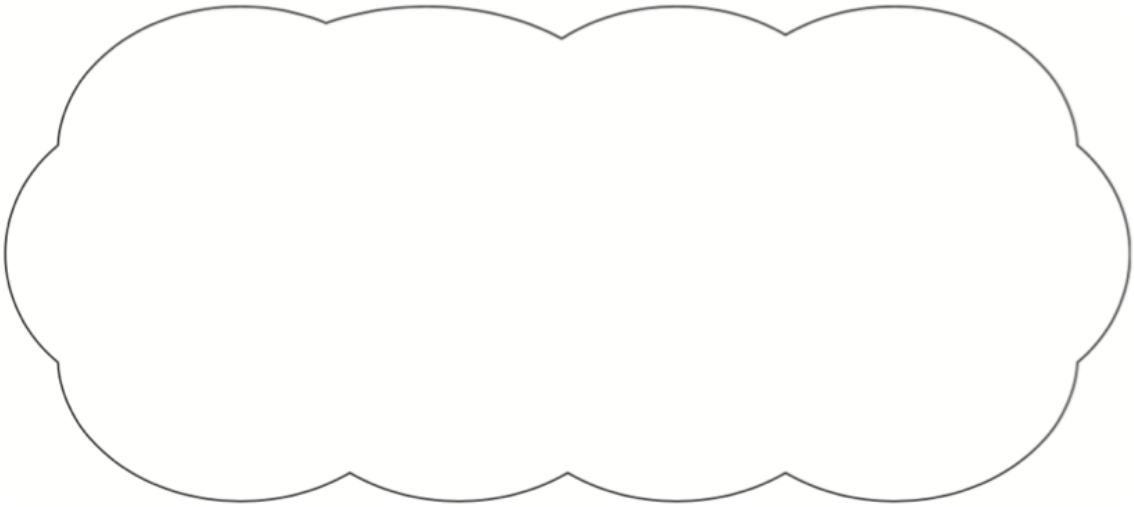
[2007]

It is a multiple of 4

It is a multiple of 6

It ends in '8'

Explain why a number which ends in '3' **cannot** be a multiple of 4



[2 marks]

32 Find the multiple of 45 that is closest to 8000

[2008]

Show your method

[1 mark]

33 John says,

'Every multiple of 5 ends in 5'

Is he correct?
Circle Yes or No.

Yes / No

Explain how you know.

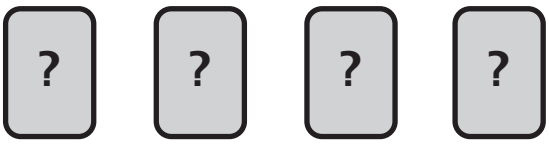
[1 mark]

34

[2003]

Debbie has a pack of cards numbered from 1 to 20

She picks four different number cards.

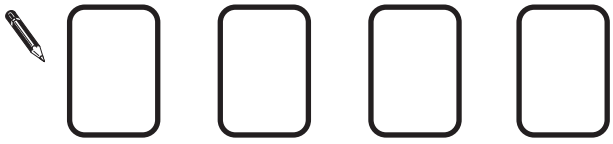


Exactly three of the four numbers are multiples of 5

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]

35

[2001]

P stands for a **multiple of 3**

Q stands for a different **multiple of 3**

Tick (✓) each statement according to whether it is **always true**, **sometimes true** or **never true**.

	always true	**sometimes true**	**never true**
The **sum** of P and Q is a **multiple of 6**			
The **difference** between P and Q is a **multiple of 3**			
The **product** of P and Q is a **multiple of 9**			

[2 marks]