Year 5 Multiplication and Division

Q1.

The numbers in this sequence increase by 10 each time.

<div align="center">

3   13   23   …
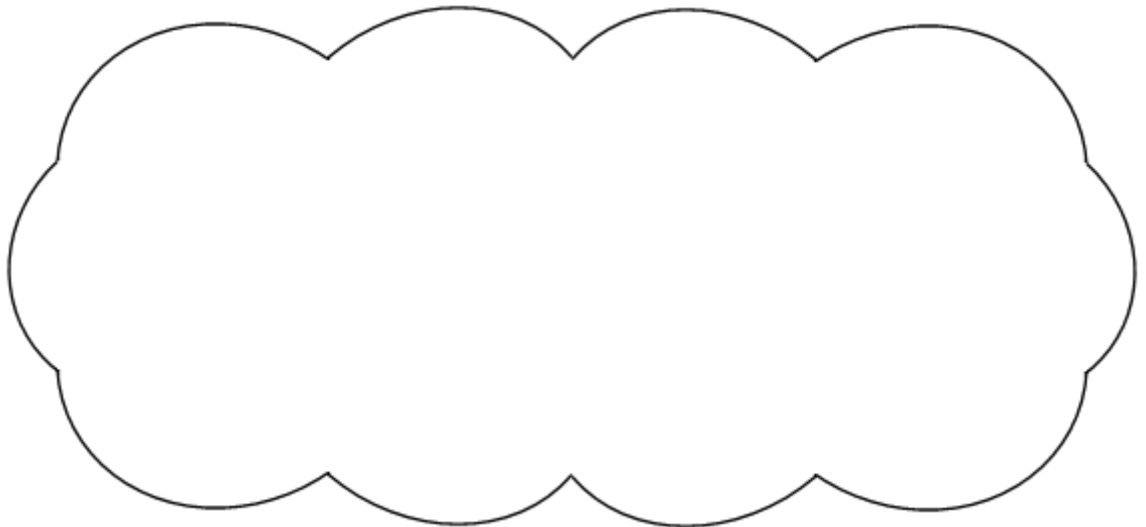
</div>

The sequence continues in the same way.

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

<table>
<tr><td>

 </td><td>and</td><td>

 </td></tr>
</table>

1 mark

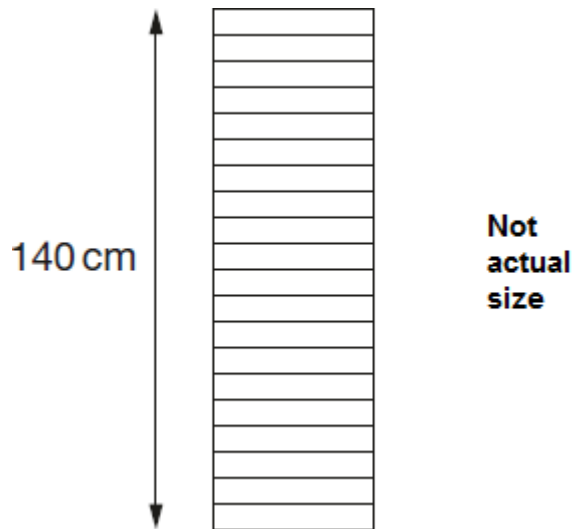Explain why it is **not** possible to find **three** numbers from the sequence that add to make a total of **96**

1 mark

Q2.

Fill in the three missing whole numbers in this calculation.

Each number is less than 10

$$\boxed{} \times \boxed{} \times \boxed{} = 105$$

1 mark

Q3.

The factors of 11 sum to 12

Write the other number whose factors sum to 12

$$\boxed{}$$

1 mark

Q4.

Lara had some money.

She spent £1.25 on a drink.

She spent £1.60 on a sandwich.

She has **three-quarters** of her money left.

How much money did Lara have to **start with**?

Show your method

£

2 marks

Q5.

A stack of 20 identical boxes is 140 cm tall.

140 cm

Not actual size

Stefan takes **three** boxes off the top.

How tall is the stack now?
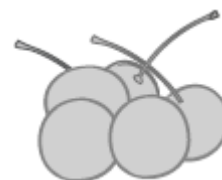
Show your method

cm

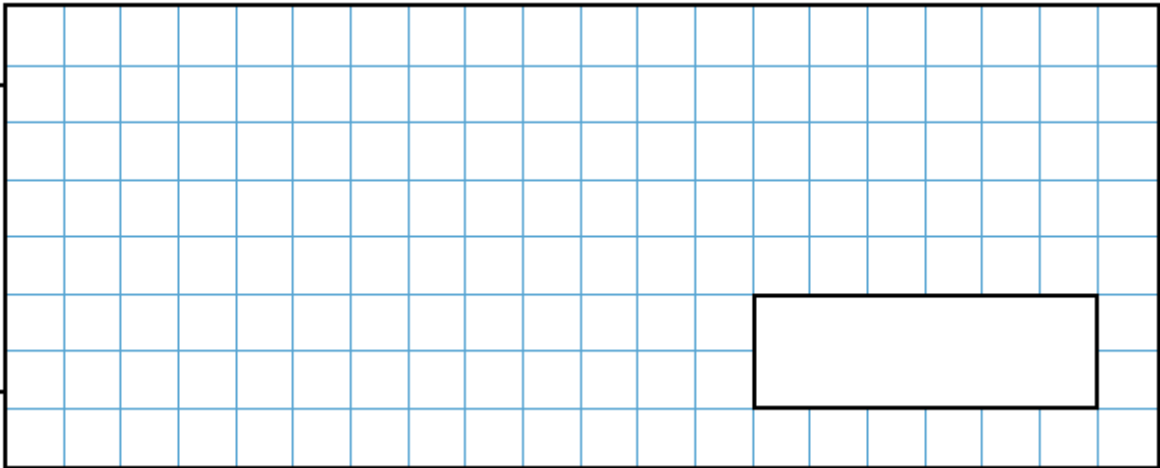2 marks

Q6.

Seb had some cherries.

Every day he ate 10 cherries and gave 5 away.

After he gave the last 5 cherries away, he had eaten 40 cherries altogether.

How many cherries did Seb have at the start?

Show
your
method

2 marks

Q7.

A spoonful is **5ml.**

How many spoonfuls can you get from this bottle?

1 mark

Q8.

Here are the ingredients for chocolate ice cream.

cream	400 ml
milk	500 ml
egg yolks	4
chocolate	120 g
sugar	100 g

Stefan has only 300 ml of cream to make chocolate ice cream.

How much **chocolate** should he use?

Show your method

_____ g

2 marks

Q9.

Large pizzas cost £8.50 each.

Small pizzas cost £6.75 each.

Five children together buy one large pizza and three small pizzas.

They share the cost equally.

How much does each child pay?

£

2 marks

Q10.

Lara chooses a number less than 100

She divides it by 3 and then subtracts 11

She then divides this result by 2

Her answer is 10.5

What was the number she started with?

Show
your
method

2 marks

Q11.

Amir says,

'All numbers that end in a 4 are multiples of 4'.

Is he correct?

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

Yes / No

Explain how you know.

1 mark

Q12.

Chris saves **50p** coins.

He has saved **45** of them.

How much money has Chris saved?

Michelle has saved **£8.40** in **20p** coins.

How many **20p coins** does Michelle have?

Show your method

2 mark

Q13.

In a country dance there are **3 boys** and **2 girls** in every line.

42 boys take part in the dance.

How many **girls** take part?

Show
your
method

2 marks

Q14.

Olivia buys three packets of nuts.

She pays with a **£2 coin**.

This is her change.

What is the cost of **one** packet of nuts?

Show
your
method

2 marks

Q15.

A gardener plants tulip bulbs in a flower bed.

She plants 3 red bulbs for every 4 white bulbs.

She plants 60 red bulbs.

How many **white** bulbs does she plant?

Show your method

2 marks

Q16.

A bag of 5 lemons costs £1

A bag of 4 oranges costs £1.80

How much **more** does one orange cost than one lemon?

Show
your
method

2 marks

Q17.

Lara chooses a number less than 20

She divides it by 2 and then adds 6

She then divides this result by 3

Her answer is 4.5

What was the number she started with?

Show
your
method

2 marks

Q18.

Write what the **three** missing digits could be in this calculation.

☐☐ × ☐ = 3 7 8

Q19.

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

Q20.
A shop sells jars of honey and honey dippers.
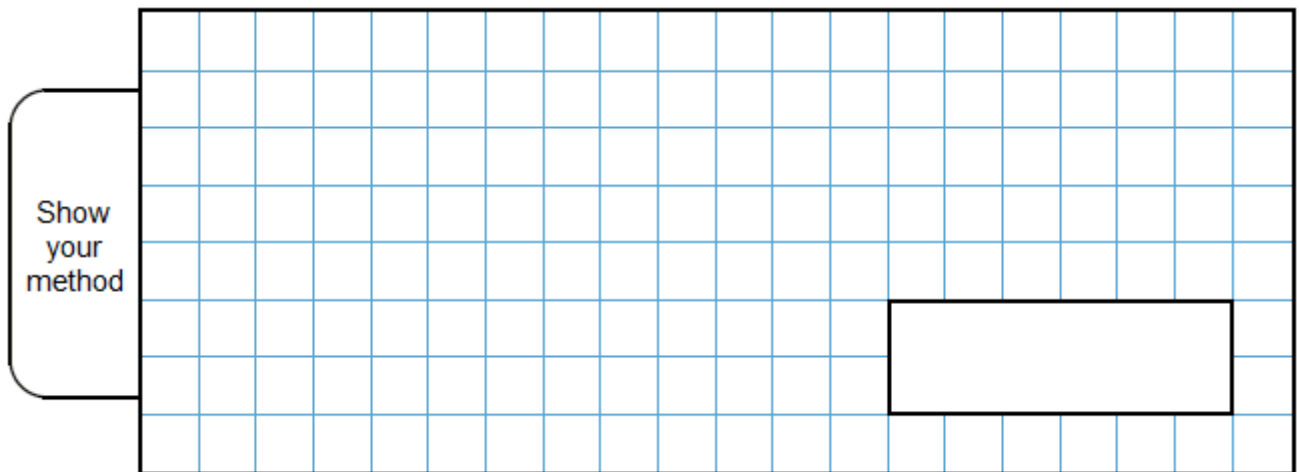
Chen bought **three** jars of honey and a dipper.

The total cost was £5.40

The dipper cost 75p.

Page 12

How much did each jar of honey cost?

Show
your
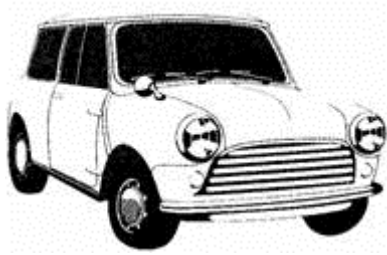method

2 marks

Q21.
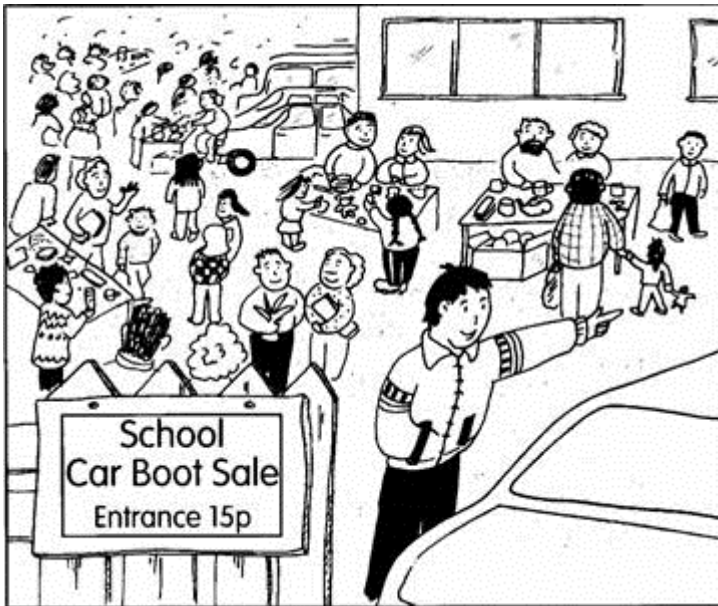
102 People came to the sale and paid 15p each to go in.

(a) How much money was collected at the entrance?

£

1 mark

Each car had to pay £7 to be at the sale.

The school collected £399 from the cars.

(b)   How many cars were there?

Q22.
Write the missing numbers.

```
      ☐ 3  1  7
  ×         3 ☐
  ──────────────
  1  1  5  8  5
  6  9  5  1  0
  ──────────────
  8  1  0  9  5
```

2 marks

Q23.
This is what it costs to visit a castle.

Allington Castle
Cost per person

Adults	£2.45
Children (11 and over)	£1.30
Children (under 11)	95p

Helen is 10 years 9 months old.

How much will it cost Helen to visit?

1 mark

On one day the number of visitors was

Adults	4
Children (11 and over)	**16**
Children (under 11)	**12**

Here is a graph to show the number of visitors.

Complete the scale for the axis called "Number of Visitors".
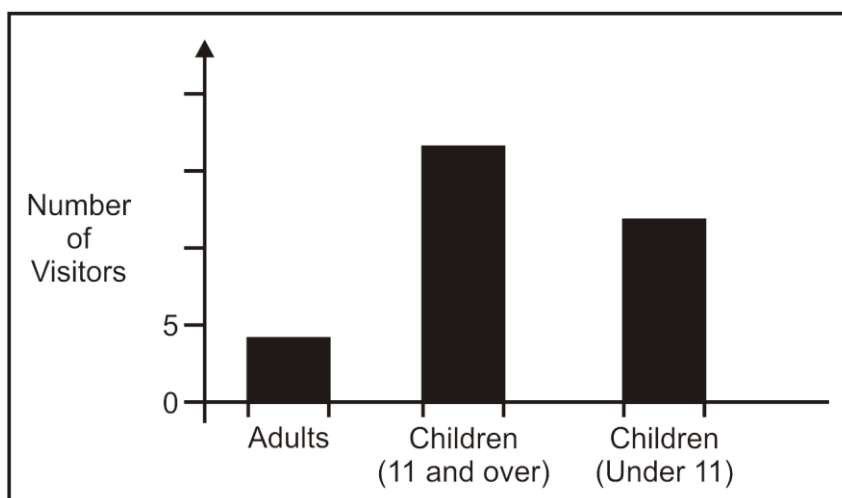
1 mark

How much will it cost for **18 children** (under 11) to visit the castle?

You **must** show your working.

Show
your
method

1 mark

Q24.

Car Boot Sale

Entrance Fee

Adults   50p
Children   30p

100 adults and **80** children pay to go in.

How much money do they pay altogether?

Show your method

£
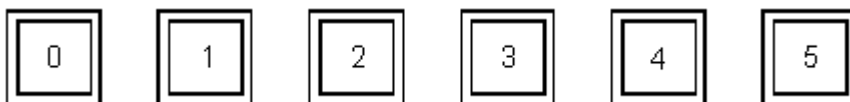
2 marks

Q25.

Write in the missing number.

3400 ÷ ☐ = 100

1 mark

Q26.

Cards
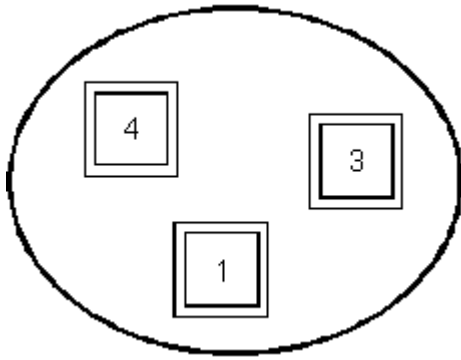
Here are some number cards:

| 0 | 1 | 2 | 3 | 4 | 5 |

Joan picked these three cards:

She made the number **314** with her cards.

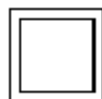(a)   Make a **smaller** number with Joan's three cards.

_____

1 mark

(b)   Make the **biggest** number you can with Joan's three cards.

_____

1 mark

(c)   Joan made the number 314 with her three cards.
       Which extra card should she pick to make her number **10 times** as big?

1 mark

       What number is **10 times** as big as 314?

_____

1 mark

(d)   Andy has these cards:

He made the number 42.5 with four of his cards.
Use some of Andy's cards to show the number **10 times** as big as 42.5

_____

<div align="right">1 mark</div>

Use some of Andy's cards to show the number **100 times** as big as 42.5

_____

<div align="right">1 mark</div>

Q27.

$$\boxed{} \quad \times \quad 10 \quad = \quad 350.5$$

$$460 \quad \div \quad \boxed{} \quad = \quad 4.6$$

$$2.3 \quad \times \quad \boxed{} \quad = \quad 2{,}300$$

<div align="right">2 marks</div>

Q28.
Complete these calculations.

$$15 \quad \times \quad 100 \quad = \quad \boxed{}$$

$$\boxed{} \quad \times \quad 10 \quad = \quad 1500$$

$$\boxed{} \div \quad 100 \quad = \quad 150$$

$$150 \quad \div \quad 10 \quad = \quad \boxed{}$$

2 marks

Q29.

Here are five number cards.

0.47	10	100	1000	4.07

Use **four** of the cards to complete these calculations.

$$47 \quad \div \quad \boxed{} \quad = \quad \boxed{}$$

$$\boxed{} \quad \times \quad \boxed{} \quad = \quad 40.7$$

1 mark

Q30.

Liam thinks of a number.
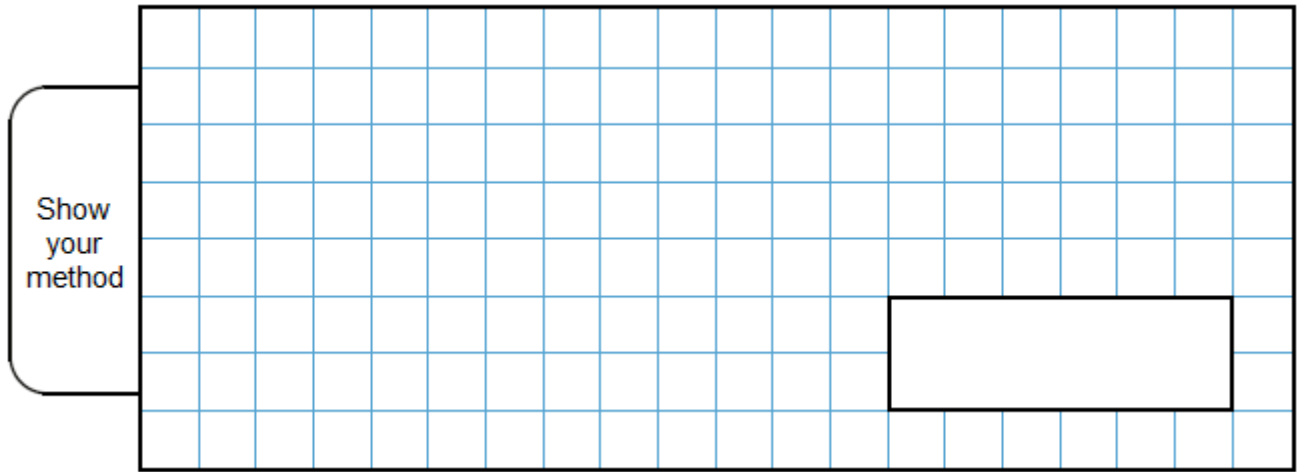
He divides it by 9 and then adds 25 to the result.

Page 20

His answer is 36

What number did Liam start with?

Show
your
method

2 marks
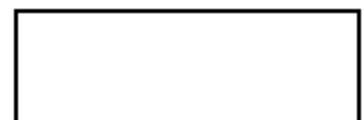
Q31.
Josh thinks of a number.

He adds 4

He multiplies his result by 3

Then he takes away 9

His final answer is 90

What number did Josh start with?

1 mark

Q32.

The numbers in this sequence increase by 3 each time.

$$3 \qquad 6 \qquad 9 \qquad 12 \qquad . . .$$

The numbers in this sequence increase by 5 each time.

$$5 \qquad 10 \qquad 15 \qquad 20 \qquad . . .$$

Both sequences continue.

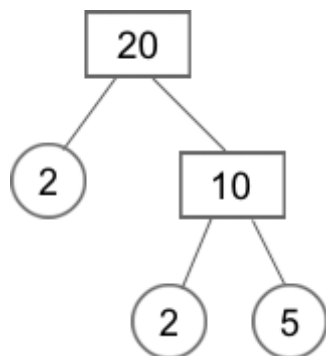Write a number **greater than 100** which will be in **both** sequences.

Show
your
method

2 marks

Q33.

Any number can be written as a product of its prime factors,
for example:

$$20 = 2 \times 2 \times 5$$

20

2   10

2   5

Write 90 as a product of its prime factors.

$90 = $ _____

1 mark

Q34.

Put these values in order with the smallest first

5^2 3^2 3^3 2^3

smallest   largest

1 mark

Q35.

Write a cross on the numbers that are <u>not</u> square numbers.

1^2 2^3 3^3 4^3 5^3

1 mark

Q36.

Circle the **two** prime numbers.

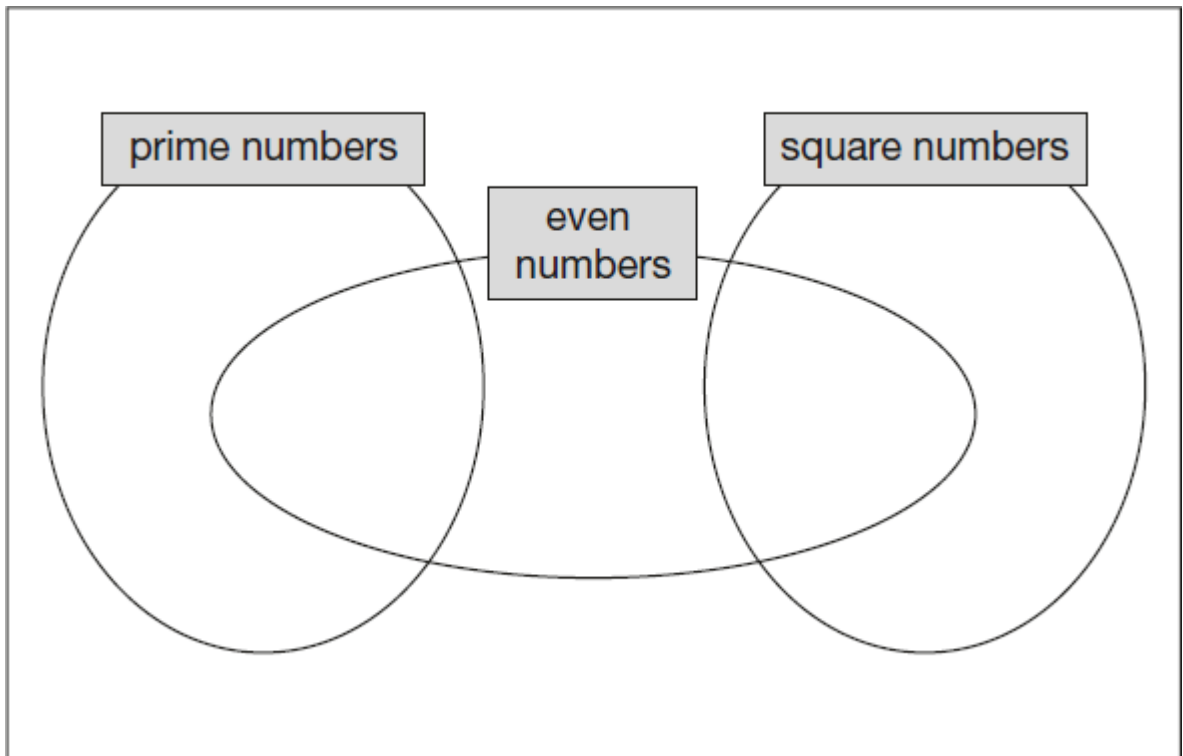29   39   49   59   69

1 mark

Q37.

Write each number in its correct place on the diagram.

16   17   18   19

2 marks

Q38.

Explain why **16** is a **square number.**

1 mark

Q39.

Emma thinks of two **prime** numbers.

She adds the two numbers together.

Her answer is 36

Write **all** the possible pairs of prime numbers Emma could be thinking of.

_____

2 marks

Q40.

Find two **square numbers** that total 45

$$\boxed{} + \boxed{} = 45$$

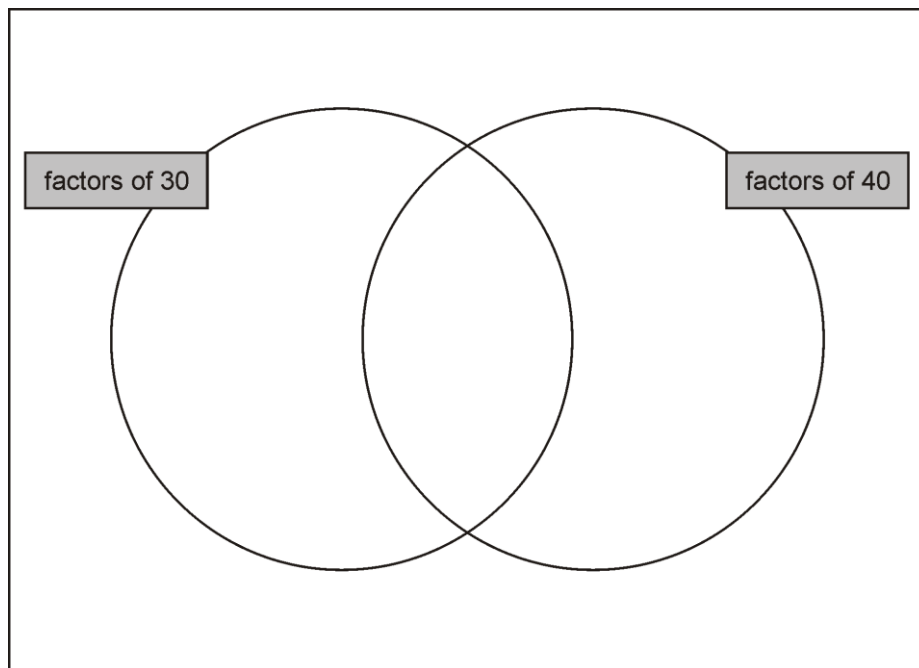1 mark

Q41.

Write these numbers in the correct places on the diagram.

5   6   7   8

2 marks