

Numbers – GCSE Mathematics Paper 3

1. No.2

Circle the number that is a factor of 10

[1 mark]

7

6

5

4

2. No.5(b)

(b) Times for the three parts of a journey are

- 20 minutes
- 40 minutes
- 1 hour 30 minutes.

Work out the **total** time for the journey.

Give your answer in hours.

[2 marks]

Answer _____ hours

3. No.15

(a) Work out the multiple of 60 that is closest to 400

[2 marks]

Answer _____

(b) Work out the highest common factor (HCF) of 12 and 18

[2 marks]

Answer _____

4. No.17

(a) Calculate $2^7 \times 5^2$

[1 mark]

Answer _____

(b) Calculate $\sqrt[4]{20\,736}$

[1 mark]

Answer _____

5. No.28

Tom and Adil are the two runners in a 200-metre race.

Tom completes the race in 24 seconds.

Adil completes the race at an average speed of 28.8 kilometres per hour.

Who wins the race?

You **must** show your working.

[3 marks]

Answer _____

As a product of prime factors,

$$Q = 2^3 \times 3 \times a^3$$

$$R = 2^4 \times 3^2 \times a^2$$

- (a) The highest common factor (HCF) of Q and R is 4056

Work out the value of a .

[2 marks]

$$a = \underline{\hspace{2cm}}$$

- (b) Work out the lowest common multiple (LCM) of Q and R .

[2 marks]

Answer _____

7. No.2

Circle the largest number.

[1 mark]

4.5061

4.5

4.516

4.56

8. No.4

Circle the value of 10^6

[1 mark]

one hundred

one thousand

one million

one billion

9. No.5

Complete the bank statement.

[3 marks]

Date	Description	Credit (£)	Debit (£)	Balance (£)
01/05/2020	Starting balance			670.43
08/05/2020	Salary	2156.75		_____
11/05/2020	Water bill		48.97	_____
18/05/2020	Mortgage payment		_____	1642.49

10. No.6

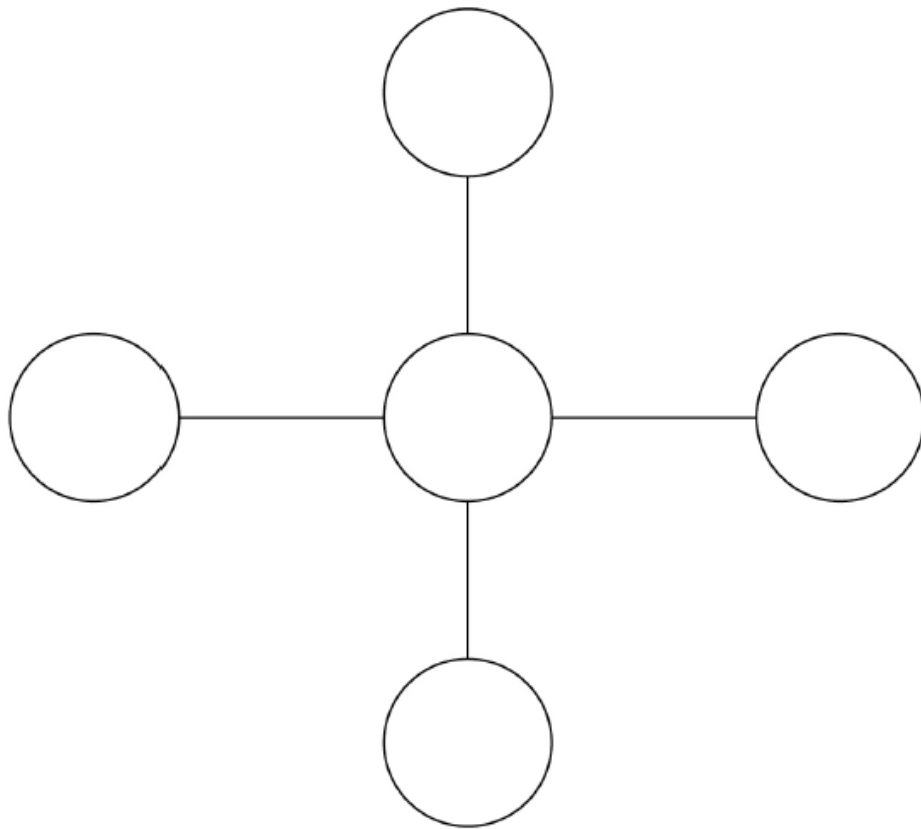
Put the numbers 1, 2, 3, 4 and 6 into the circles so that

each line of three numbers multiplies to 12

the total of the vertical line is one more than the total of the horizontal line.

Use each number once.

[2 marks]



11. No.7

Point A is 217 metres **above** sea level.

Point B is 145 metres **lower** than point A.

Point C is 59 metres **below** sea level.

How much **higher** is point B than point C?

[3 marks]

Answer _____ metres

Diagram showing four separate boxes containing the numbers 2, 5, 6, and 8.

- [1 mark]

$$\boxed{} + \boxed{} - \boxed{} - \boxed{} = 1$$

[2 marks]

First card	Second card
2	5
5	2

13. No.22

The number of people living in a town is 47 000 to the nearest 1000

Which **one** of these is a possible number of people living in the town?

Circle your answer.

[1 mark]

46 000

46 500

47 500

48 000

14. No.26

At a country park there is a house, a museum and a garden.

The table shows the prices per person to visit the park.

	Price per person
Garden only	Free
House and museum	£12.50
House only	£8
Museum only	£7

One day, 480 people visit the park.

67 visit the garden **only**.

40% visit the house **and** the museum.

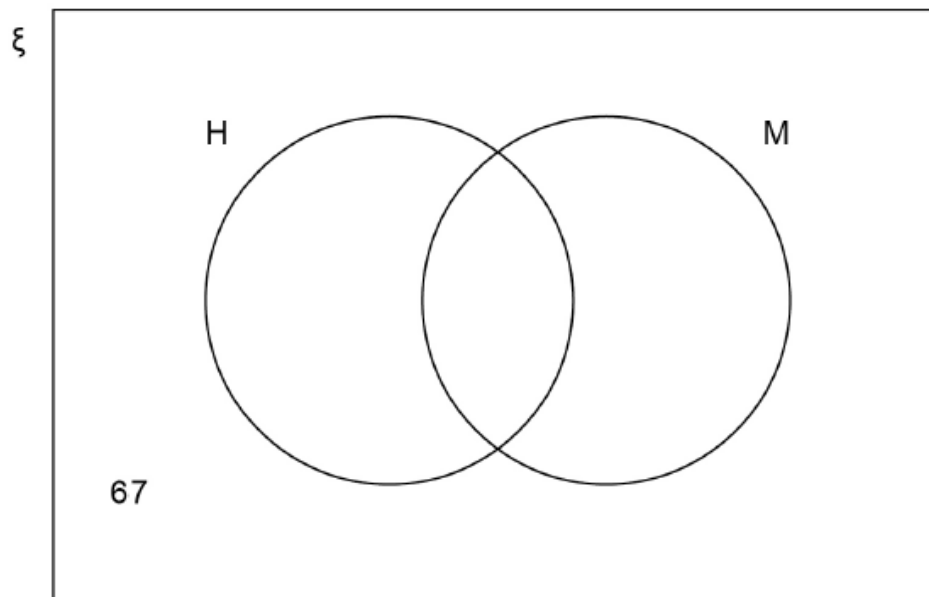
$\frac{3}{8}$ visit the house **only**.

The rest visit the museum **only**.

In total, how much do the 480 people pay to visit the park?

You may use the Venn diagram to help you.

[5 marks]



Answer £ _____

15. No.27

The heel of a shoe exerts a pressure of 198 pounds per square inch.

Convert this pressure into kilograms per square centimetre.

Use

1 pound = 0.45 kilograms

1 square inch = 6.25 square centimetres

[3 marks]

Answer _____ kg/cm²

16. No.6

At a country park there is a house, a museum and a garden.

The table shows the prices per person to visit the park.

	Price per person
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House only	£8
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One day, 480 people visit the park.

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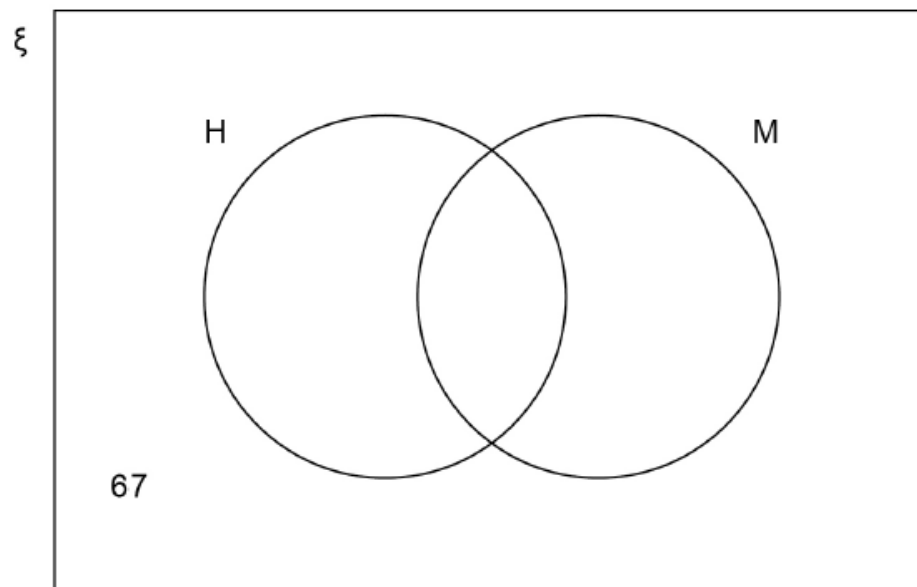
$\frac{3}{8}$ visit the house **only**.

The rest visit the museum **only**.

In total, how much do the 480 people pay to visit the park?

You may use the Venn diagram to help you.

[5 marks]



Answer £ _____

17. No.20

$$\frac{a}{b} = 3c$$

$$\frac{b}{c} = 2$$

Work out the value of a when $c = 8$ **[3 marks]**

Answer _____

18. No.28 $a = 4.72$ to 3 significant figures. $b = 158$ to 3 significant figures.Work out the upper bound of $\frac{a}{b}$ You **must** show your working.**[3 marks]**

Answer _____