GCSE Mathematics
Paper 2 (Calculator)
Foundation Tier

Paper Reference: **GFP2.2**

Time: 1 hour 30 minutes
Total Marks: 80

This is a practice paper containing exam-style questions designed to support student preparation. It is not an official past paper or publication from any examination board.

Answer ALL questions.

1. Write 0.73 as a percentage.

.....%

(Total for Question 1 is 1 mark)

2. Write down the value of 3^4

.....

(Total for Question 2 is 1 mark)

3. Here are some numbers:

15 23 8 12 19 6

Write down the median.

.....

(Total for Question 3 is 1 mark)

4. Change 3500 millimetres to metres.

..... metres

(Total for Question 4 is 1 mark)

5. Here are four digit cards:

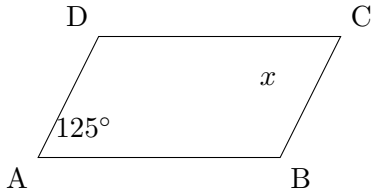
6	2	9	3

Use each card once to make the smallest possible 4-digit even number.

.....

(Total for Question 5 is 1 mark)

6. The diagram shows a parallelogram ABCD.



(a) Write down the size of angle x.

$x =$ ..... °

(1)
(b) Give a reason for your answer.

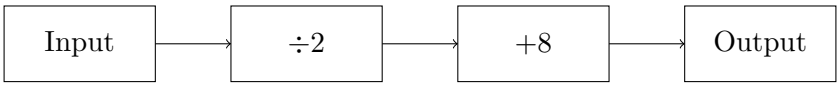
.....

(1)
(Total for Question 6 is 2 marks)

7. Jack buys 4 bottles of water at 85p each and 3 sandwiches at £3.20 each.
Work out the total cost.

£.....
(Total for Question 7 is 3 marks)

8. Here is a number machine:



(a) Work out the output when the input is 16.

.....

(2)
(b) Work out the input when the output is 15.

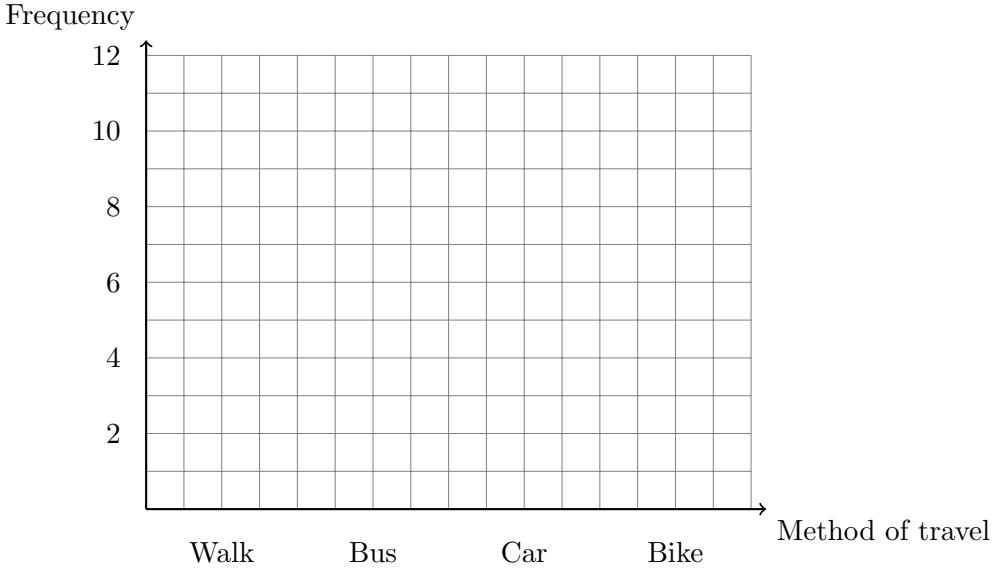
.....

(2)
(Total for Question 8 is 4 marks)

9. The table shows how 30 students travel to school.

Method of travel	Frequency
Walk	12
Bus	8
Car	7
Bike	3

Draw a bar chart for this information.

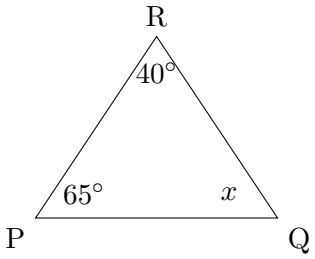


(Total for Question 9 is 3 marks)

10. A mobile phone costs £320.
In a sale, the price is reduced by 30%.
Work out the sale price.

£.....
(Total for Question 10 is 3 marks)

11. The diagram shows triangle PQR.



Work out the value of x.

$x =$ ..... °
(Total for Question 11 is 2 marks)

12. (a) Work out $\frac{2}{5} \times 150$

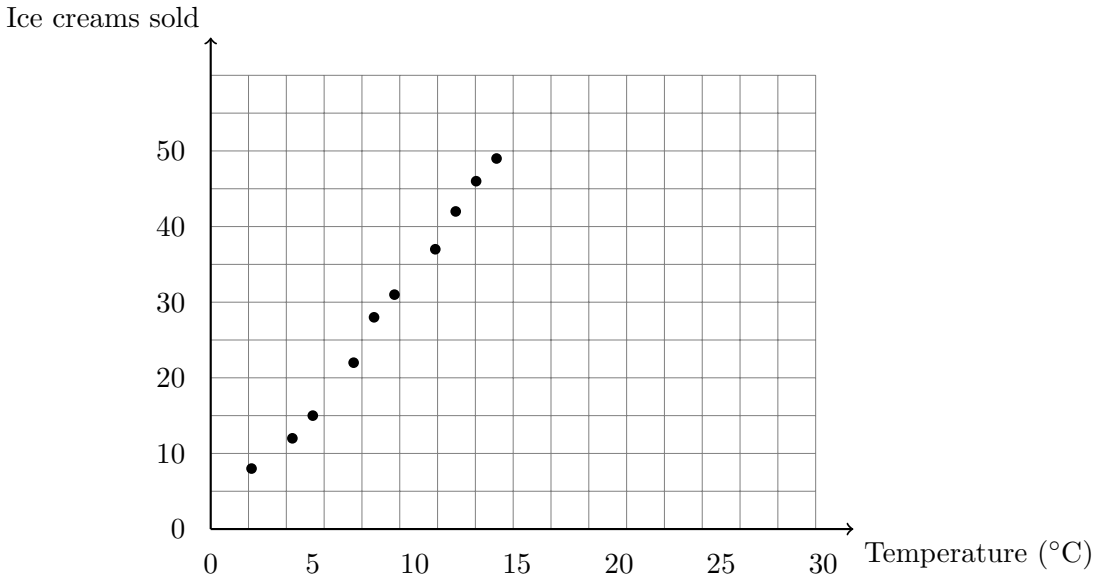
.....

(2)
(b) Work out $3\frac{1}{3} - 1\frac{3}{4}$

.....

(3)
(Total for Question 12 is 5 marks)

13. The scatter graph shows information about the temperature and number of ice creams sold on 10 different days.



(a) Describe the relationship between temperature and ice cream sales.

.....

(1)

(b) Draw a line of best fit on the scatter graph.

(1)

(c) Use your line of best fit to estimate the number of ice creams sold when the temperature is 22°C.

.....

(1)

(Total for Question 13 is 3 marks)

14. (a) Simplify $7a + 2b - 3a - b$

.....

(2)

(b) Solve $3x + 5 = 26$

$x =$.....

(2)

(Total for Question 14 is 4 marks)

15. Here are the heights, in cm, of 15 people:
165, 172, 158, 169, 175, 162, 170, 163, 167, 171, 160, 174, 166, 168, 173
(a) Complete the frequency table.

Height (cm)	Frequency
155-159	
160-164	
165-169	
170-174	
175-179	

(2)
(b) Write down the modal class.

.....

(1)
(Total for Question 15 is 3 marks)

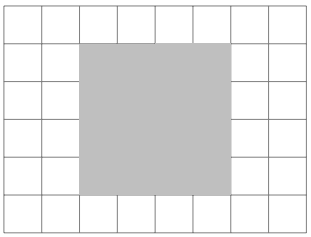
16. To make concrete, sand, cement and gravel are mixed in the ratio 2:1:3.
How much sand is needed to make 18 kg of concrete?

.....kg
(Total for Question 16 is 3 marks)

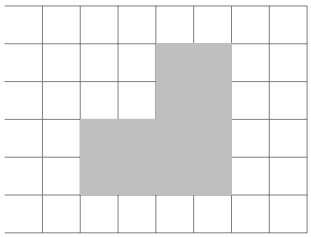
17. Work out 15% of 240

£.....
(Total for Question 17 is 2 marks)

18. The diagram shows the plan and side elevation of a 3D shape.

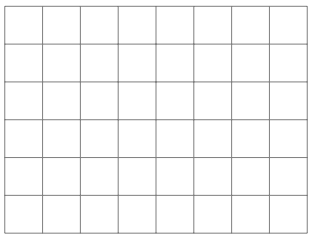


Plan



Side elevation

On the grid below, draw the front elevation of the shape.



(Total for Question 18 is 2 marks)

19. The first four terms of a sequence are:

4, 9, 14, 19, ...

(a) Write down the next term in the sequence.

.....

(1)

(b) Write down the nth term of the sequence.

.....

(2)

(Total for Question 19 is 3 marks)

20. A spinner has 4 equal sections coloured red, blue, yellow and green.
The spinner is spun twice.
(a) Complete the table to show all the possible outcomes.

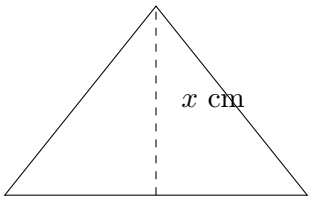
	Red	Blue	Yellow	Green
Red	(R,R)			
Blue				
Yellow				
Green				

(2)
(b) Find the probability that both spins give the same colour.

.....

(2)
(Total for Question 20 is 4 marks)

21. The diagram shows a triangle with base $(2x + 3)$ cm and height x cm.



The area of the triangle is 35 cm^2.
(a) Show that $x^2 + \frac{3x}{2} = 35$

(2)
(b) Solve $x^2 + \frac{3x}{2} = 35$ to find the value of x.

$x =$.....
(3)
(Total for Question 21 is 5 marks)

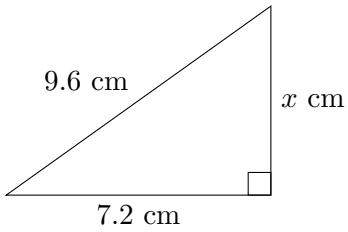
22. The table shows information about the weights of 50 apples.

Weight, w (grams)	Frequency
$100 \leq w < 120$	6
$120 \leq w < 140$	12
$140 \leq w < 160$	18
$160 \leq w < 180$	10
$180 \leq w < 200$	4

Calculate an estimate for the mean weight.

..... grams
(Total for Question 22 is 4 marks)

23. Here is a right-angled triangle.



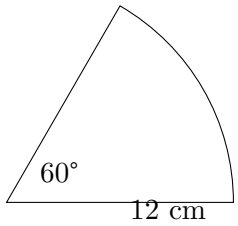
Work out the value of x. Give your answer correct to 1 decimal place.

$x =$ ..... cm
(Total for Question 23 is 3 marks)

24. Lisa invests £3200 at 2.8% compound interest per year.
Work out the value of her investment after 4 years.

£.....
(Total for Question 24 is 3 marks)

25. The diagram shows a sector of a circle with radius 12 cm and angle 60°.



Calculate the area of the sector. Give your answer in terms of π.

..... cm^2
(Total for Question 25 is 3 marks)

26. The number of visitors to a museum increased by 8% each year for 2 years.
At the end of the 2 years, there were 58,320 visitors.
Work out the number of visitors at the start.

.....
(Total for Question 26 is 3 marks)

TOTAL FOR PAPER IS 80 MARKS

Educational mathematics resources:
stepupmaths.co.uk