GCSE Mathematics
Paper 3 (Calculator)
Foundation Tier

Paper Reference: **GFP3.6**

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 37% as a decimal.

.....

(Total for Question 1 is 1 mark)

2. Round 5174 to the nearest thousand.

.....

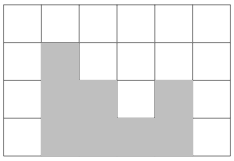
(Total for Question 2 is 1 mark)

3. Write down a number that is greater than -7 but less than -4

.....

(Total for Question 3 is 1 mark)

4. Here is a grid of squares.



What fraction of the grid is shaded?

.....

(Total for Question 4 is 1 mark)

5. Write down the value of the 8 in the number 49.867

.....

(Total for Question 5 is 1 mark)

6. The pictogram shows information about the number of ice creams, sandwiches and drinks sold by Year 9 at a sports day.

Item	Number sold
Ice creams	○○○○ᑦ
Sandwiches	○○○
Drinks	○○ᑦ
Hot dogs	

Key: ○ represents 8 items

26 hot dogs were sold by Year 9.
(a) Use this information to complete the pictogram.

(1)
At the sports day, Year 10 sold a total of 180 items.
(b) Which Year sold most items at the sports day, Year 9 or Year 10?
You must show how you get your answer.

(3)
(Total for Question 6 is 4 marks)

7. Leah is cycling laps of a track.
Each lap of the track is 400m.
Leah has cycled 127 laps of the track.
She wants to cycle a total distance of 55000m.
Calculate how many more laps Leah needs to cycle.

.....

(Total for Question 7 is 3 marks)

8. Here are the first four terms of a number sequence.

83 76 69 62

(a) Explain how to work out the next number of the sequence.

(1)

(b) Work out the difference between the 6th term and the 8th term of the sequence.

.....

(2)

(c) Explain why 29 is not a number in this sequence.

(1)

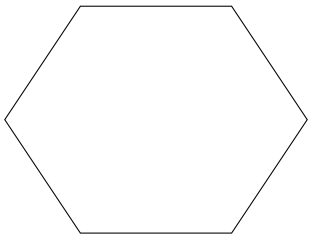
(Total for Question 8 is 4 marks)

9. Paula buys a 18 kilogram bag of bird food.
Paula's birds have 4 meals a day.
She gives her birds 95 grams of bird food for each of these meals.
How many complete weeks will the bag of bird food last?
You must show all your working.

.....

(Total for Question 9 is 5 marks)

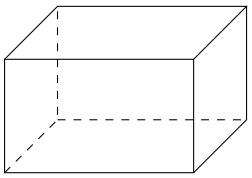
10. Here is a polygon.



(a) Write down the mathematical name of this polygon.

.....

(1)
Here is a prism.



Each edge 6.8cm

Each edge of the prism has a length of 6.8cm.
(b) Work out the total length of the edges of the prism.

.....cm

(2)
(Total for Question 10 is 3 marks)

11. There are only red counters, white counters and blue counters in a bag.
number of red counters : number of white counters : number of blue counters = 3 : 11 : 6
What fraction of the counters in the bag are blue counters?

.....
(Total for Question 11 is 2 marks)

12. A swimming lesson lasted $1\frac{5}{6}$ hours.
The lesson finished at 16:20
At what time did the swimming lesson start?

.....
(Total for Question 12 is 2 marks)

13. (a) Simplify $9k^3 + 7k^3 - 5k^3$

.....

(1)
(b) Simplify $(18p + 12p) \div 5$

.....

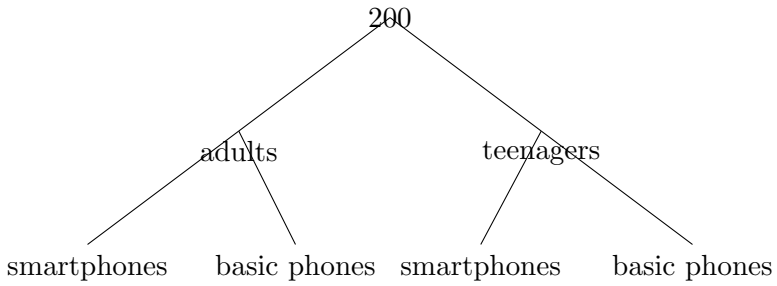
(1)
(Total for Question 13 is 2 marks)

14. Write the following numbers in order of size.
Start with the smallest number.

$\frac{4}{9}$ 0.51 46% $\frac{8}{17}$ 0.485

(Total for Question 14 is 2 marks)

15. A company sold 200 mobile phones in April.
Each of these phones was either a smartphone or a basic phone.
125 of the 200 phones were sold to adults.
The rest of the phones were sold to teenagers.
18 of the 35 basic phones were sold to teenagers.
(a) Use this information to complete the frequency tree.



(3)

One of the phones sold to an adult is chosen at random.
(b) Find the probability that this phone was a smartphone.

.....

(2)
(Total for Question 15 is 5 marks)

16. Solve $\frac{w}{9} + 6 = 13$

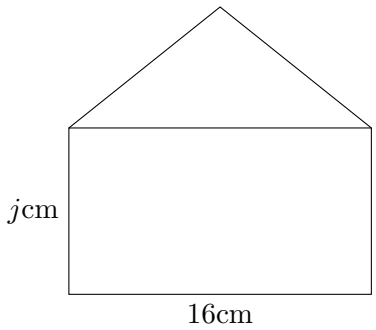
$w =$ .....

(Total for Question 16 is 2 marks)

17. Carlos works 40 hours a week in Spain.
She is paid €528 per week.
Carlos applies for a job in the UK.
The rate of pay is £13.20 per hour.
€1 = £0.86
Carlos thinks the rate of pay in the UK is greater than the rate of pay in Spain.
Is Carlos correct?
You must show how you get your answer.

(Total for Question 17 is 3 marks)

18. Here is a shape made from a rectangle and a triangle.

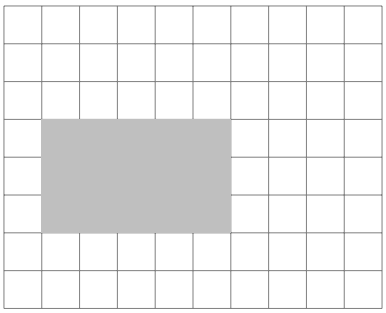


The shape has exactly one line of symmetry. The height of the triangle is 2cm.
The area of the rectangle is 6 times the area of the triangle.
The width of the rectangle is $j$cm.
Work out the value of j.
You must show all your working.

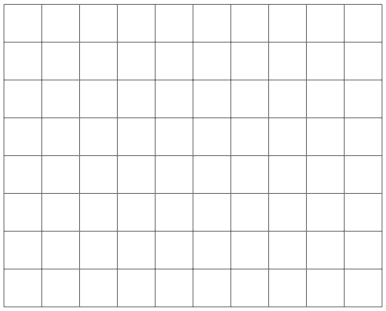
$j =$ .....

(Total for Question 18 is 5 marks)

19. The front elevation of a cuboid is shown on the centimetre grid below.



The volume of the cuboid is 150cm^3
On the grid, draw the plan of the cuboid.



(Total for Question 19 is 3 marks)

20. (a) Write 376000 in standard form.

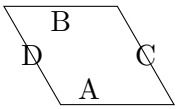
.....

(1)
(b) Write 8.47×10^{-3} as an ordinary number.

.....

(1)
(Total for Question 20 is 2 marks)

21. Here is a biased spinner.



The table shows the probabilities that when the spinner is spun it will land on A, on B, on C and on D.

Letter	A	B	C	D
Probability	0.35	0.18	0.29	0.18

Maria will spin the spinner 250 times.
Work out an estimate for the number of times the spinner will land on A.

.....

(Total for Question 21 is 2 marks)

22. Nina works at a weather station.

The table gives information about the wind speed, W mph, at midday for each of 60 towns in Scotland on Friday.

Wind speed (W mph)	Frequency
$5 < W \leq 10$	4
$10 < W \leq 15$	9
$15 < W \leq 20$	18
$20 < W \leq 25$	23
$25 < W \leq 30$	6

(a) Calculate an estimate for the mean wind speed.

..... mph

(3)

Nina says,

"The median wind speed is 20 mph because 20 is the middle number in the middle group."

(b) Is Nina correct?

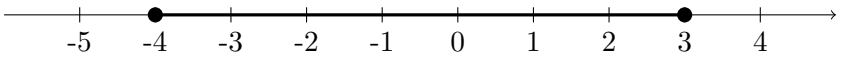
Give a reason for your answer.

(1)

(Total for Question 22 is 4 marks)

23. Oliver is asked to show the inequality $-4 < x \leq 3$ on a number line.

Here is his answer.



(a) Write down two mistakes Oliver has made.

1 .....

2 .....

(2)

(b) Work out the smallest integer that satisfies the inequality

$4y + 9 > 25$

.....

(2)

(Total for Question 23 is 4 marks)

24. Hannah buys packets of balloons and boxes of candles.
There are 24 balloons in each packet.
There are 18 candles in each box.
Hannah buys exactly the same number of balloons and candles.
Work out how many packets of balloons and how many boxes of candles she could have bought.
You must show all your working.

.....packets of balloons
..... boxes of candles
(Total for Question 24 is 3 marks)

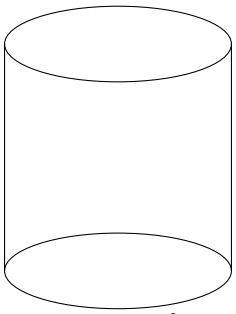
25. A factory orders a large number of components from a supplier.
It would take 24 hours to make all the components using 5 machines.
How many machines are needed to make all the components in 8 hours?

.....
(Total for Question 25 is 2 marks)

26. James travelled by train and by bus.
He travelled 238 miles by train at an average speed of 68 miles per hour.
James then travelled for 3 hours and 45 minutes by bus.
Work out, in hours and minutes, James's total travelling time.

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

27. The diagram shows a solid cylinder placed on a horizontal surface.

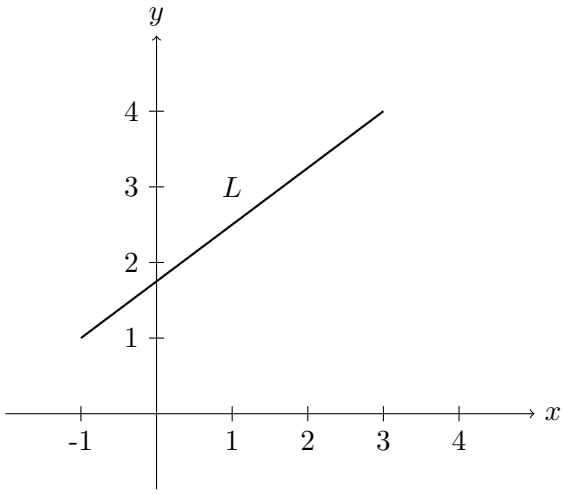


$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

The cylinder has radius 6 cm and height 12 cm.
The cylinder is made from material with density 3.2 g/cm^3.
Work out the mass of the cylinder.
Give your answer correct to the nearest gram.

..... g
(Total for Question 27 is 4 marks)

28. The line L is shown on the grid.



Find an equation for L.

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TOTAL FOR PAPER IS 80 MARKS