GCSE Mathematics
Paper 3 (Calculator)
Foundation Tier

Paper Reference: **GFP3.3**

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

0.38 0.4 0.42 0.365

.....

(Total for Question 1 is 1 mark)

2. Write down the value of the 6 in the number 24675

.....

(Total for Question 2 is 1 mark)

3. Write $\frac{6}{8}$ as a decimal.

.....

(Total for Question 3 is 1 mark)

4. Write 17.8394 correct to the nearest whole number.

.....

(Total for Question 4 is 1 mark)

5. Here is a list of numbers.

6 14 21 28 35

From the list, write down a multiple of 4

. . . . . .

(Total for Question 5 is 1 mark)

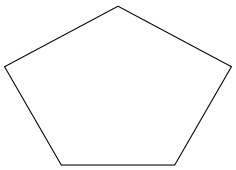
6. 192 bars of soap were sold from a shop.
$\frac{1}{4}$ of these bars of soap were large bars.
The rest of the bars of soap were small bars.
All the large bars of soap were sold for £3 each.
All the small bars of soap were sold for 75p each.
Work out the total amount of money for which the 192 bars of soap were sold.
Give your answer in pounds.

£.....
(Total for Question 6 is 3 marks)

7. Kirsty buys a 15 kilogram bag of cat food.
Kirsty's cat has 2 meals a day.
She gives her cat 125 grams of cat food for each of these meals.
How many complete weeks will the bag of cat food last?
You must show all your working.

.....
(Total for Question 7 is 5 marks)

8. Here is a polygon.

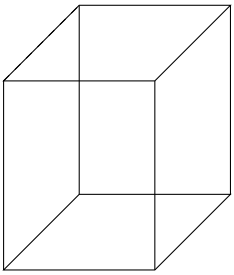


(a) Write down the mathematical name of this polygon.

.....

(1)

Here is a prism.



Each edge 9.5cm

Each edge of the prism has a length of 9.5cm.

(b) Work out the total length of the edges of the prism.

.....cm

(2)

(Total for Question 8 is 3 marks)

9. There are only red counters, blue counters and green counters in a bag.

number of red counters : number of blue counters : number of green counters = 4 : 12 : 9

What fraction of the counters in the bag are green counters?

.....

(Total for Question 9 is 2 marks)

10. A music lesson lasted $2\frac{3}{4}$ hours.
The lesson finished at 15:45
At what time did the music lesson start?

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

11. (a) Simplify $6m^3 + 11m^3 - 4m^3$

.....

(1)
(b) Simplify $(15z + 9z) \div 6$

.....

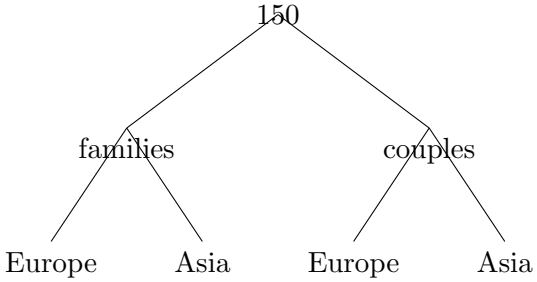
(1)
(Total for Question 11 is 2 marks)

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

$\frac{5}{8}$ 0.68 63% $\frac{7}{11}$ 0.615

(Total for Question 12 is 2 marks)

13. A travel company sold 150 holidays in March.
Each of these holidays was in Europe or was in Asia.
96 of the 150 holidays were sold to families.
The rest of the holidays were sold to couples.
15 of the 24 holidays in Asia were sold to couples.
(a) Use this information to complete the frequency tree.



(3)

One of the holidays sold to a family is chosen at random.
(b) Find the probability that this holiday was not in Asia.

.....

(2)
(Total for Question 13 is 5 marks)

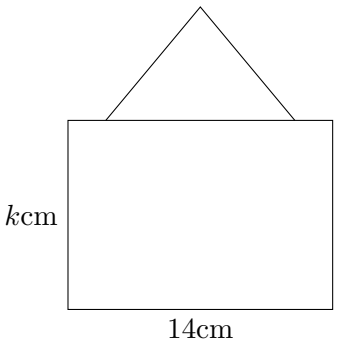
14. Solve $\frac{y}{8} + 5 = 11$

$y =$ .....
(Total for Question 14 is 2 marks)

15. Emma works 35 hours a week in Germany.
She is paid €462 per week.
Emma applies for a job in the UK.
The rate of pay is £11.80 per hour.
€1 = £0.89
Emma thinks the rate of pay in the UK is greater than the rate of pay in Germany.
Is Emma correct?
You must show how you get your answer.

(Total for Question 15 is 3 marks)

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

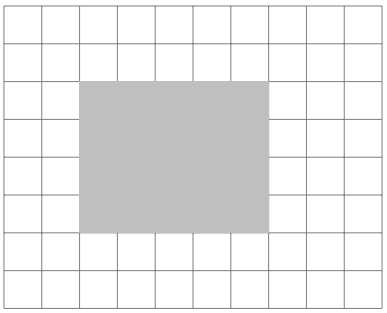


The area of the triangle is 22.4 cm^2.
The area of the rectangle is 2.5 times the area of the triangle.
The width of the rectangle is $k$cm.
Work out the value of k.
You must show all your working.

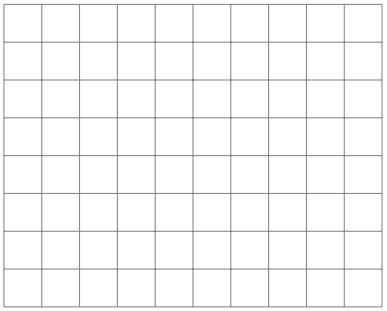
$k =$ .....

(Total for Question 16 is 5 marks)

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



The volume of the cuboid is 200cm^3
On the grid, draw the plan of the cuboid.



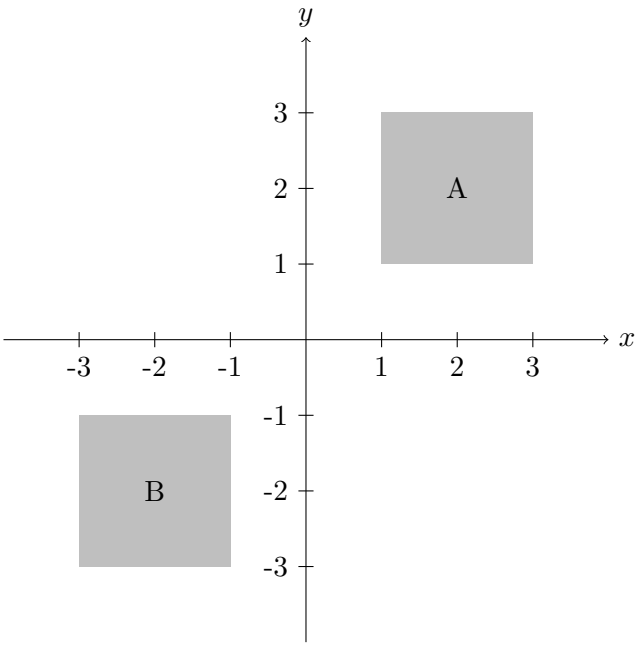
(Total for Question 17 is 3 marks)

18. There are only red beads and blue beads in a bag.
number of red beads : number of blue beads = 3 : 8
There are 42 red beads in the bag.
Work out the total number of beads in the bag.

.....

(Total for Question 18 is 2 marks)

19.



Describe fully the single transformation that maps shape A onto shape B.

(Total for Question 19 is 2 marks)

20. The diagram shows the position of town X.

Town Y is 35 km from town X on a bearing of 125°
Mark the position of town Y with a cross (×).
Use a scale of 1 cm to 10 km.

(Total for Question 20 is 2 marks)

21. Solve $3(4x + 1) = 39$

$x =$ .....

(Total for Question 21 is 3 marks)

22. Kate invests £4500 for 5 years at z% simple interest per year.
At the end of the 5 years, Kate has received a total of £675 in interest.
Work out the value of z.

$z =$ .....
(Total for Question 22 is 3 marks)

23. (a) Simplify $(p^4)^3$

.....

(1)
(b) Simplify $q^7 \times q^5$

.....

(1)
(c) Expand $5r(r^2 + 2r)$

.....

(2)
(Total for Question 23 is 4 marks)

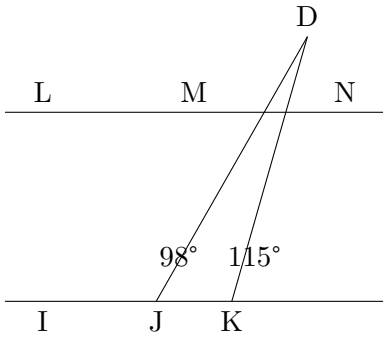
24. Lucy wants to know how much pasta she will need for 500 people at an event.
Each person who eats pasta will eat 2 portions of pasta.
12.5g of pasta is needed for each portion of pasta.
Lucy assumes 68% of the people will eat pasta.
(a) Using this assumption, work out the amount of pasta Lucy needs.
Give your answer correct to the nearest gram.

..... g

(4)
Lucy's assumption is wrong.
72% of the people will eat pasta.
(b) How does this affect your answer to part (a)?

(1)
(Total for Question 24 is 5 marks)

25. DEF and DGH are straight lines.
IJK and LMN are parallel lines.



Show that triangle DJK is isosceles.
Give a reason for each stage of your working.

(Total for Question 25 is 5 marks)

26. It takes 16 hours for 3 identical machines to make a batch of toys.
How many hours would it take 8 of these machines to make a batch of toys of the same size?

.....hours
(Total for Question 26 is 2 marks)

27. C and D are numbers such that

$$C = 2^4 \times 3^2 \times 5 \quad (1)$$
$$D = 2^2 \times 3^3 \quad (2)$$

(a) Find the highest common factor (HCF) of C and D.

.....

(1)

(b) Find the lowest common multiple (LCM) of C and D.

.....

(2)

(Total for Question 27 is 3 marks)

28. Oil flows from a tank at a constant rate of 6.8 m^3/s

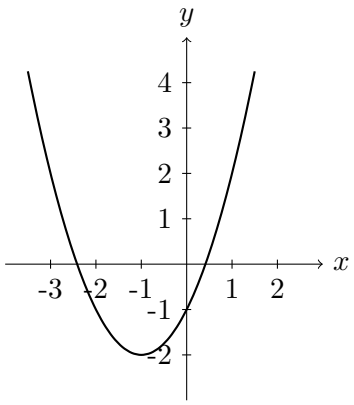
How many days does it take for 47020800 m^3 of oil to flow from the tank?

Give your answer correct to the nearest day.

.....days

(Total for Question 28 is 3 marks)

29. Here is the graph of $y = x^2 + 2x - 1$



(a) Write down the coordinates of the turning point on the graph of $y = x^2 + 2x - 1$

(.....,.....)

(1)

(b) Write down an estimate for one of the roots of $x^2 + 2x - 1 = 0$

.....

(1)

TOTAL FOR PAPER IS 80 MARKS