NON-CALC F

GCSE Mathematics · Foundation Tier

40 marks · 45 minutes · Non-calculator

Name ..... Class .....

Answer all questions. Show all your working. Diagrams are NOT accurately drawn unless stated.

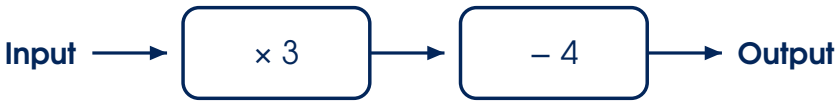
1 Write these numbers in order of size. Start with the smallest number.

0.6 **0.56** **0.065** **0.605**

.....

(Total for Question 1 is 1 mark)

2 Here is a function machine.



(a) Work out the output when the input is 6

.....

(1)

(b) Work out the input when the output is 29

.....

(1)

(Total for Question 2 is 2 marks)

3 **(a)** Write 60 as a product of its prime factors.

.....

(2)

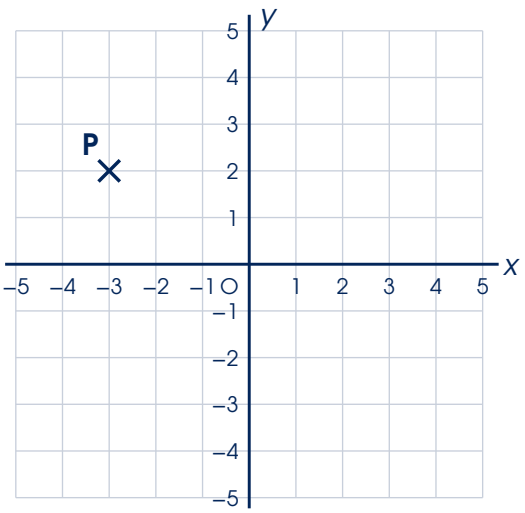
(b) Find the highest common factor (HCF) of 60 and 84

.....

(1)

(Total for Question 3 is 3 marks)

4 The point P is shown on the grid.



(a) Write down the coordinates of P.

(.....)

(1)

Q is the point (5, –4)

(b) Work out the coordinates of the midpoint of PQ.

(.....)

(1)

(Total for Question 4 is 2 marks)

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5 72 students were asked to name their favourite sport.

The pie chart shows information about their answers.

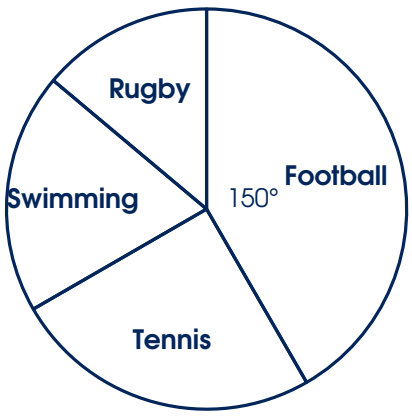


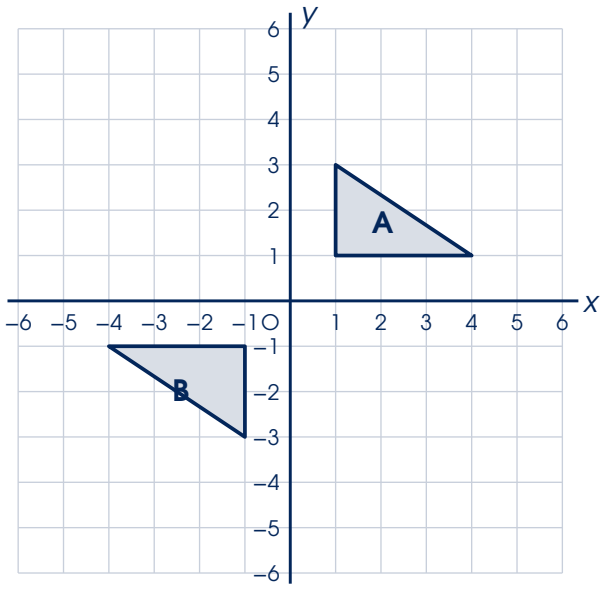
Diagram NOT accurately drawn

How many of the students chose football?

.....

(Total for Question 5 is 2 marks)

6



(a) On the grid, reflect shape *A* in the *y*-axis.

(1)

(b) Describe fully the single transformation that maps shape *A* onto shape *B*.

.....

.....

(2)

(Total for Question 6 is 3 marks)

7 Ravi's height is 164 cm, correct to the nearest centimetre.

Write down the error interval for Ravi's height, *h* cm.

.....

(Total for Question 7 is 2 marks)

8 The diagram shows a rectangle. All measurements are in centimetres.

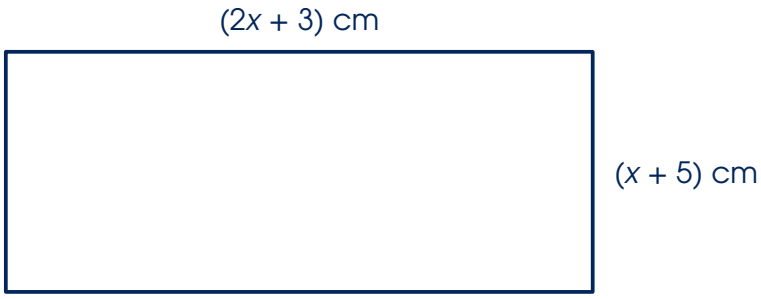


Diagram NOT accurately drawn

The perimeter of the rectangle is 40 cm.

Work out the length of the longest side of the rectangle.

..... cm

(Total for Question 8 is 3 marks)

9 Here are the ingredients for making 8 pancakes.

Pancakes (makes 8)

160 g flour
2 eggs
400 ml milk

Jo has 300 g of flour, 3 eggs and 1 litre of milk.

Work out the greatest number of pancakes Jo can make.

.....

(Total for Question 9 is 3 marks)

10 **(a)** Write $5^4 \times 5^3$ as a single power of 5

.....

(1)

(b) Write $2^{10} \div 2^4$ as a single power of 2

.....

(1)

Ali says, "$3^2 \times 3^4 = 9^6$"

(c) Is Ali correct? You must give a reason for your answer.

.....

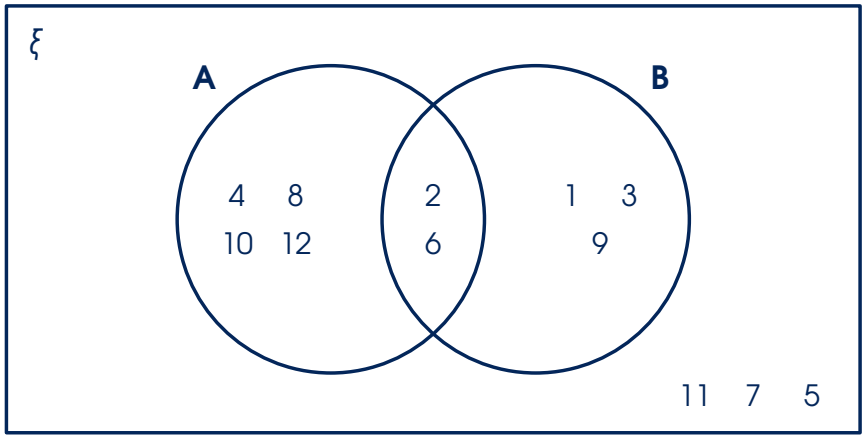
.....

(1)

(Total for Question 10 is 3 marks)

11 ξ = {whole numbers from 1 to 12} A = {even numbers} B = {factors of 18}

The Venn diagram shows this information.



(a) Write down the numbers in $A \cap B$.

.....

(1)

A number is chosen at random from ξ.

(b) Find the probability that the number is in B but not in A.

.....

(1)

(Total for Question 11 is 2 marks)

12 Yoghurts are sold in two sizes of pack.

Small pack	Large pack
6 yoghurts for £2.40	10 yoghurts for £3.80

Which pack gives the better value for money?

You must show how you get your answer.

(Total for Question 12 is 3 marks)

13 Show that $(x + 3)(x + 5) - 8x$ simplifies to $x^2 + 15$

(Total for Question 13 is 2 marks)

14 A coach travels 150 km in 2 hours 30 minutes.

Work out the average speed of the coach in kilometres per hour.

..... km/h

(Total for Question 14 is 3 marks)

15 The shape is made from a rectangle and a semicircle.

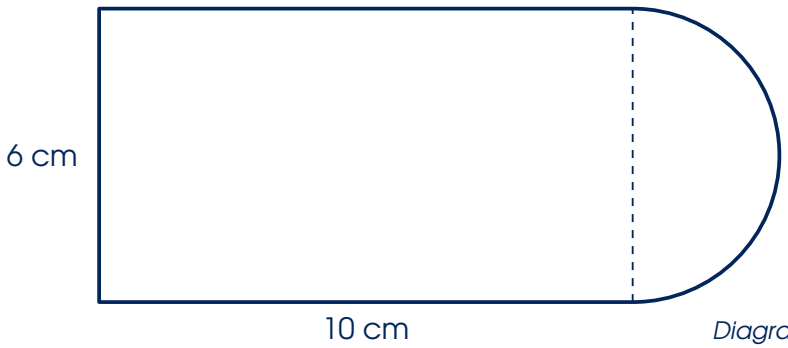


Diagram NOT accurately drawn

Work out the perimeter of the shape.

Give your answer in terms of π.

..... cm

(Total for Question 15 is 3 marks)

16 The table shows the number of goals a hockey team scored in each of 20 matches.

Goals scored	Frequency
0	4
1	6
2	7
3	3

Jamie says, "The mean number of goals scored is more than 1.5"

Is Jamie correct? You must show all your working.

(Total for Question 16 is 3 marks)

TOTAL FOR PAPER IS 40 MARKS