NON-CALC D

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 Round 4783 to the nearest hundred.

.....

(Total for Question 1 is 1 mark)

2 Write 40% as a fraction in its simplest form.

.....

(Total for Question 2 is 1 mark)

3 A chef uses this formula to work out the time, T minutes, to roast a chicken that weighs k kilograms.

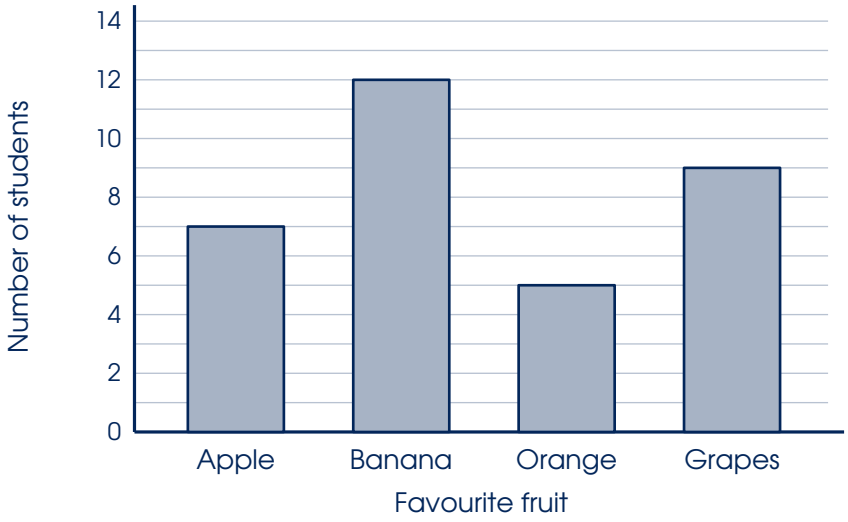
$T = 30 + 20k$

The chef takes 90 minutes to roast a chicken. Work out the weight of the chicken.

..... kg

(Total for Question 3 is 2 marks)

4 The bar chart shows the favourite fruit of some students.



(a) Which fruit is the mode?

.....

(1)

(b) How many students are shown in the bar chart?

.....

(1)

(c) What fraction of these students chose apple?

.....

(1)

(Total for Question 4 is 3 marks)

5 Work out 912 ÷ 24

.....

(Total for Question 5 is 2 marks)

6 The diagram shows a cuboid.

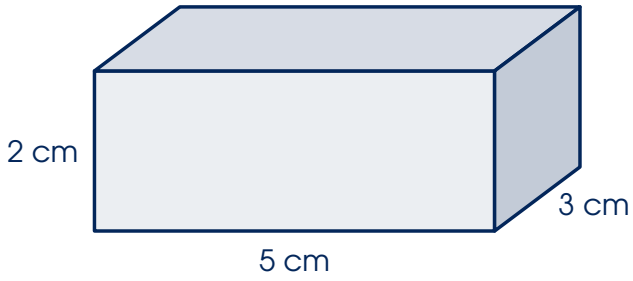


Diagram NOT accurately drawn

(a) Work out the volume of the cuboid.

..... cm^3

(2)

A box is in the shape of a cuboid 10 cm long, 6 cm wide and 4 cm high.

(b) How many of the cuboids above will fit exactly inside the box?

.....

(2)

(Total for Question 6 is 4 marks)

7 A train travels 150 miles in 2 hours 30 minutes.

Work out the average speed of the train.

..... miles per hour

(Total for Question 7 is 3 marks)

---

8 **(a)** Simplify $a \times a \times a$

.....

(1)

(b) Show that $3(2x + 5) - 2(x + 3)$ simplifies to $4x + 9$

(2)

(Total for Question 8 is 3 marks)

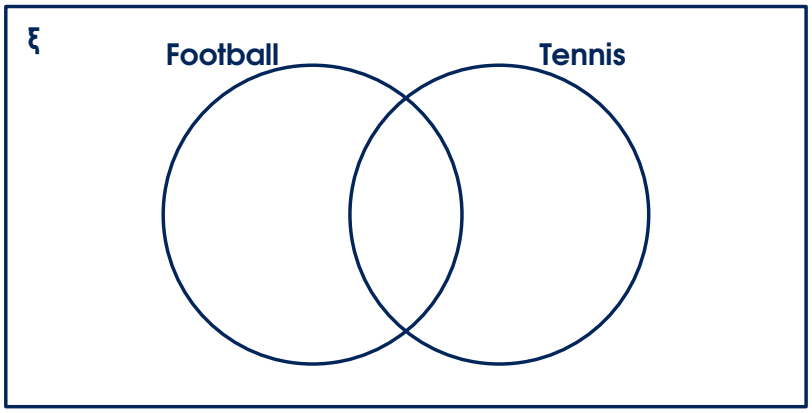
---

9 There are 30 students in a class.

18 of the students play football. 12 of the students play tennis.

5 of the students play both football and tennis.

(a) Complete the Venn diagram.



(2)

One of the 30 students is chosen at random.

(b) Find the probability that this student plays tennis but not football.

.....

(1)

(Total for Question 9 is 3 marks)

10 The diagram shows three angles on a straight line.

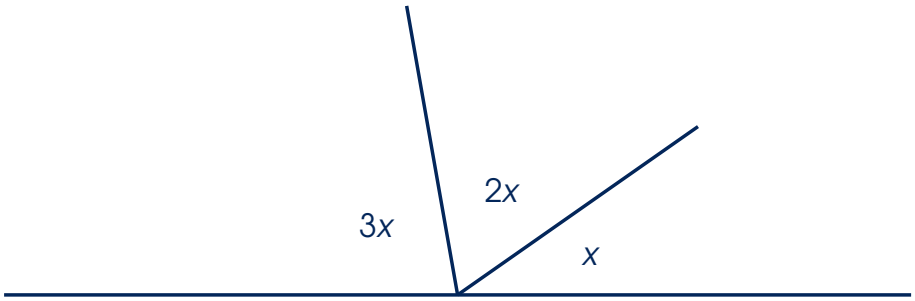


Diagram NOT accurately drawn

Show that the largest of the three angles is a right angle.

(Total for Question 10 is 3 marks)

---

11 **(a)** Work out the value of $\sqrt{49} + 2^3$

.....

(1)

Sam says, "$\sqrt[3]{27} = 9$"

(b) Explain why Sam is wrong.

.....

.....

(1)

(Total for Question 11 is 2 marks)

12 Jake mixes blue paint and yellow paint in the ratio 2 : 5 to make green paint.
He has 6 litres of blue paint and 12 litres of yellow paint.
Work out the greatest amount of green paint Jake can make.

..... litres

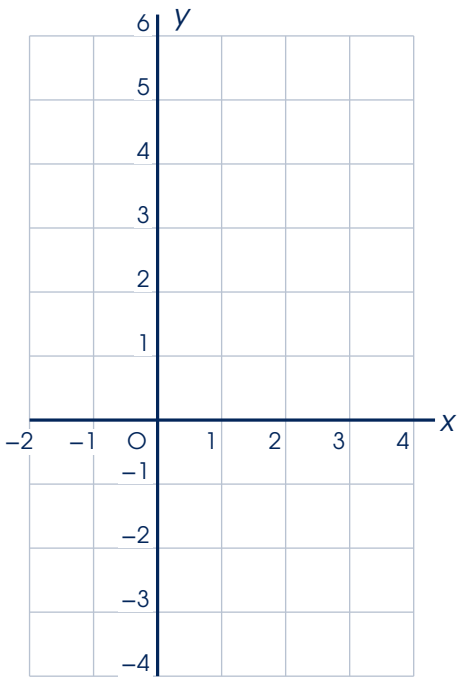
(Total for Question 12 is 3 marks)

13 **(a)** Complete the table of values for $y = 2x - 1$

x	−1	0	1	2	3
y		−1			5

(2)

(b) On the grid, draw the graph of $y = 2x - 1$ for values of x from −1 to 3



(1)

(c) Does the point (10, 21) lie on the line $y = 2x - 1$? Give a reason for your answer.

.....

(1)

(Total for Question 13 is 4 marks)

14 Ruby pays £40 each month to belong to a gym.

The monthly price goes up by 15%.

Ruby pays the new price for 12 months.

How much more does Ruby pay over the 12 months than she would have paid at the old price?

£.....

(Total for Question 14 is 3 marks)

15 A blue bus leaves the bus station every 12 minutes.

A red bus leaves the bus station every 18 minutes.

A blue bus and a red bus both leave the bus station at 9 am.

When will a blue bus and a red bus next leave the bus station at the same time?

.....

(Total for Question 15 is 3 marks)

TOTAL FOR PAPER IS 40 MARKS