GCSE Grade 4

Maths Booklet 5

Paper 1H
Non-Calculator

1   There are only blue cubes, red cubes and yellow cubes in a box.

The table shows the probability of taking at random a blue cube from the box.

Colour	blue	red	yellow
Probability	0.2		

The number of red cubes in the box is the same as the number of yellow cubes in the box.

(a) Complete the table.

(2)

There are 12 blue cubes in the box.

(b) Work out the total number of cubes in the box.

....

(2)

(Total for Question 1 is 4 marks)

2 Deon needs 50 g of sugar to make 15 biscuits.

She also needs

three times as much flour as sugar
two times as much butter as sugar

Deon is going to make 60 biscuits.

(a) Work out the amount of flour she needs.

.... g
(3)

Deon has to buy all the butter she needs to make 60 biscuits.
She buys the butter in 250 g packs.

(b) How many packs of butter does Deon need to buy?

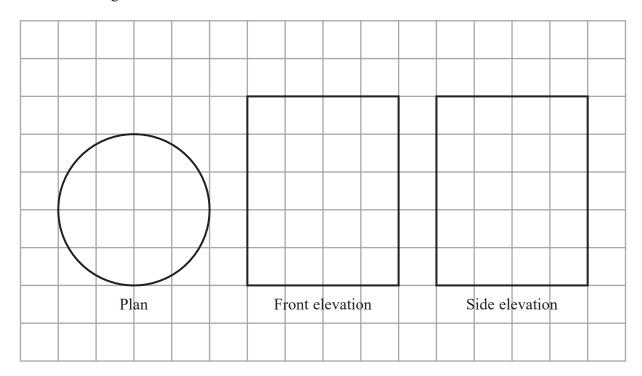...
(2)

(Total for Question 2 is 5 marks)

3 Find the highest common factor (HCF) of 72 and 90

....

(Total for Question 3 is 2 marks)

4 The diagram shows the plan, front elevation and side elevation of a solid shape, drawn on a centimetre grid.

Plan   Front elevation   Side elevation

In the space below, draw a sketch of the solid shape.
Give the dimensions of the solid on your sketch.

(Total for Question 4 is 2 marks)

Turn over ▶

5 Work out the value of $\dfrac{3^7 \times 3^{-2}}{3^3}$

....

6 $v^2 = u^2 + 2as$

$u = 12 \qquad a = -3 \qquad s = 18$

(a) Work out a value of v.

....

(2)

(b) Make s the subject of $\quad v^2 = u^2 + 2as$

....

(2)

7 A bonus of £2100 is shared by 10 people who work for a company.
40% of the bonus is shared equally between 3 managers.
The rest of the bonus is shared equally between 7 salesmen.

One of the salesmen says,

"If the bonus is shared equally between all 10 people I will get 25% more money."

Is the salesman correct?
You must show how you get your answer.

(Total for Question 7 is 5 marks)

8 It would take 120 minutes to fill a swimming pool using water from 5 taps.

(a) How many minutes will it take to fill the pool if only 3 of the taps are used?

.... minutes

(2)

(b) State one assumption you made in working out your answer to part (a).

....

....

(1)

(Total for Question 8 is 3 marks)

9 A plane travels at a speed of 213 miles per hour.

(a) Work out an estimate for the number of seconds the plane takes to travel 1 mile.

.... seconds

(3)

(b) Is your answer to part (a) an underestimate or an overestimate?
Give a reason for your answer.

....

....

(1)

(Total for Question 9 is 4 marks)