1 The total cost of hiring the room for n hours is T euros.

(c) Write down a formula for T in terms of n.

....

(2)

(Total for Question 1 is 2 marks)

2 There are 6 eggs in a small box of eggs.
There are 12 eggs in a large box of eggs.

Alex buys g small boxes of eggs and h large boxes of eggs.
He buys a total of T eggs.

(c) Write down a formula for T in terms of g and h.

....
(3)

(Total for Question 2 is 3 marks)

3 The diagram shows a shape.

12 cm

Diagram **NOT**
accurately drawn

6 cm

9 cm

x cm

The shape has area 129 cm²

Work out the value of x.

$x =$ ....

(Total for Question 3 is 4 marks)

4 Sergio buys *m* boxes of seeds and *n* packets of seeds.

Each box contains 10 seeds.
Each packet contains 6 seeds.

The total number of seeds that Sergio buys is *T*.(d) Write

down a formula for *T* in terms of *m* and *n*.

....

(3)

(Total for Question 4 is 3 marks)

5 Francesco uses the rule below to find the time, in minutes, to cook a chicken in his oven.

| **Number of minutes to cook a chicken** |
| Multiply the weight of the chicken, in kg, by 40 and then add 15 |

(d) Use Francesco's rule to write down a formula for the time, T minutes, to cook a chicken of weight k kilograms.
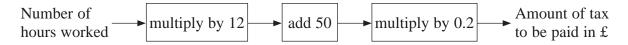
....

(2)

(Total for Question 5 is 2 marks)

6 When the input is n, the output is P.

(c) Find a formula for P in terms of n.

....

(2)

(Total for Question 6 is 2 marks)

7 Molly uses this number machine to work out the amount of tax that she has to pay on the money she earns.

Number of hours worked → multiply by 12 → add 50 → multiply by 0.2 → Amount of tax to be paid in £

When Molly works *n* hours the amount of tax she has to pay is £*T*

Find a formula for *T* in terms of *n*

(Total for Question 7 is 3 marks)

8 Rosanna sells m small bags of marbles and p large bags of marbles.

Each small bag contains 15 marbles.
Each large bag contains 40 marbles.

The total number of marbles that Rosanna sells is T

(e) Write down a formula for T in terms of m and p

....

(3)

(Total for Question 8 is 3 marks)

9 There are 200 bolts in each box of bolts.
Samira buys c boxes of bolts.

Samira uses the bolts she bought to fill packets of bolts.
There are 50 bolts in each packet of bolts.
Samira sells d packets of bolts.

The total number of bolts Samira has left is T

(b) Write down a formula for T in terms of c and d

....

(3)

(Total for Question 9 is 3 marks)

10

(b) Write down an expression for y in terms of x

$y =$ ....

(1)

(Total for Question 10 is 1 marks)

11 A small bag of grain contains 2 kg of grain.
A large sack of grain contains 7 kg of grain.

Makenna buys r small bags of grain and h large sacks of grain.

The total amount of grain Makenna buys is F kg.

Write down a formula for F in terms of r and h

....

(Total for Question 11 is 3 marks)