Answer **all** questions in the spaces provided

1 Circle the cube number.

[1 mark]

100 1000 10 000 100 000

2 A fair ordinary dice is thrown once.

Circle the probability of getting a 2 or a 3

[1 mark]

$\frac{1}{6}$ $\frac{2}{6}$ $\frac{3}{6}$ $\frac{5}{6}$

3 Circle the decimal that is greater than $\frac{1}{5}$ and less than $\frac{1}{4}$

[1 mark]

0.152 0.200 0.215 0.251

4 What is a **litre** a unit of?

Circle your answer.

[1 mark]

area density mass capacity

5 2.5 kg of carrots cost £1.70

Work out the cost of 3.25 kg of carrots.

[3 marks]

Answer £ _____

Turn over for the next question

7

6 Gina makes a sandwich using

bread (B) or a roll (R)

and

ham (H) or cheese (C)

and

salad (S) or pickle (P)

6 (a) List **all** the possible types of sandwich Gina could make.
One has been done for you.

[2 marks]

B H S

6 (b) What **fraction** of the possible types of sandwich have cheese **and** pickle?

[1 mark]

Answer _____

7 *ABC* is a right-angled triangle.

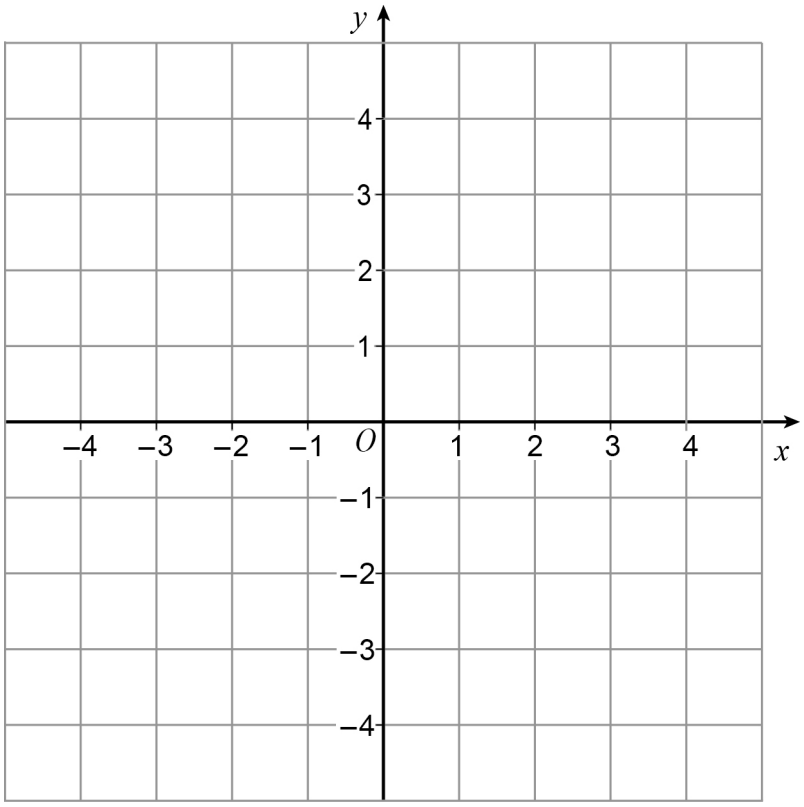
A is the point (–3, –2)

B is the point (1, –2)

C is a point on the line $y = 4$

7 (a) Draw triangle *ABC* on the centimetre grid below.

[3 marks]



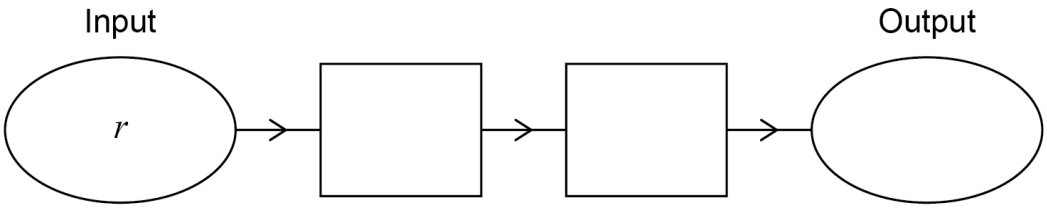
7 (b) Work out the area of triangle *ABC*.

[2 marks]

Answer _____ cm^2

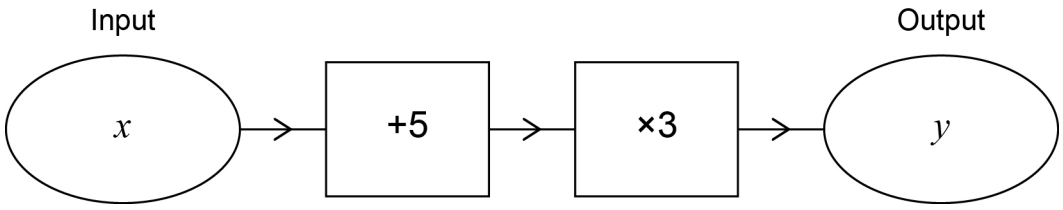
8

8 (a) Complete the number machine so that $q = 7r - 2$



[2 marks]

8 (b) Write down the output y in terms of x.

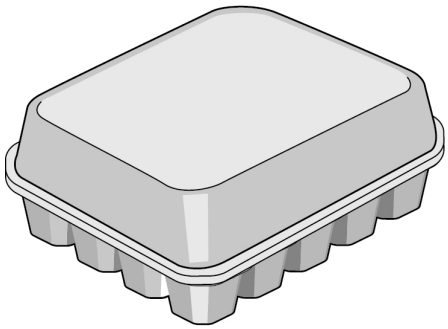


[1 mark]

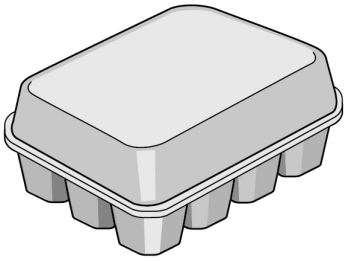
Answer _____

9 A farmer has 580 eggs to put into boxes.

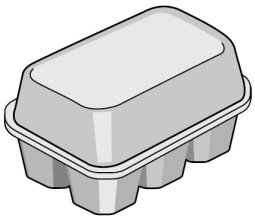
The boxes come in three sizes.



20 eggs



12 eggs



6 eggs

He wants

at least 10 boxes of 20 eggs

at least 15 boxes of 12 eggs

at least 25 boxes of 6 eggs.

The farmer fills 54 boxes with the 580 eggs.

Show how he does this.

[5 marks]

Answer _____ boxes of 20 eggs

_____ boxes of 12 eggs

_____ boxes of 6 eggs

8

10 Megan says,

"If you add any three multiples of 10 the total must be

a multiple of 10

and

a multiple of 3"

Is she correct?
You **must** show your working.

[2 marks]

Answer _____

11 A fair spinner has 12 equal sections.

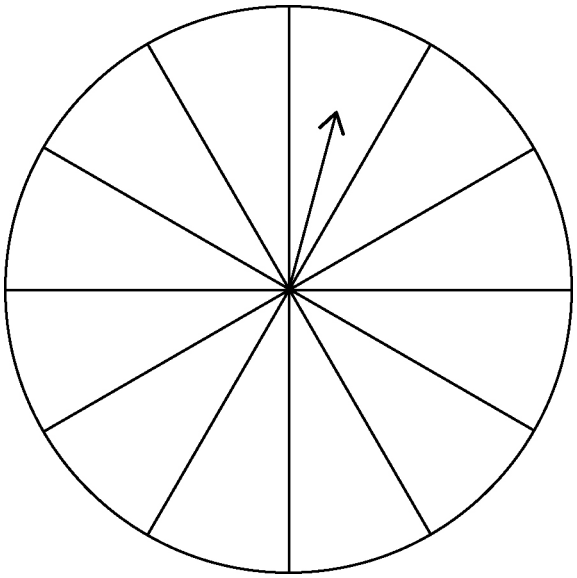
Label each section A, B, C or D so that when the arrow is spun,

the probability it lands on A is $\frac{1}{6}$

the probability it lands on B is **equal** to the probability it lands on C

the probability it lands on D is **double** the probability it lands on A.

[3 marks]



Turn over for the next question

5

12 $a - b = 5$

12 (a) Work out the value of $2(a - b)$

[1 mark]

Answer _____

12 (b) Work out the value of $7a - 7b$

[1 mark]

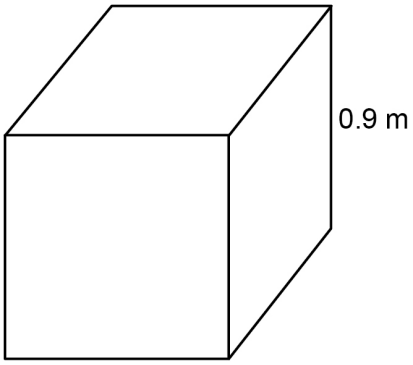
Answer _____

12 (c) Work out the value of $b - a$

[1 mark]

Answer _____

13 A cube has edge length 0.9 metres.



Work out the **total** surface area of the cube.

Give your answer in **square centimetres**.

[3 marks]

Answer _____ cm^2

Turn over for the next question

6

14 £1700 is invested for 3 years at 4% per year **simple** interest.

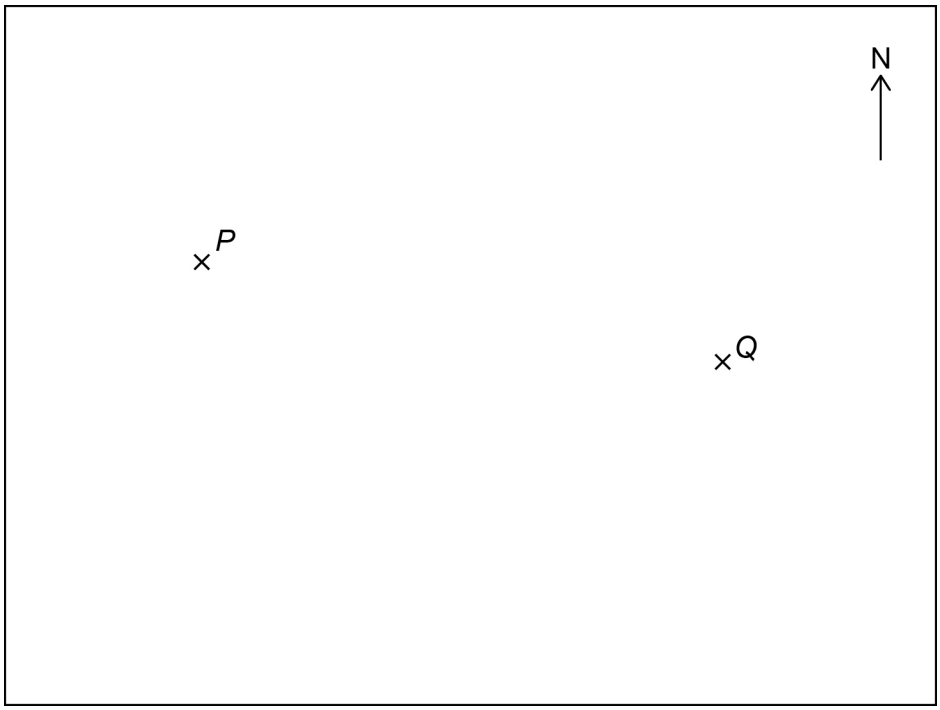
Work out the total interest.

[3 marks]

Answer £ _____

15 Here is a map showing two towns, *P* and *Q*.

Scale: 1 cm represents 50 km



15 (a) Work out the **actual** distance between towns *P* and *Q*.

[2 marks]

Answer _____ km

15 (b) Town *R* is 200 km due South of town *P*.

Mark *R* on the map.

[2 marks]

7

16 A train has 1 first-class carriage and 6 standard carriages.

The first-class carriage has 64 seats.

$\frac{3}{8}$ are being used.

Each standard carriage has 78 seats.

$\frac{7}{13}$ in each carriage are being used.

Are **more than** half the seats on the train being used?

You **must** show your working.

[5 marks]

Answer _____