This assessment is there for you to check what you have learned both at school and during the Help Your Kids: Maths live lessons. Try and answer the question by yourself at first and once you have had a go try and get some help from your parents or even by watching the Lockdown lesson for that topic.

NON CALCULATOR SECTION:

1.

Work out the value of 2^4

....

(Total for Question 1 is 1 mark)

2.

Work out 60% of 70

....

(Total for Question 5 is 2 marks)

3.

Work out $\dfrac{2}{3} - \dfrac{1}{4}$

....

(2)

4.

Here is a list of four fractions.

$$\dfrac{4}{16} \qquad \dfrac{2}{8} \qquad \dfrac{15}{60} \qquad \dfrac{3}{9}$$

One of these fractions is **not** equivalent to $\dfrac{1}{4}$

Write down this fraction.

....

(Total for Question 4 is 1 mark)

5.

Work out

(a) 35×10

(1)

....

(b) $6000 \div 100$

(1)

....

(c) $72 \div 10$

(1)

....

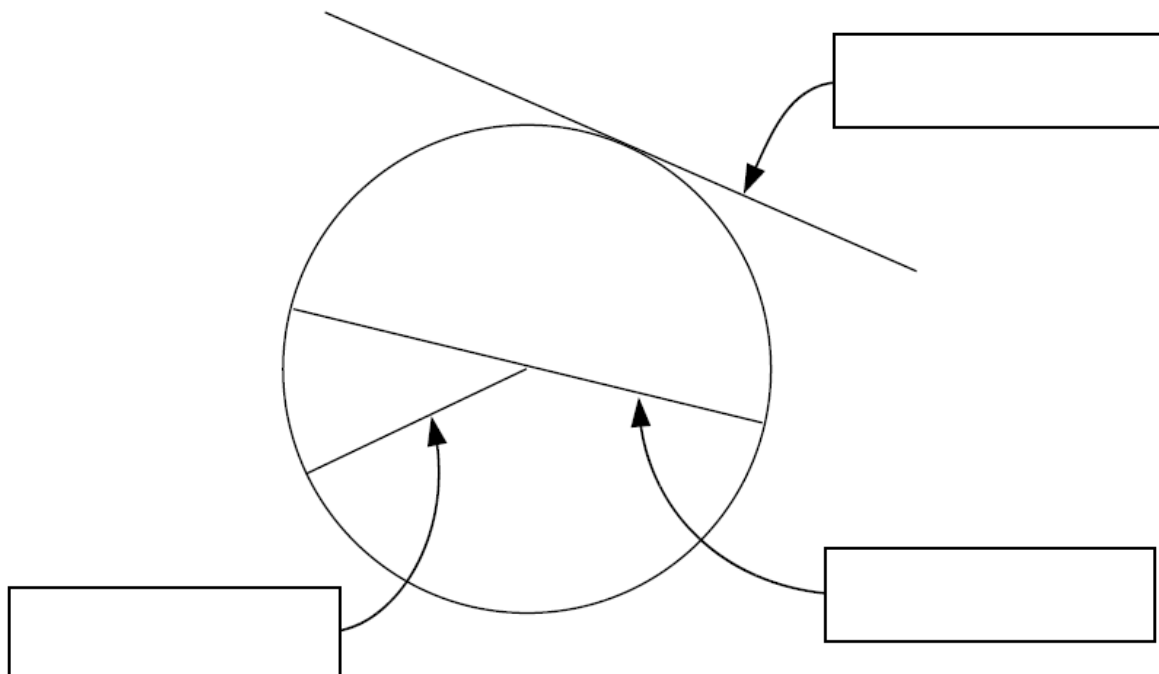(d) 0.14×1000

(1)

....

6.

(Total for Question 2 is 3 marks)

Write in labels for the three features of a circle shown above.

7.

A shopkeeper records how many bottles of water he sells each day.
Here are his results.

2　　　9　　　8　　　3　　　4　　　5　　　3　　　6

(a)　Write down the mode.

(1)

…………………………………

(b)　Work out the median.

(2)

…………………………………

(c)　Work out the mean.

(2)

…………………………………

8.

(a)

85°
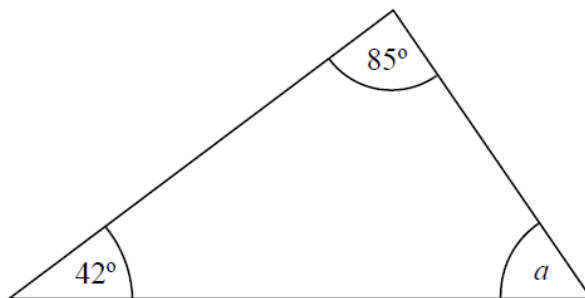
Diagram **NOT**
accurately drawn

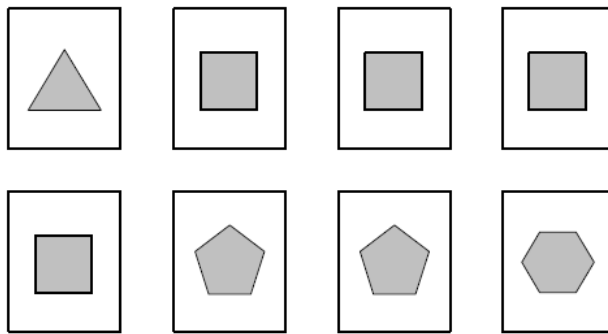42°　　　　　　　　　　　　a

(i)　Work out the size of angle a.

(1)

$a = $ …………………………… °

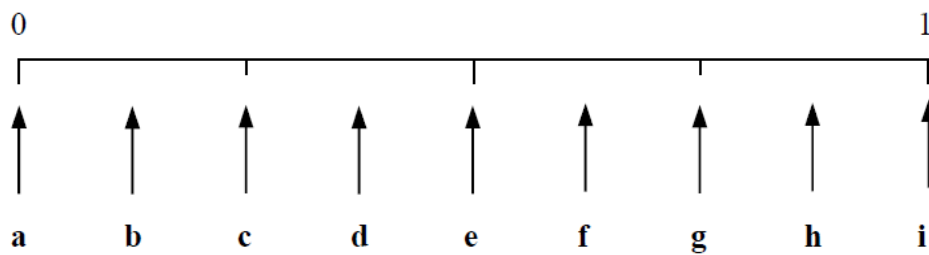(ii)　Give a reason for your answer.

(1)

Emma has these eight cards.   Each card has a shape on it.

Emma turns the cards over and mixes them up.
She then picks one card at random.

Here is a probability scale.

| 0 | | | | | | | | 1 |

a   **b**   **c**   **d**   **e**   **f**   **g**   **h**   **i**

Which arrow points to the probability that the card picked **?**

(a)   has a square on it,   …………… **(1)**   (b)   has a triangle on it,   …………… **(1)**

(c)   has a circle on it,   …………… **(1)**   (d)   has a shape with
less than 5 sides on it.   …………… **(1)**

10.

Work out

(a)   15% of 80

(2)

…………………………………

(b) $\frac{5}{6}$ of 42

(2)

…………………………………

11.

There are 60 men and 45 women at a conference.

$\frac{1}{5}$ of the men have come by train.

$\frac{1}{3}$ of the women have come by train.

How many people in total have come to the conference by train?

....

(Total for Question 7 is 3 marks)

12.

Diane see the same jacket on offer in two shops.

SHOP A

Jacket

Normally £80

Now 20% off

SHOP B

Jacket

Normally £90

Now $\frac{1}{3}$ off

In which shop is the jacket now cheaper?

What is the difference in price?

Shop ....

£ ....

(Total for Question 11 is 4 marks)

13.

(a) Expand $m(3m + 1)$

(1)

....

(b) Simplify $6p - 2q - p + 5q$

(2)

....

(c) Expand and simplify $3(4a + c) - 2(3a + 5)$

(2)

....

14.

(a) The nth term of a sequence is given by the expression $2n(n - 6)$.
Find the value of the smallest positive term of the sequence.

(2)

....

(b) Here are the first 5 terms of another sequence.

        11   15   19   23   27

Find an expression, in terms of n, for the nth term of this sequence.

(2)

....

15.

(a) Solve $t + t + t = 12$

$t =$ ....

(1)

(b) Solve $x - 2 = 6$

$x =$ ....

(1)

(c) Solve $6w + 2 = 20$

$w =$ ....

(2)

16.

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)

CALCULATOR SECTION

17.

$P = 7r + 3q$

Work out the value of P when $r = 5$ and $q = -4$

....
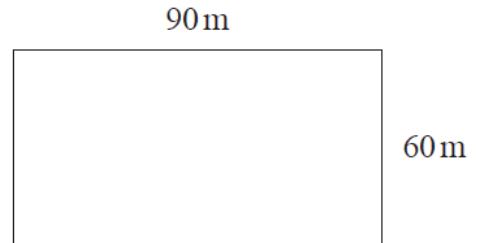
(Total for Question 11 is 2 marks)

18.

A garden is in the shape of a rectangle 90 m by 60 m.

Flowers are grown in 40% of the garden.
The rest of the garden is grass.

Work out the area of the garden that is grass.

90 m

60 m

....m^2

(Total for Question 15 is 4 marks)

19.

£360 is shared between Abby, Ben, Chloe and Denesh.

The ratio of the amount Abby gets to the amount Ben gets is $2:7$

Chloe and Denesh each get 1.5 times the amount Abby gets.

Work out the amount of money that Ben gets.

£..

(Total for Question 26 is 4 marks)

20.

Nimer was driving to a hotel.
He looked at his Sat Nav at 13 30

Time	13 30
Distance to destination	65 miles

Nimer arrived at the hotel at 14 48
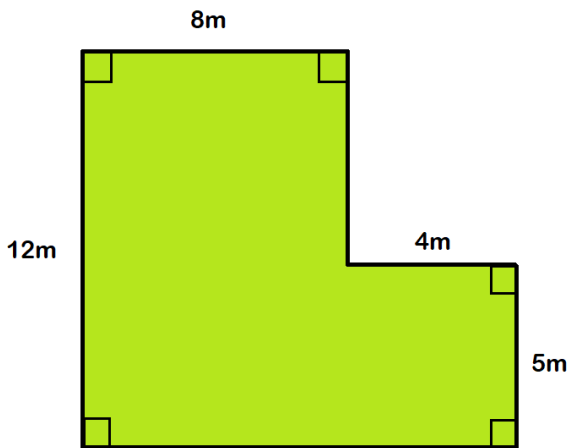
Work out the average speed of the car from 13 30 to 14 48
You must show all your working.

.... mph

(Total for Question 27 is 4 marks)

21. The diagram below shows an L shaped garden

8m

12m

4m

5m

Sammy wants to buy turf for the whole of her garden shown here. One roll of turf covers 1.5 square metres and costs £5.

How much will it cost her to turf the whole of her garden? You must show all of your working.

_____ **(5 marks)**

22. Paulo is making a 3 layer circular cake the same as the one pictured below.

3cm gap

The bottom layer has a diameter of 40cm. The flat space showing on the top of the first and second layers is 3cm all the way around.

He wraps red ribbon round each layer

What is the total length of red ribbon needed for all three layers of the cake. Give your answer in centimetres correct to 1 decimal place.

_____ **(5 marks)**