

Question 1 (2 Marks)

Jules buys a washing machine.

20% VAT is added to the price of the washing machine.

Jules then has to pay a total of £600

What is the price of the washing machine with **no** VAT added?

£.....

Question 2 (3 Marks)

Solve $x^2 = 5x + 24$

.....

Question 3 (3 Marks)

Cormac has some sweets in a bag.

The sweets are lime flavoured or strawberry flavoured or orange flavoured.

In the bag

$$\frac{\text{number of lime flavoured sweets}}{\text{number of strawberry flavoured sweets}} : \frac{\text{number of orange flavoured sweets}}{\text{number of lime flavoured sweets}} = 9 : 4 : x$$

Cormac is going to take at random a sweet from the bag.

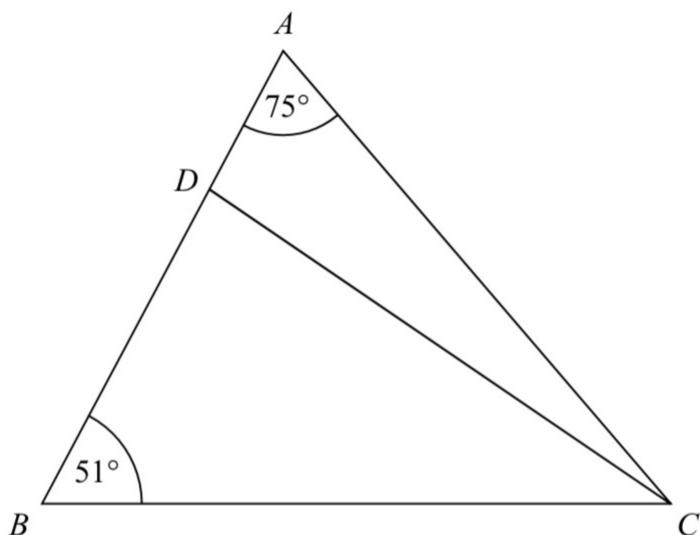
The probability that he takes a lime flavoured sweet is $\frac{3}{7}$

Work out the value of x .

$$x = \dots$$

Question 4 (4 Marks)

The diagram shows triangle ABC .



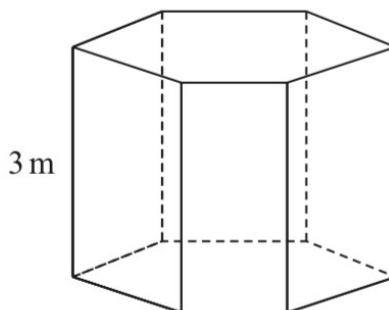
ADB is a straight line.

the size of angle DCB : the size of angle ACD = 2 : 1

Work out the size of angle BDC .

Question 5 (3 Marks)

The diagram shows a prism placed on a horizontal floor.



$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

The prism has height 3 m

The volume of the prism is 18 m^3

The pressure on the floor due to the prism is 75 newtons/m^2

Work out the force exerted by the prism on the floor.

..... newtons

(Total 15 Marks)