

**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

number of lime : number of strawberry : number of orange  
flavoured sweets : flavoured sweets : flavoured sweets = 9 : 4 : x

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

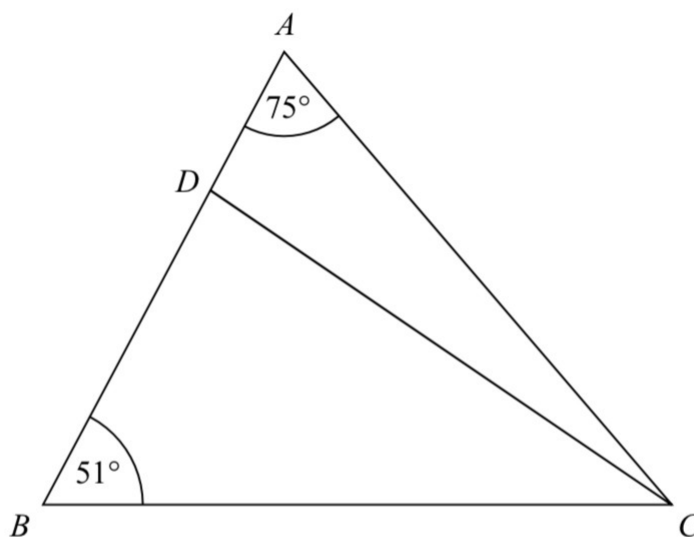
The probability that he takes a lime flavoured sweet is  $\frac{3}{7}$

Work out the value of  $x$ .

$x =$  .....

**Question 4 (4 Marks)**

The diagram shows triangle  $ABC$ .



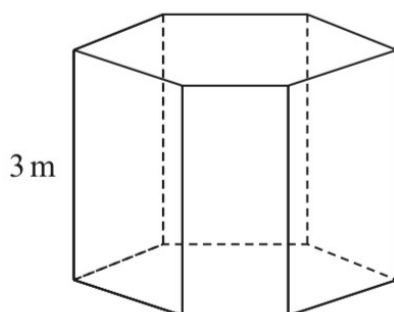
$ADB$  is a straight line.

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  $18 \text{ m}^3$

The pressure on the floor due to the prism is  $75 \text{ newtons/m}^2$

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

..... newtons

**(Total 15 Marks)**