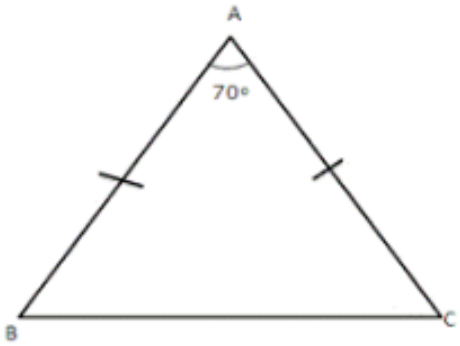
Exercise 5A

Question 1:

AB=AC implies their opposite angle are equal




$\Rightarrow \quad \angle B = \angle C$ [angles opposite to equal sides]

But $\angle A + \angle B + \angle C = 180°$

$\Rightarrow \quad 70° + \angle B + \angle B = 180°$

$\Rightarrow \quad 70° + 2\angle B = 180°$

$\Rightarrow \quad 2\angle B = 180° - 70°$

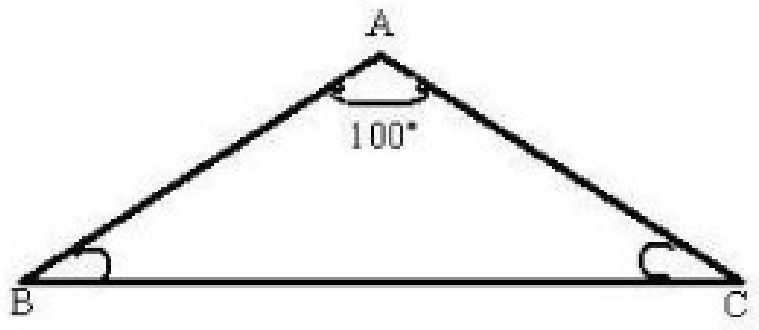
$\Rightarrow \quad 2\angle B = 110°$

$\Rightarrow \quad \angle B = \frac{110°}{2}$

$\Rightarrow \quad \angle B = 55°$

$\Rightarrow \quad \angle B = \angle C = 55°$

Question 2:




Consider the isosceles triangle ΔABC.

Since the vertical angle of ABC is 100° , we have, $\angle A = 100°$.

By angle sum property of a triangle, we have,

$\angle A + \angle B + \angle C = 180°$

$\Rightarrow 100° + \angle B + \angle C = 180°$

$\Rightarrow \quad 100° + 2\angle B = 180°$ [Since in an isosceles triangle base angles are equal, $\angle B = \angle C$]

$\Rightarrow \quad 2\angle B = 180° - 100° = 80°$

$\Rightarrow \quad \angle B = \frac{80°}{2}$

$\Rightarrow \quad \angle B = 40°$

$\Rightarrow \quad \angle B = \angle C = 40°$

********** END **********