Exercise 7A

Question 9:

Let a $= 13$ cm, B $= 13$ cm and $c = 20$ cm

Now, $s = \frac{1}{2}(a+b+c)$

$= \left(\frac{13+13+20}{2}\right)$ Cm $= \frac{46}{2} = 23$ cm

$\therefore$ area of the triangle $= \sqrt{s(s-a)(s-b)(s-c)}$

$= \sqrt{23(23-13)(23-13)(23-20)}$

$= \sqrt{23\times10\times10\times3}$

$= 10\sqrt{69}$

$= 10\times8.306 = 83.06$ cm^2

$\therefore$ area of an isosceles triangle $= 83.06$ cm^2

Question 10:

Let ΔABC be an isosceles triangle and Let $AL \perp BC$.

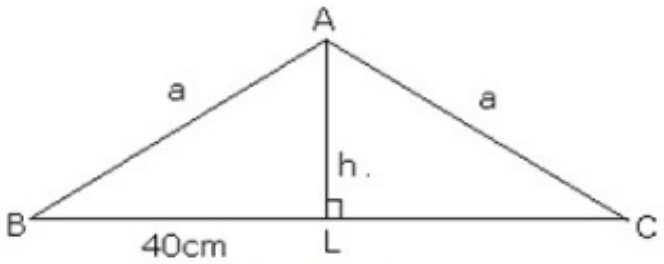
Given that BC $= 80$ cm and Area of $\Delta ABC = 360$ cm^2

$\therefore \quad \frac{1}{2}\times BC\times AL = 360$ cm^2

$\Rightarrow \quad \frac{1}{2}\times80\times h = 360$ cm^2

$\Rightarrow \quad 40\times h = 360$ cm^2

$\Rightarrow \quad h = \frac{360}{40} = 9$ cm



Now $BL = \frac{1}{2}(BC)$

$= \left(\frac{1}{2}\times80\right)$ cm $= 40$ cm and AL $= 9$cm

$a = \sqrt{BL^2 + AL^2}$

$= \sqrt{(40)^2+(9)^2} \Rightarrow \sqrt{1600+81}$

$\Rightarrow \quad \sqrt{1681} = 41$cm

$\therefore$ Perimeter $= (41+41+80) = 162$ cm

Perimeter of the triangle $= 162$ cm.

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