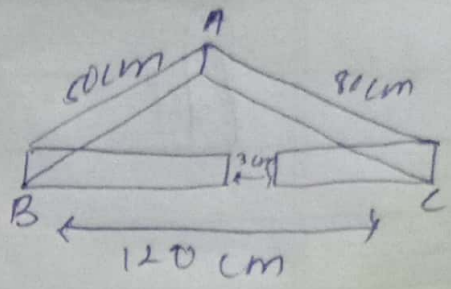
Assessment

Ex-2 For finding area of the park, we have

$2s = 250m + 80m + 120m = 250m$

$s = 125m$



i.e;

Now: $s-a = (125-120)m = 5m$.

$s-b = (125-80)m = 45m$.

$s-c = (125-50)m = 75m$.

Therefore, area of the park $= \sqrt{s(s-a)(s-b)(s-c)}$

$= \sqrt{125 \times 5 \times 45 \times 75}\ m^2$

$= 375\sqrt{15}\ m^2$

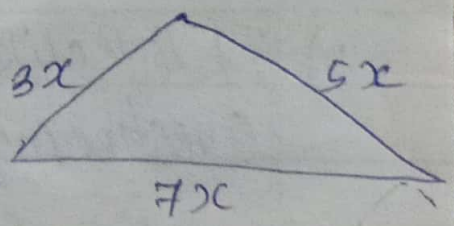
Also perimeter of the park = AB + BC + CA = 250m

therefore, length of the wire needed for fencing = 250m - 3m (to be left for gate)

$= 247m$

And so the cost of fencing $= 220 \times 247 = ₹ 4940$.

(3) Ex $s = \frac{60+100+140}{2}\ m = 150m$

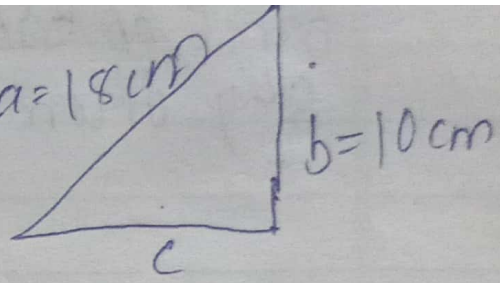


and area will be $\sqrt{150(150-60)(150-100)(150-140)}\ m^2$

$= \sqrt{150 \times 90 \times 50 \times 10}\ m^2$

$= 1500\sqrt{3}\ m^2$.

(ii) Area of triangle $= \sqrt{s(s-a)(s-b)(s-c)}$



Here, s is the semi-perimeter, and a, b, c are the sides of the triangle

Given: a = 18cm, b = 10cm

Perimeter = 42cm

Semi-perimeter = $s = \frac{\text{Perimeter}}{2}$

$s = \frac{42}{2}$

$s = 21\text{cm}$

We need to find c.

No(1)

Perimeter = 42cm

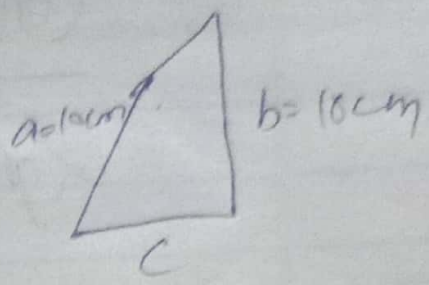
a+b+c = 42cm

18cm+10cm+c = 42cm

28cm+c = 42cm

c = 42-28cm

c = 14cm



Area of $\triangle = \sqrt{s(s-a)(s-b)(s-c)}$

Area of $\triangle = \sqrt{21(21-18)(21-10)(21+14)}$

$= \sqrt{21(3)(11)(7)}$

$= \sqrt{21(7\times3)(11)}$

$= \sqrt{21(21)(11)}$

$= \sqrt{21\times21\times11}$

$= \sqrt{21^2}\times\sqrt{11}$

$= (21)\times\sqrt{11}$

$= 21\sqrt{11}$

Ther area = $21\sqrt{11}$ cm2.

(5) $12x + 17x + 25x = 540\text{cm}$.

$= 54x = 540\text{cm}$

$= x = \frac{540}{54}$

$= x = 10\text{cm}$