

Area of Oblique Triangle using Heron's Theorem

** These are not right triangles.

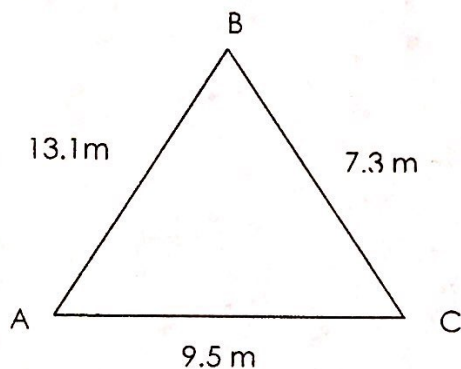
** Use when given SSS.

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

$$s = \frac{a+b+c}{2}$$

Ex: Find the area. Round to the nearest tenth.

1.



$$s = \frac{13.1 + 7.3 + 9.5}{2}$$

$$s = 14.95$$

$$A = \sqrt{14.95(14.95-7.3)(14.95-9.5)(14.95-13.1)}$$

$$A = 33.957$$

$$\boxed{A = 34.0 \text{ m}^2}$$

2. In ABC, $a=3, b=7.5, c=5.4$

$$s = \frac{3 + 7.5 + 5.4}{2}$$

$$s = 7.95$$

$$A = \sqrt{7.95(7.95-3)(7.95-7.5)(7.95-5.4)}$$

$$\boxed{A = 6.7 \text{ m}^2}$$