

Section 9.4 Area of a Triangle

Objectives: Find the area of SAS and SSS triangles.

Area of SAS Triangles

$$K = \frac{1}{2}ab \sin c$$

$$K = \frac{1}{2}bc \sin a$$

$$K = \frac{1}{2}ac \sin b$$

The area K of a triangle equals one-half the product of two of its sides times the sine of their included angle.

Area of SSS Triangles

Heron's Formula

The area K of a triangle with sides a , b , and c is

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

where $s = \frac{1}{2}(a + b + c)$.

Work #1 – 5