Introduction to Trigonometry with Applications

AREA OF TRIANGLES – PART A

PROFESSOR PANOS S. SHIAKOLAS
MECHANICAL AND AEROSPACE ENGINEERING DEPARTMENT
COLLEGE OF ENGINEERING
UNIVERSITY OF TEXAS AT ARLINGTON

Area of Arbitrary Triangle

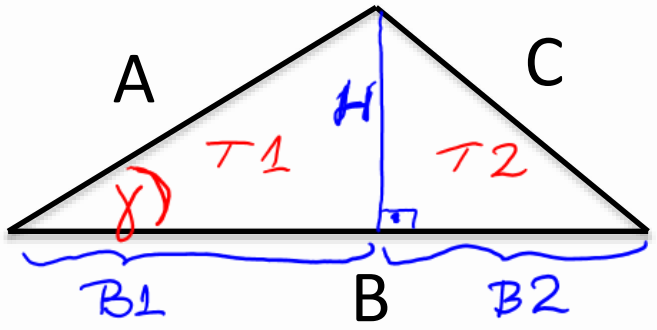
$$A_T = A_{T1} + A_{T2}$$

$$A_{T1} = \frac{\text{PROD. PERP}}{2} = \frac{B_1 * H}{2}$$

$$A_{T2} = \frac{\text{PROD. PERP}}{2} = \frac{B_2 * H}{2}$$

$$A_T = \frac{B_1 * H}{2} + \frac{B_2 * H}{2}$$

$$A_T = \frac{(B_1 + B_2) H}{2} \Rightarrow \boxed{A_T = \frac{B * H}{2}}$$



LAW OF SINES

LAW OF COSINES