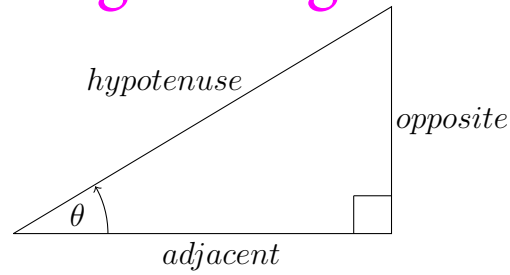


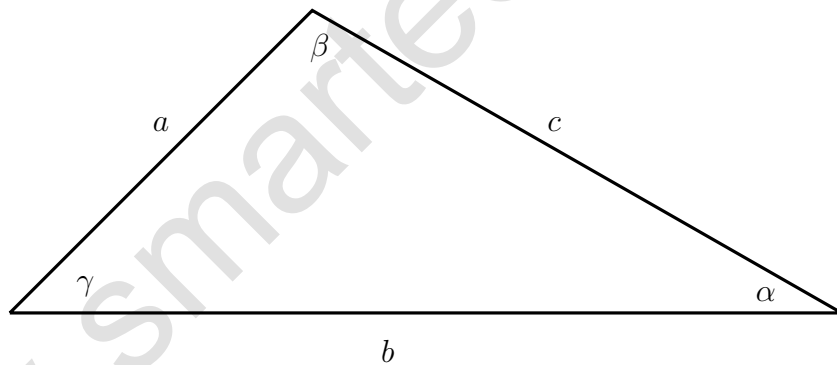
Trigonometric Formula Sheet

For Right Angled Triangles



$$\begin{aligned}\sin \theta &= \frac{opp}{hyp} & \csc \theta &= \frac{hyp}{opp} \\ \cos \theta &= \frac{adj}{hyp} & \sec \theta &= \frac{hyp}{adj} \\ \tan \theta &= \frac{opp}{adj} & \cot \theta &= \frac{adj}{opp}\end{aligned}$$

Law of Sines, Cosines, and Tangents



Law of Sines

$$\frac{\sin \alpha}{a} = \frac{\sin \beta}{b} = \frac{\sin \gamma}{c}$$

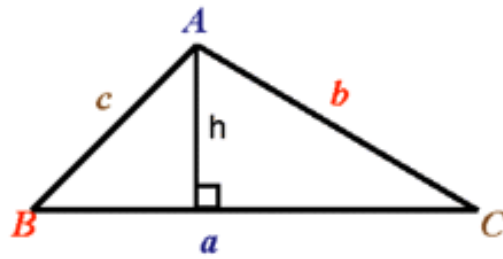
Law of Cosines

$$a^2 = b^2 + c^2 - 2bc \cos \alpha$$

$$b^2 = a^2 + c^2 - 2ac \cos \beta$$

$$c^2 = a^2 + b^2 - 2ab \cos \gamma$$

Area of a triangle



$$\text{Area of a triangle} = \frac{1}{2}bc \sin A = \frac{1}{2}ac \sin B = \frac{1}{2}ab \sin C.$$