

# Chapter 8 Summary

## 8.1 Geometric Mean

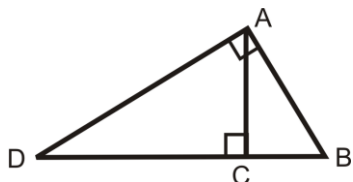
**Geometric Mean of  $a$  and  $b$ :**

$$\frac{a}{x} = \frac{x}{b}$$

$$x^2 = ab \quad (\text{cross multiply})$$

$$x = \sqrt{ab}$$

**Similar Right Triangles**

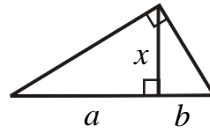


$$\triangle ABD \sim \triangle CBA \sim \triangle CAD$$

*\*Beware of letter order!!*

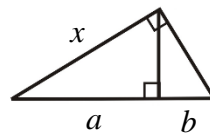
**Zoom-Zooms**

*Heart-Beat*

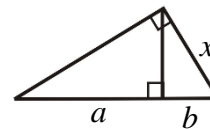


$$\frac{a}{x} = \frac{x}{b}$$

*Mountain Climber*



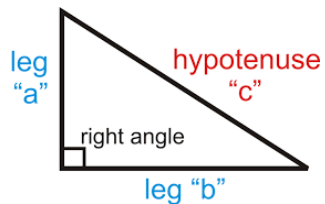
$$\frac{a}{x} = \frac{x}{a+b}$$



$$\frac{b}{x} = \frac{x}{a+b}$$

## 8.2 Pythagorean Theorem

**Pythagorean Theorem**



$$a^2 + b^2 = c^2$$

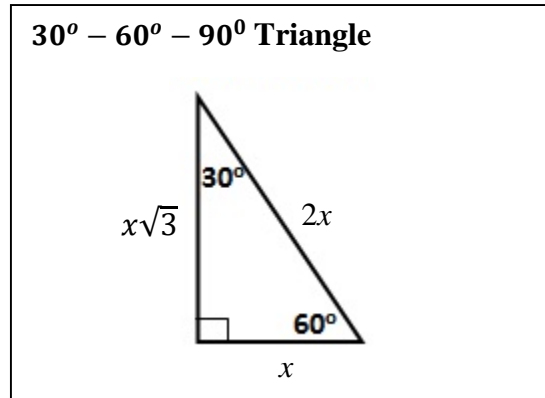
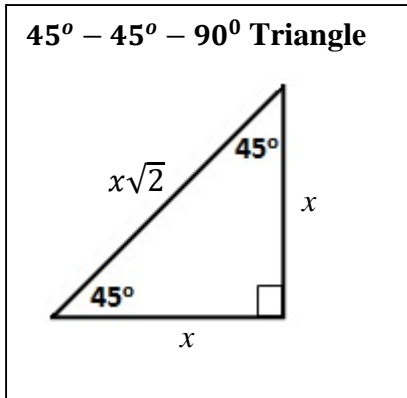
**Classify Triangles**

*right*  $c^2 = a^2 + b^2$

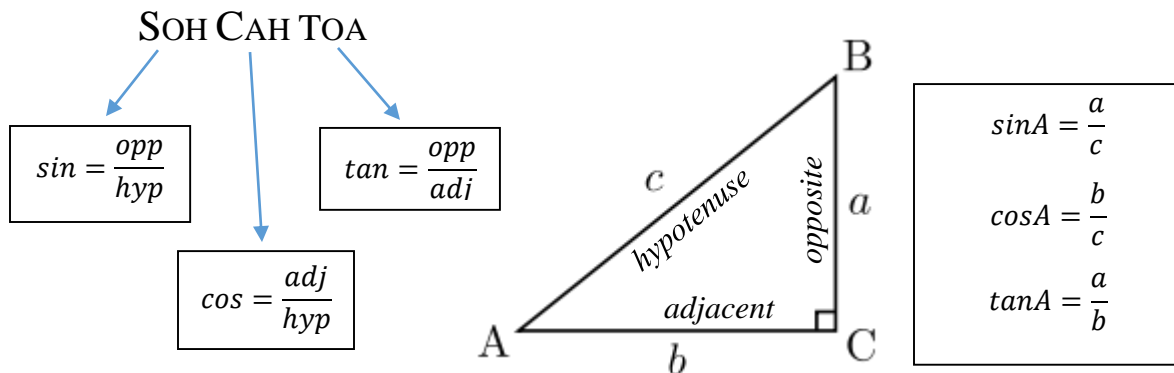
*acute*  $c^2 < a^2 + b^2$

*obtuse*  $c^2 > a^2 + b^2$

### 8.3 Special Right Triangles



### 8.4 Trigonometry



### 8.5 Angles of Elevation and Depression

