

Trigonometric Ratios

Trigonometry

_____ is the study of the properties of triangles, trigonometric functions, and their applications

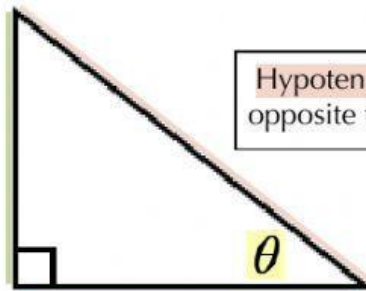
Only works for _____ triangles

The three most common trigonometric ratios are _____, _____, and _____

Trigonometric ratios are used to find the missing _____ or _____ of a right triangle.

Parts of a right triangle

Opposite: the side opposite the angle



Hypotenuse: the side opposite the right angle

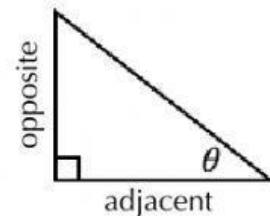
Adjacent: the side next to the angle

θ is pronounced "theta"

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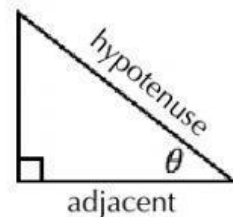
TOA

$$\tan(\theta) = \frac{\text{opposite}}{\text{adjacent}}$$



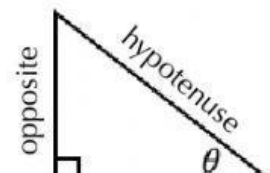
CAH

$$\cos(\theta) = \frac{\text{adjacent}}{\text{hypotenuse}}$$



SOH

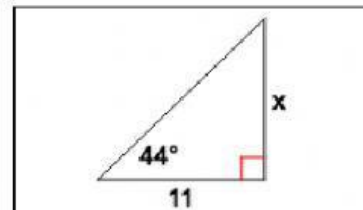
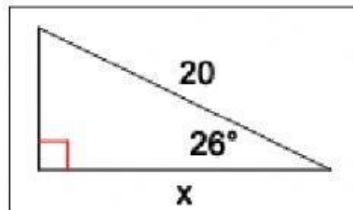
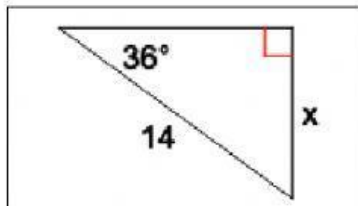
$$\sin(\theta) = \frac{\text{opposite}}{\text{hypotenuse}}$$



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Examples:

Finding a missing **side**



Finding a missing **angle**

