

Name: _____

Class Notes

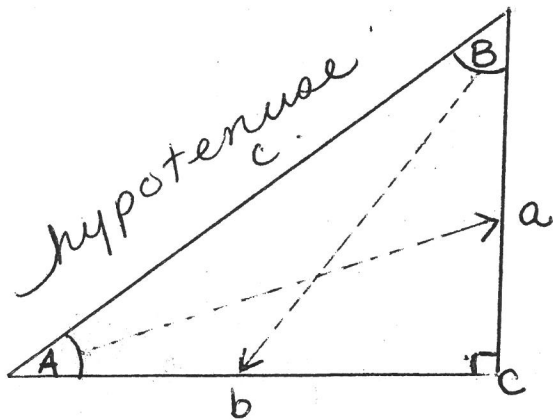
Trigonometric Ratios

Trigonometric comes from the Greek words:
"trigonon" which means triangle and
"metria" which means measure.

We use trigonometric ratios to calculate the measures of angles and sides in a right triangle.

We refer to the sides of the triangle as the leg of the triangle.

We use capital letters to represent angles and the same letter in lower case to identify the opposite side of the angle.

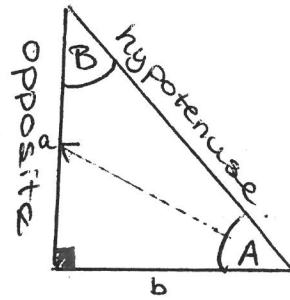
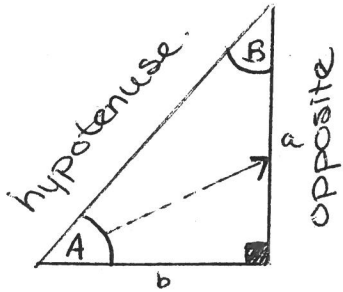


Sine of an Angle

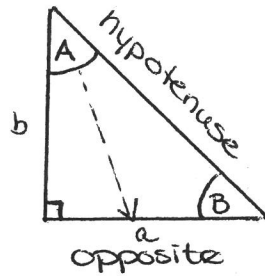
The sine of angle A (denoted $\sin(A)$) is a ratio:

the measure of the leg opposite to angle A divided by the measure of the hypotenuse.

$$\sin(A) = \frac{\text{Opposite}}{\text{hypotenuse}}$$

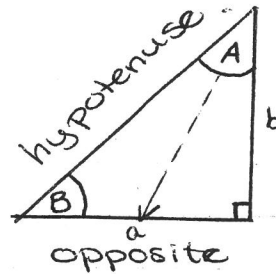


$$\sin(A) = \frac{a}{c}$$

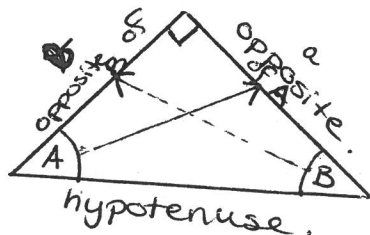


$$\sin(A) = \frac{a}{c}$$

$$\sin(B) = \frac{b}{c}$$



$$\sin(B) = \frac{b}{c}$$



$$\sin(A) = \frac{a}{c}$$

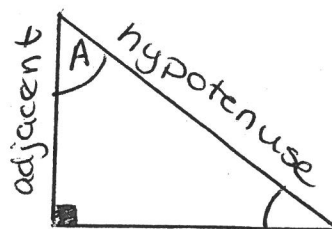
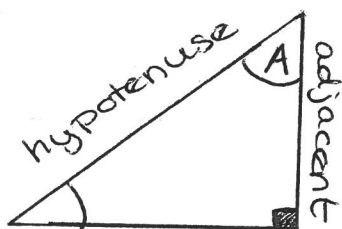
$$\sin(B) = \frac{b}{c}$$

Cosine of an Angle

The cosine of angle A (denoted $\cos(A)$) is a ratio:

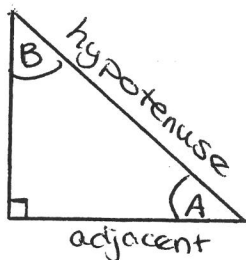
the measure of the leg adjacent to angle A
divided by
the measure of the hypotenuse

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



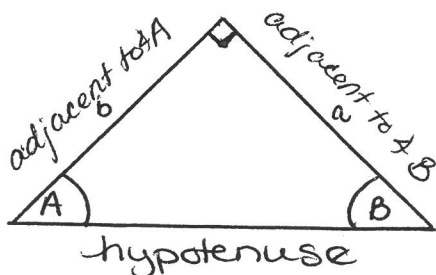
$$\cos(A) = \frac{b}{c}$$

$$\cos(B) = \frac{a}{c}$$



$$\cos(A) = \frac{b}{c}$$

$$\cos(B) = \frac{a}{c}$$



$$\cos(A) = \frac{b}{c}$$

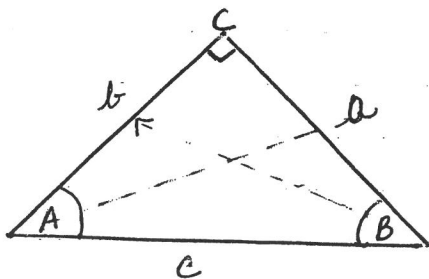
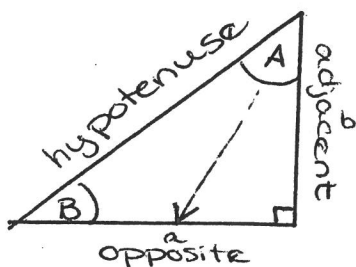
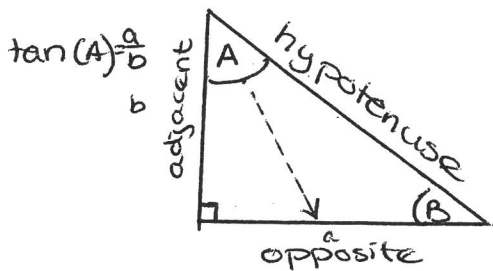
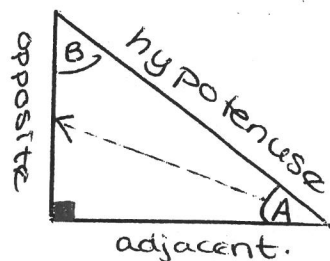
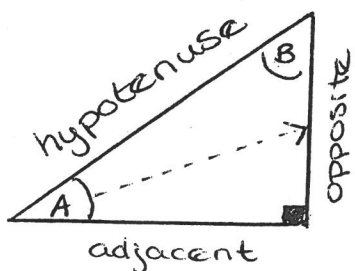
$$\cos(B) = \frac{a}{c}$$

Tangent of an Angle

The tangent of angle A (denoted $\tan(A)$) is a ratio:

the measure of the leg opposite to angle A
divided by
the measure of the leg adjacent to angle A

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



$$\tan(A) = \frac{a}{b}$$

$$\tan(B) = \frac{b}{a}$$