6r NOTES Trigonometric Ratios.pdf - [Geometry: Week 2.1 Day 5] - Go PDF Rea...

TRIGONOMETRIC RATIOS: *Ratios of the lengths of the sides of a right triangle (related to the acute angles).*

The three most common ratios are ***SINE, COSINE, & TANGENT***.

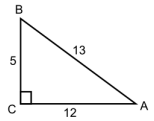
TRIGONOMETRIC RATIO	ABBREVIATION	DEFINITION
Sine	sin	$\frac{\text{opposite leg}}{\text{hypotenuse}}$
Cosine	cos	$\frac{\text{adjacent leg}}{\text{hypotenuse}}$
Tangent	tan	$\frac{\text{opposite leg}}{\text{adjacent leg}}$

A common device for memorizing these ratios is: SOH, CAH, TOA

Jan 20-10:51 AM

6r NOTES Trigonometric Ratios.pdf - [Geometry: Week 2.1 Day 5] - Go PDF Rea...

EXAMPLE 1: *Find sin A, cos A tan A, sin B, cos B, and tan B. Express each ratio as a fraction.*



sin A = $\frac{5}{13}$ *sin B* = $\frac{12}{13}$

cos A = $\frac{12}{13}$ *cos B* = $\frac{5}{13}$

tan A = $\frac{5}{12}$ *tan B* = $\frac{12}{5}$

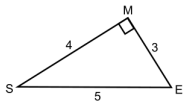
Notes: **TRIGONOMETRIC RATIOS**

QUICK CHECK: *Find sin S, cos S tan S, sin E, cos E, and tan E. Express each ratio as a fraction.*

Jan 20-11:03 AM

6r NOTES Trigonometric Ratios.pdf - [Geometry: Week 2.1 Day 5] - Go PDF Rea...

QUICK CHECK: *Find sin S, cos S tan S, sin E, cos E, and tan E. Express each ratio as a fraction.*



sin S = $\frac{3}{5}$ *sin E* = $\frac{4}{5}$

cos S = $\frac{4}{5}$ *cos E* = $\frac{3}{5}$

tan S = $\frac{3}{4}$ *tan E* = $\frac{4}{3}$

Use trigonometric tables to evaluate expressions involving trigonometric ratios.

EXAMPLE 2: *Find each value using the trig table attached.*

a) cos 41° = .7547 b) sin 78° = .9781

c) tan 23° = .45 d) sin 53° = .7986

EXAMPLE 3: *Let ∠A be an acute angle in a right triangle. Approximate the measure of ∠A to the nearest degree.*

Jan 20-11:55 AM