

Trigonometric Ratios

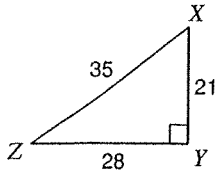
Date _____ Period _____

Find the value of each trigonometric ratio.

Answer

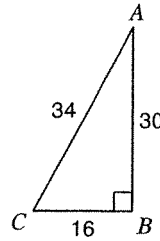
1) $\tan Z$

$\text{T.O.A.} = \tan \theta = \frac{21}{28}$



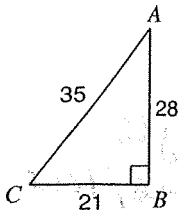
$3/4$

2) $\cos C$



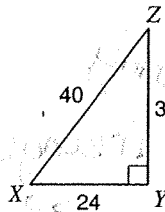
$8/17$

3) $\sin C$



$4/5$

4) $\tan X$

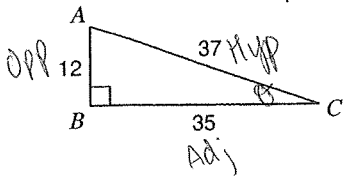


$4/3$

Find the value of each trigonometric ratio to the nearest ten-thousandth.

5) $\tan C$

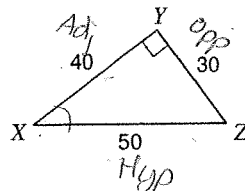
$\text{Tan} = \frac{\text{Opp}}{\text{Adj}} = \frac{12}{35}$



0.3429

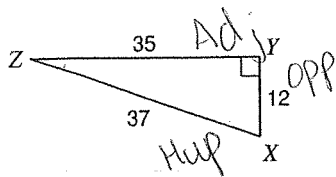
6) $\tan X$

$\text{Tan} = \frac{\text{Opp}}{\text{Adj}} = \frac{30}{40}$



0.7500

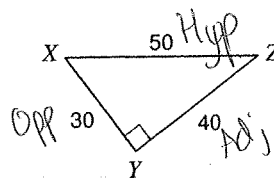
7) $\sin Z$



0.3243

$\sin = \frac{O}{H} = \frac{12}{37}$

8) $\sin Z$



0.6000

9) $\sin 48^\circ$

0.7431 calc $\rightarrow \sin(48)$

10) $\sin 38^\circ$

0.6157

11) $\cos 61^\circ$

0.4848

12) $\cos 51^\circ$

0.6293

Need Calc

Critical thinking questions:

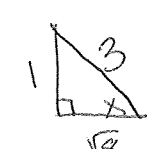
13) Can the sine of an angle ever equal 2? Why or why not?

$\sin = \frac{\text{Opp}}{\text{Hyp}}$
 No, hypotenuse > opposite side
 so it will always be < 1

14) $\sin x = \frac{1}{3}$ Find $\cos x$

Find $\cos x$.

$\cos = \frac{\text{Adj}}{\text{Hyp}} = \frac{\sqrt{8}}{3}$



$a^2 + b^2 = c^2$
 $1^2 + b^2 = 3^2$
 $1 + b^2 = 9$
 $b^2 = 8$
 $b = \sqrt{8}$

15) Error Analysis

A teacher asks the class if they can express the $\sin(A)$ in Triangle 1 and the $\sin(b)$ in triangle 2.

Jose says $\sin(A) = \frac{4}{5}$ and $\sin(b)$ does not exist.

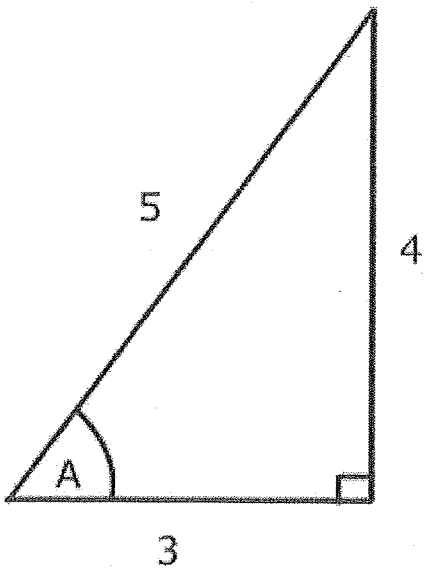
Jenny says $\sin(A) = \frac{4}{5}$ and $\sin(B) = \frac{2}{4.6}$

Who is correct? (explain your reasoning)

Jose

Triangle 2 is not a right angle
so it doesn't use sine/cosine/tan

Triangle 1



Triangle 2

