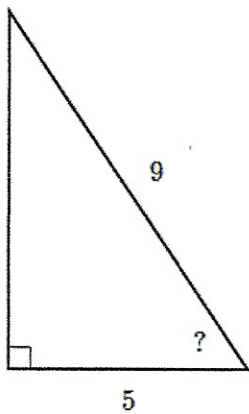


Additional Practice: Solving For an angle using trig ratios

ch 8.4



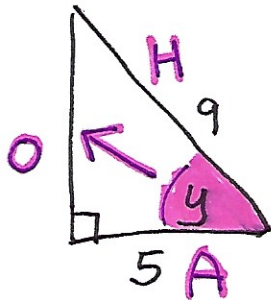
First label triangle with

"O" for opposite

"A" for adjacent

"H" for hypotenuse

Second decide which trig ratio you need. It will be cos because we know "A" and "H".



Third solve for angle y

$$\cos x = \frac{A}{H}$$

$$\cos y = \frac{5}{9}$$

$$\cancel{\cos^{-1}} \cos y = \cos^{-1} \left(\frac{5}{9} \right)$$

$$y = \cos^{-1} \left(\frac{5}{9} \right)$$

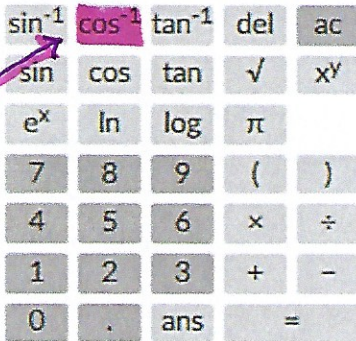
$$y = \boxed{56.25^\circ}$$

↑
rounded to 2 decimal places

acos(5/9) =

56.251011404

degrees →



cos⁻¹ Key

[also called arc cos

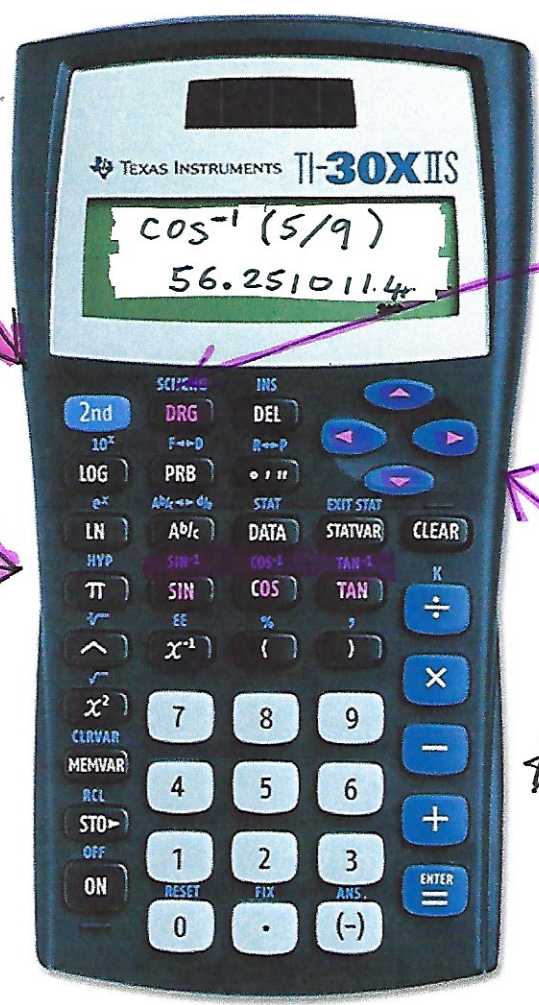
or inverse cos]

Your calculator can take the inverse of sin, cos and tan functions. These are written above the sin, cos, and tan buttons

to use them

Press 2nd

then the button

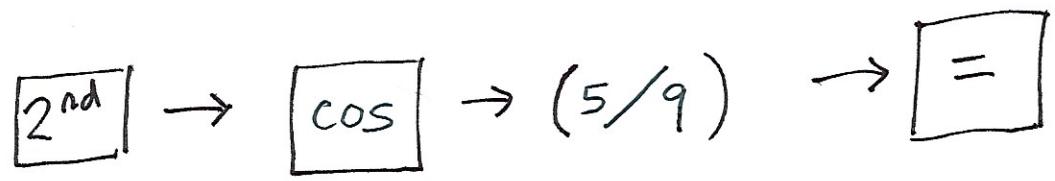


DRG key says DEG

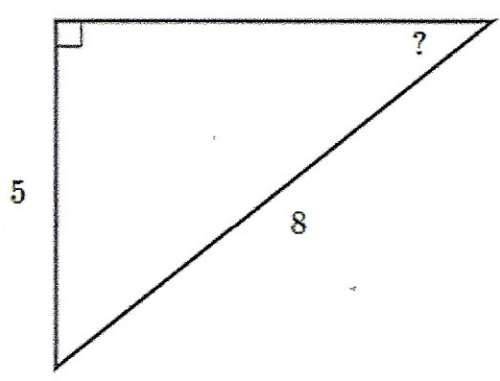
if not, change using arrow keys

★ Remember ★ We are using degrees "DEG" in our problems

Keystrokes for Problem #1

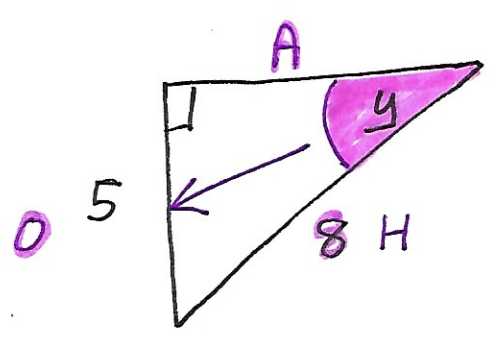


#2)



first label triangle with
 "O" for opposite
 "A" for adjacent
 "H" for hypotenuse

second decide which trig ratio you need. It will be sin because we know "O" and "H"



third solve for angle y

$$\sin x = \frac{O}{H}$$

$$\sin y = \frac{5}{8}$$

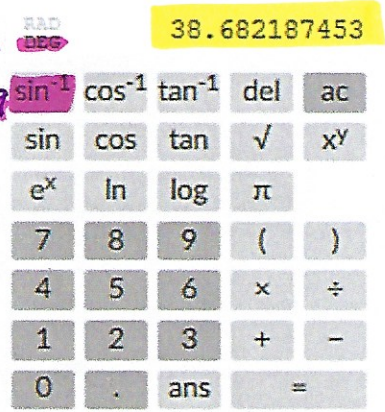
~~$$\sin^{-1} \sin y = \sin^{-1} \left(\frac{5}{8} \right)$$~~

$$y = \sin^{-1} \left(\frac{5}{8} \right)$$

$$y = \boxed{38.68^\circ}$$

↑
rounded to 2 decimal places

asin(5/8) =



degrees →

sin⁻¹ Key

[also called arcsin or inverse sin]