# Trigonometry

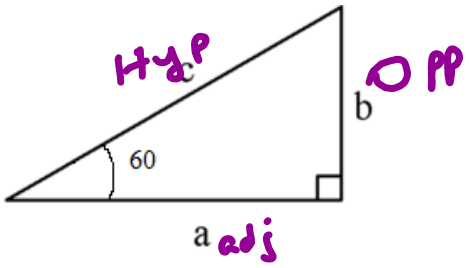
To find unknown sides use:

**SOHCAHTOA** **SOH - CAH - TOA**

O= opposite- always located opposite of the angle given

H= hypotenuse- always the longest side of the triangle

A= adjacent- side which is not the O or the H.




SOH CAH TOA

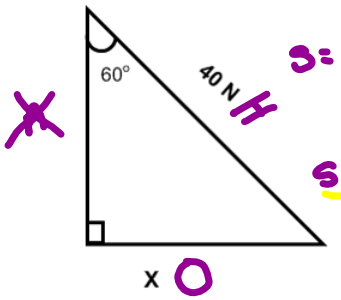
# Steps to determine which to use:

1- Place hyp, adj and opp on the triangle

2- Determine if use cos, sin or tan

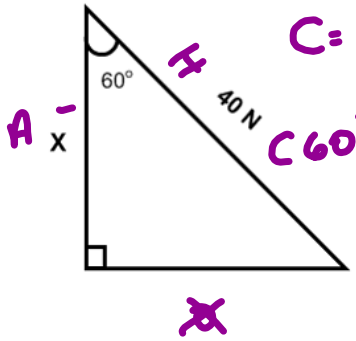
3- Solve for unknown

SOH CAH TOA




S: O/H

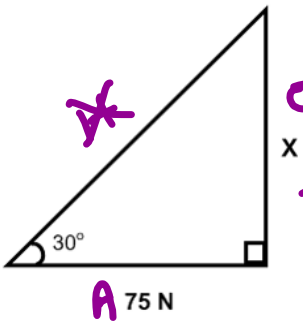
S60 = X/40N = 30N




C = A/H

C60 = X/40N

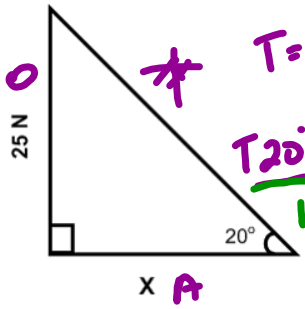
20N




T = O/A

T30 = X/75N

40N

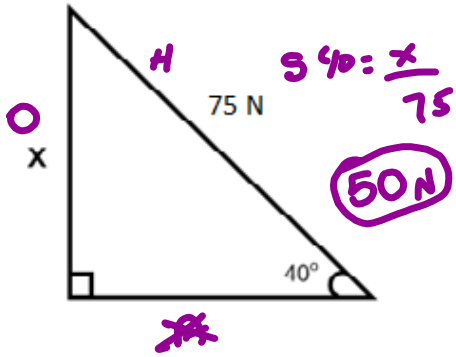



T = O/A

T20 = 25N/X

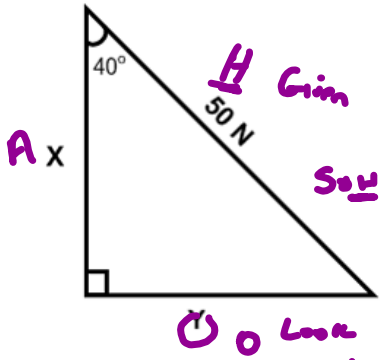
1 ÷ 25 = 20 ÷ X

70N




S40 = X/75

50N



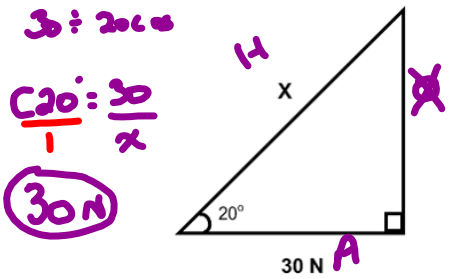

Cim

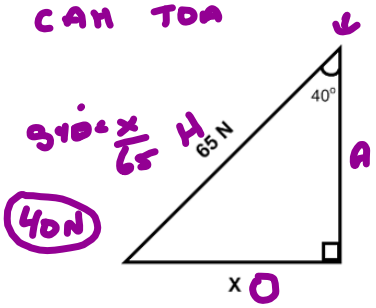
SOH CAH TOA

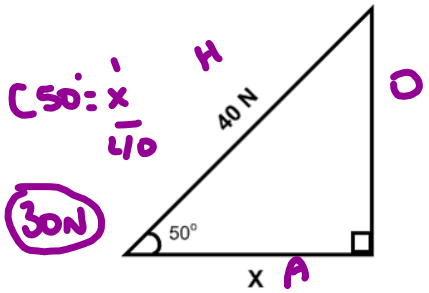
Look

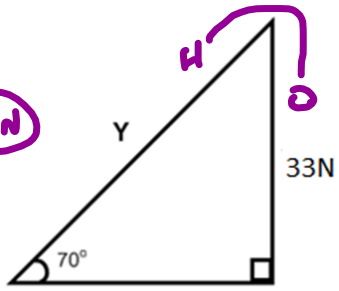
C40 = X/50 = 40N

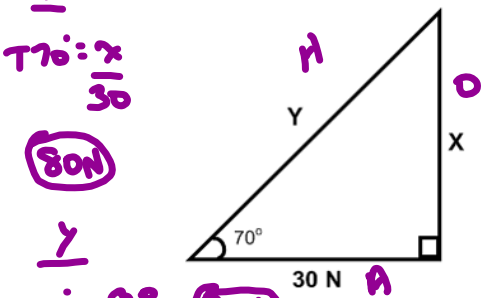
S40 = Y/50 = 30N

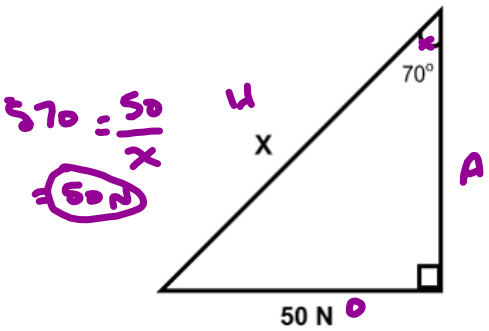

H
X
20°
30 N
A


40°
65 N
H
A
X
O


H
40 N
O
50°
X
A


H
O
Y
33N
70°
X
A


H
O
Y
X
70°
30 N
A


70°
H
X
A
50 N
O