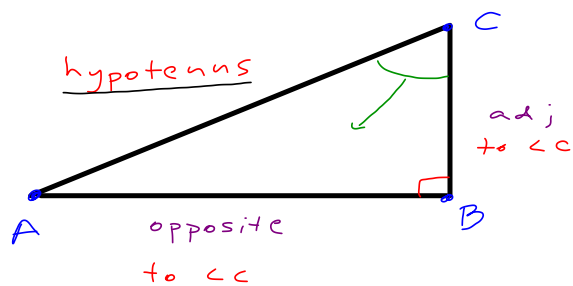
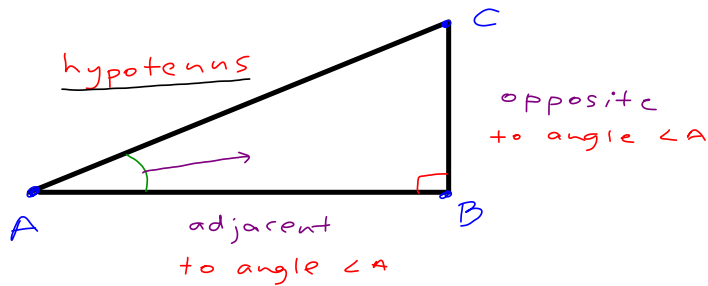
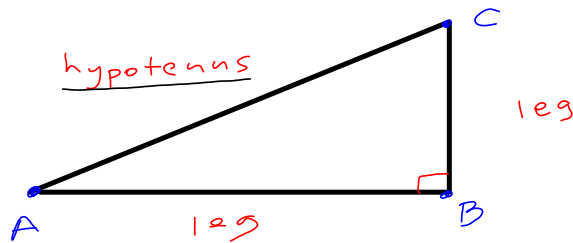


Lesson 4: Determining missing measurements using SOH CAH TOA

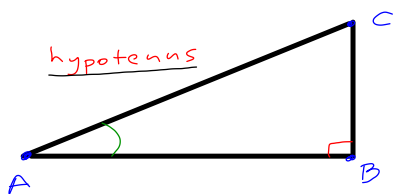
→ no angle selected?

↳ only for right triangles.

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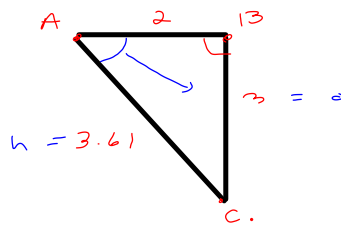


Sine of an Angle



$$\sin A = \frac{\text{opposite}}{\text{hypotenuse}}$$

p 111.



careful  
calculator  
must be in  
degrees.

Find measure of  $\angle A$

$$\sin A = \frac{o}{h}$$

$$\sin^{-1} \left( \frac{3}{3.61} \right)$$

$$A = 56.2^\circ$$

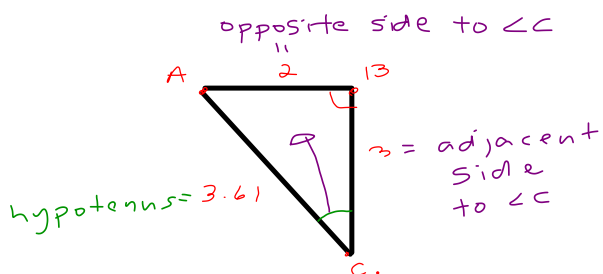
solve  $\angle A$   
SOH CAH  
Step i. label side, Tan

Step ii Solve for  
A  $\approx 56.2^\circ$

Do question 3-4  
p 111-112

p 111.

a) Find  $\angle C$



Solving for an angle  
w/ sine.

step i. identify angle  
in question.

step ii. label the sides.

step iii Write equation  
and sub in values

$$\sin C = \frac{\text{opp}}{\text{hypo}}$$

$$\cancel{\sin} \sin C = \sin^{-1} \left( \frac{2}{3.61} \right)$$

Solve.

Sine

$$C = 33.6^\circ$$

Cosine of an Angle



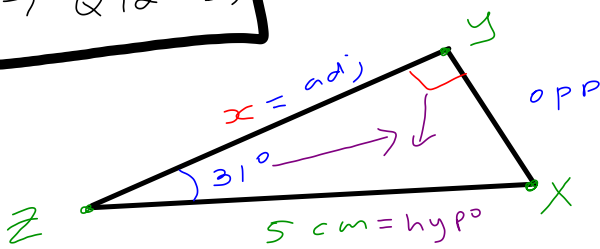
$$\cos A = \frac{\text{adj}}{\text{hypo}}$$

Step i. label angle and consequently the sides  
 - have hypo and want adj

$$\cos Z = \frac{ZY}{ZX}$$

pg 117 Q12 b)

Find  $x$



$$5(\cos 31) = \left(\frac{x}{5}\right)$$

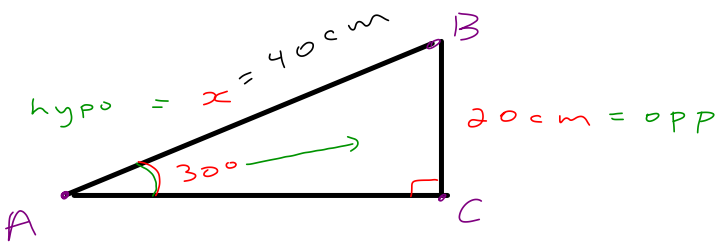
$$4.29 \text{ cm} = x$$

P 117  
d) Solve

S O H  
P  
A S

C A H  
S O

T O A  
S O A



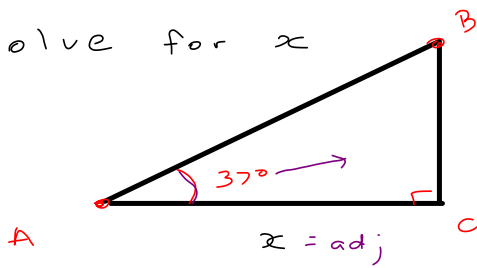
$$\sin A = \frac{\text{opp}}{\text{hypo}}$$

$$\sin 30 = \frac{20}{x}$$

$$\frac{x \sin 30}{\sin 30} = \frac{20}{\sin 30}$$

$$x = 40\text{cm}$$

Solve for  $x$



Soh  $\checkmark$  CAH  $\checkmark$       To  $\checkmark$  A  $\checkmark$   
 a p d  
 n p j

3 = opp

$$\tan A = \frac{\text{opp}}{\text{adj}}$$

$$\tan 37 = \frac{3}{x}$$

$$\cancel{x \cdot \tan 37} = \frac{3}{\cancel{\tan 37}}$$

$$x \approx 4 \text{ units}$$

p 129

# 2

p 132 # 8 - # 10