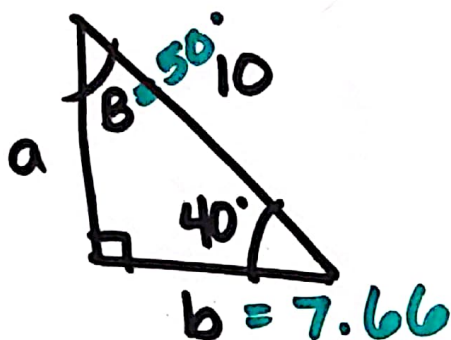


Trig Session #3 :

Review

① Find $\angle B$: use sum $\angle$'s = 180°



$$\begin{array}{r} 180^\circ \\ - 90^\circ \\ \hline = 90^\circ \\ - 40^\circ \\ \hline \underline{\underline{50^\circ}} \leftarrow \angle B \end{array}$$

② Find b : $\cos B = \frac{\text{adj}}{\text{hyp}}$

$$\sin B = \frac{\text{opp}}{\text{hyp}}$$

$$\sin B = \frac{b}{10}$$

$$10 \cdot \sin 50^\circ = \frac{b}{10} \cdot 10$$

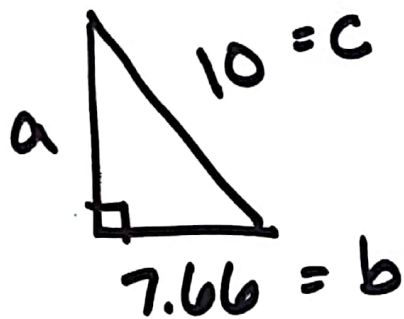
$$b = 10 \cdot \underbrace{\sin 50^\circ}_{0.766} = \underline{\underline{7.66}}$$

③ Find a : $c^2 = a^2 + b^2$

(Review)

Pg. 2

③ (cont'd)



$$c^2 = a^2 + b^2$$

$$a^2 = c^2 - b^2$$

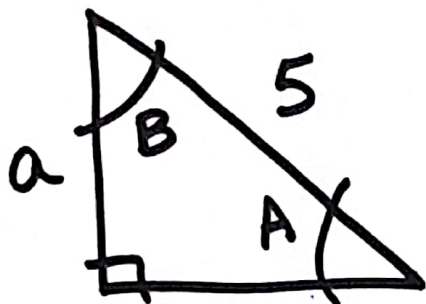
$$a^2 = 10^2 - 7.66^2$$

$$a^2 = 100 - 58.7$$
$$\sqrt{a^2} = \sqrt{41.3}$$

$$\underline{\underline{a = 6.4}}$$

Trig #3

Pg. 3



$$\sin A = \frac{2}{5}$$

Plan:

1. Pyth. Thm.
 $c^2 = a^2 + b^2$

2. $\sin A = \frac{\text{opp}}{\text{hyp}}$

3. Sum of angles = 180°

1. $c^2 = a^2 + b^2$

$$a^2 = c^2 - b^2 = 5^2 - 2^2$$
$$= 25 - 4 = 21$$

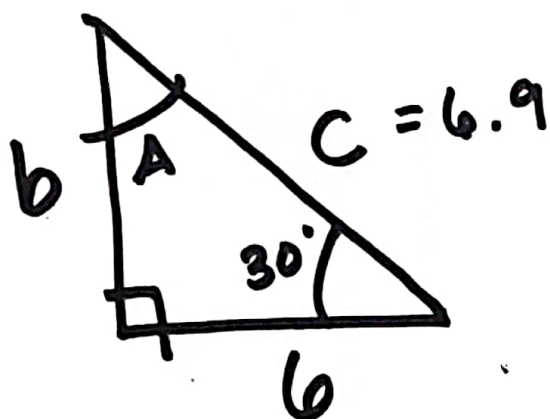
$$a = \sqrt{21} = 4.6$$

2. $\sin A = \frac{4.6}{5}$

← inverse sine
to get $\angle$

$$\angle A = \sin^{-1}\left(\frac{4.6}{5}\right) \Rightarrow \underline{\underline{66.9^\circ}}$$

3. $\angle B = 180^\circ - 90^\circ - 66.9^\circ = \underline{\underline{23.6^\circ}}$



Plan:

1. Sum $\angle = 180^\circ$

2. $\sin A = \frac{\text{opp}}{\text{hyp}}$

3. $\cos A = \frac{\text{adj}}{\text{hyp}}$

1. 180°
 $- 90^\circ$
 $- 30^\circ$

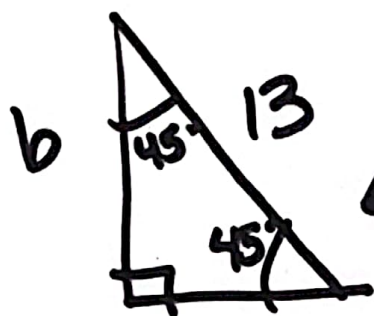
$60^\circ = \angle A$

2. $\frac{\sin 60^\circ}{\sin 60^\circ} = \frac{6}{C} \cdot \frac{C}{\sin 60^\circ}$

$\Rightarrow C = \frac{6}{\sin 60^\circ} = \frac{6}{0.866} = \underline{\underline{6.9}}$

3. $\cos A = \frac{b}{6.9} \Rightarrow \cos 60^\circ = \frac{b}{6.9}$

$b = 6.9 \cos 60^\circ = \underline{\underline{3.45}}$



right
isosceles
triangle
 $b=a$

Plan:

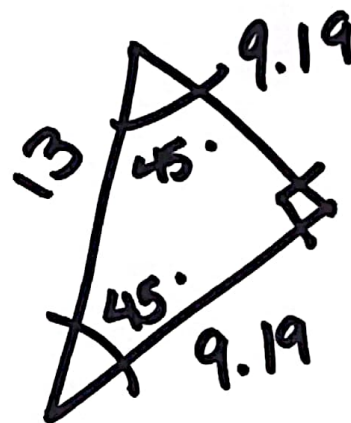
1. Sum $\angle$'s to 180.

2. $\sin A = \frac{a}{c}$

3. $c^2 = a^2 + b^2$

①

$$\begin{array}{r} 180^\circ \\ - 90^\circ \\ - 45^\circ \\ \hline 45^\circ = \angle A + \angle B \end{array}$$

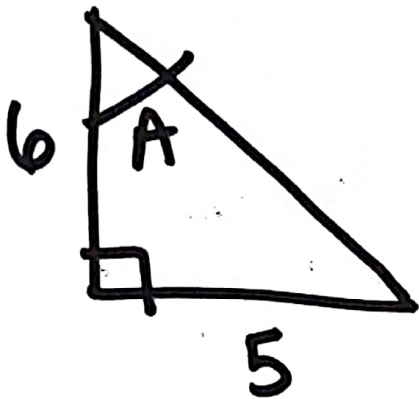


② $\sin 45^\circ = \frac{b}{13}$

$b = 13 \sin 45^\circ = \underline{\underline{9.19}}$

③ $a = b = \underline{\underline{9.19}} \leftarrow \text{rt. isosceles } \Delta$

pg. 6



$$\sin = \frac{\text{opp}}{\text{hyp}}$$

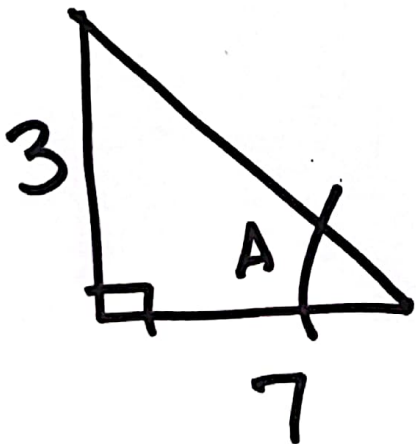
$$\tan = \frac{\sin}{\cos}$$

$$\cos = \frac{\text{adj}}{\text{hyp}}$$

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

$$\tan A = \frac{5}{6}$$

$$\angle A = \tan^{-1}\left(\frac{5}{6}\right) = \underline{\underline{39.8^\circ}} \sim \underline{\underline{40^\circ}}$$

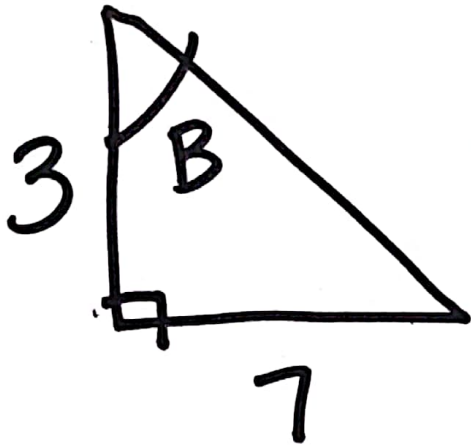


$$\tan A = \frac{\text{opp}}{\text{adj}}$$

$$\tan A = \frac{3}{7}$$

$$\angle A = \tan^{-1}\left(\frac{3}{7}\right)$$

$$\angle A = \underline{\underline{23.2^\circ}}$$



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

$$\tan B = \frac{7}{3}$$

$$\angle B = \tan^{-1}\left(\frac{7}{3}\right)$$

$$\angle B = \underline{\underline{66.8^\circ}}$$

$$\angle A + \angle B = 23.2^\circ + 66.8^\circ = \underline{\underline{90^\circ}}$$

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

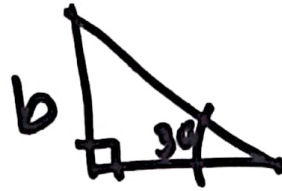
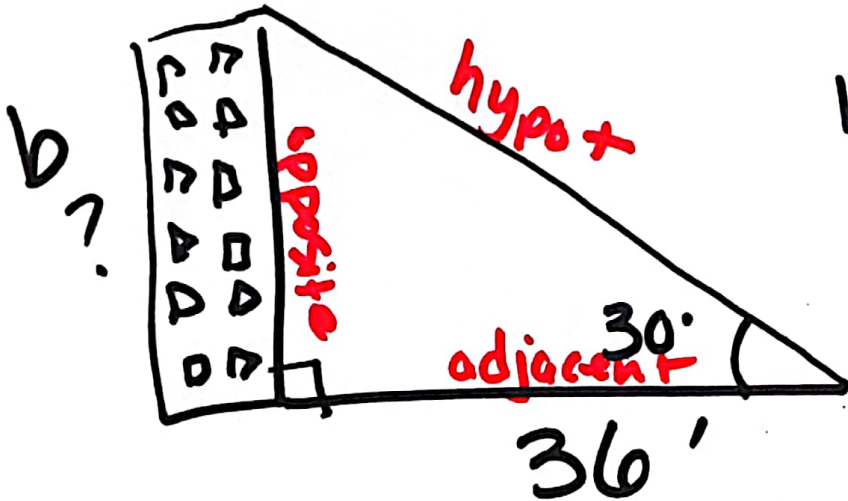
$$\cos A = \frac{\text{adj}}{\text{hyp}}$$

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

SOH CAH TOA

Trig #3

pg. 9



$$\tan B = \frac{b}{36}$$

$$\tan 4 = \frac{\text{opp}}{\text{adj}} = \frac{b}{36}$$

$$\tan 30^\circ = \frac{b}{36}$$

$$b = 36' \tan 30^\circ$$

$$\underline{\underline{b = 21'}}$$