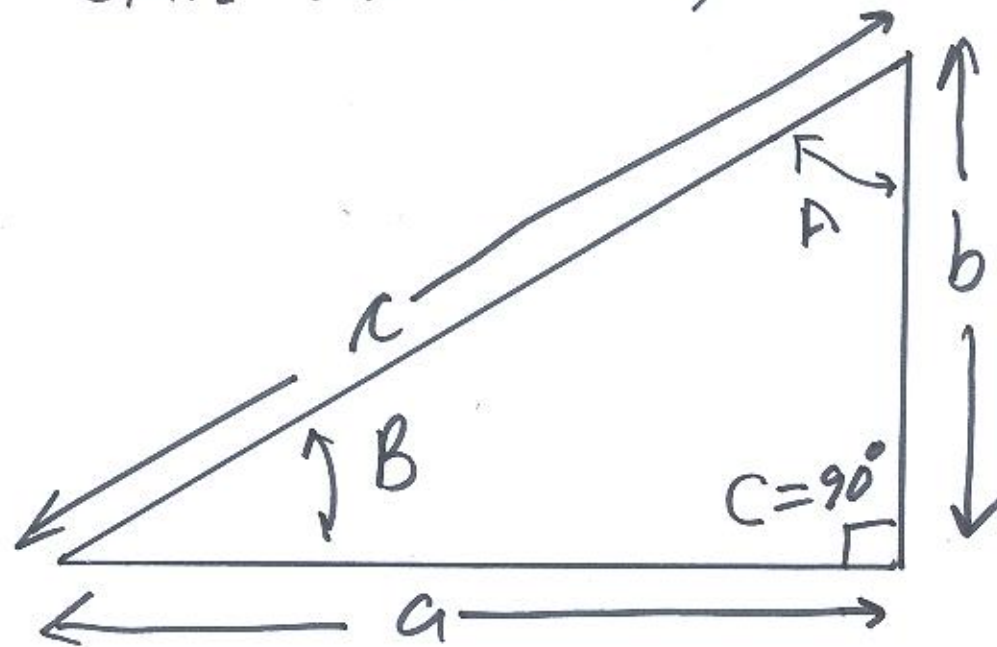


1/

Exam Friday

Quiz Due Thursday



Inverse trig fncs  
 $\sin^{-1}(r) = \angle$  whose sine is  $r$   
 $\cos^{-1}(r) = \angle$  whose cosine is  $r$   
 $\tan^{-1}(r) = \angle$  whose tangent is  $r$

SOHCAHTOA

$$\sin(\angle) = \text{side opp/hyp}$$

$$\cos(\angle) = \text{side adj/hyp}$$

$$\tan(\angle) = \text{side opp/side adj}$$

$$\cot(\angle) = \frac{1}{\tan(\angle)} = \text{side adj/side opp}$$

$$\sec(\angle) = \frac{1}{\cos(\angle)} = \frac{\text{hyp}}{\text{adj side}} ; \csc(\angle) = \frac{1}{\sin(\angle)} = \frac{\text{hyp}}{\text{opp}}$$

2/ Can completely solve any rt. triangle

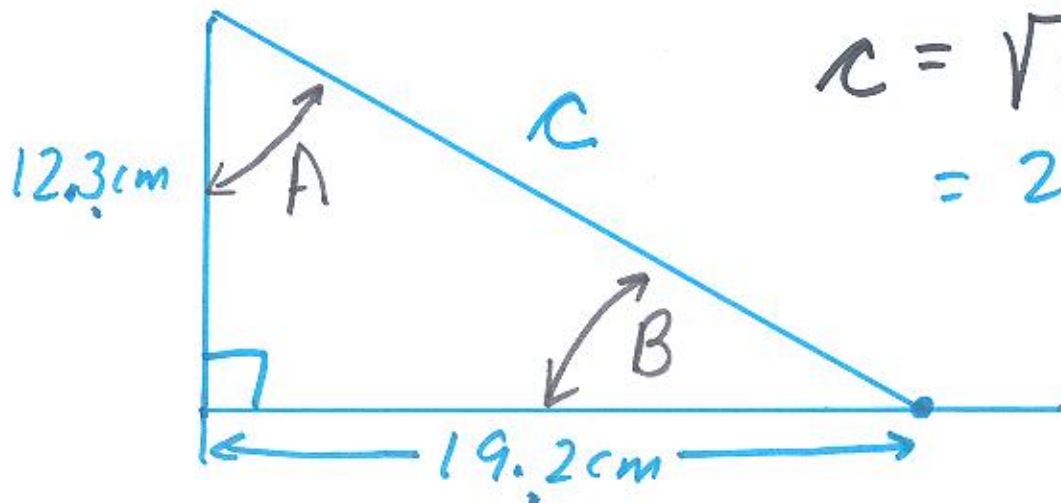
3 pieces (one of which is its a right triangle)  
of information

↑  
one of which must be a side

$$b = 12.3 \text{ cm} \quad a = 19.2 \text{ cm} \quad c = \underline{22.8 \text{ cm}}$$

$$B = \frac{90^\circ - A}{32.64^\circ}$$

$$A = \underline{57.36^\circ} \quad C = 90^\circ$$



$$c = \sqrt{12.3^2 + 19.2^2} \text{ cm} \\ = 22.80 \text{ cm}$$

3/ Get  $\angle A$

$$\sin(A) = \frac{19.2\text{cm}}{c}$$

$$A = \angle \text{ whose sine is } \frac{19.2\text{cm}}{c}$$

$$A = \sin^{-1}\left(\frac{19.2\text{cm}}{c}\right) = 57.36^\circ$$

2nd way to get  $\angle A$

$$\cos(A) = \frac{12.3\text{cm}}{c}$$

$$A = \angle \text{ whose cosine is } \frac{12.3\text{cm}}{c}$$

$$A = \cos^{-1}\left(\frac{12.3\text{cm}}{c}\right) = 57.36^\circ$$

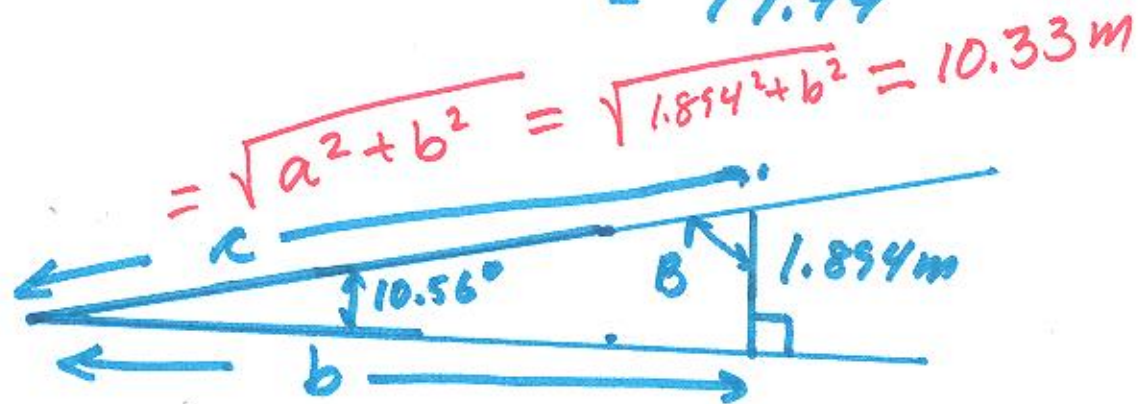
3rd way to get  $\angle A$

$$\tan(A) = \frac{19.2\text{cm}}{12.3\text{cm}}$$

$$A = \angle \text{ whose tangent is } \frac{19.2}{12.3}$$

$$A = \tan^{-1}\left(\frac{19.2}{12.3}\right) = 57.36^\circ$$

$$B = 90^\circ - A = 90^\circ - 10.56^\circ = 79.44^\circ$$



First b, then c

~~$$\tan(10.56^\circ) = \frac{1.894\text{m}}{b}$$~~

$$b \tan(10.56^\circ) = 1.894\text{m}$$

$$b = \frac{1.894\text{m}}{\tan(10.56^\circ)}$$

$$b = 10.16\text{m}$$

~~$$1.894\text{m} \tan(79.44^\circ) = \frac{b \cdot 1.894\text{m}}{1.894\text{m}}$$~~

$$b = 1.894 \tan(79.44^\circ)$$

First c, then b

$$\sin(10.56^\circ) = \frac{1.894\text{m}}{c}$$

Cross multiply

$$\boxed{c} \frac{\sin(10.56^\circ)}{\sin(10.56^\circ)} = \frac{1.894\text{m}}{\sin(10.56^\circ)}$$

$$c = \frac{1.894\text{m}}{\sin(10.56^\circ)} = 10.33\text{m}$$

$$b = \sqrt{c^2 - 1.894^2} = 10.16\text{m}$$

5/

$$(n-2) * 180^\circ$$

Pentagon  $n = 5$

$$3 * 180^\circ = 540^\circ$$

$$\text{interior } \angle \text{ of a regular pentagon} = \frac{540^\circ}{5} = 108^\circ$$