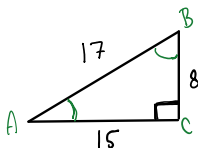


Sine & Cosine Ratio intro

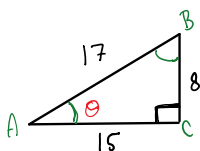
Thursday, November 10, 2016 8:40 AM



The Sine ratio is 0.47 label the sides. Theta is not given

$$\sin \theta = 0.47$$

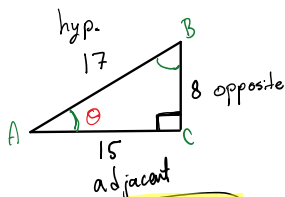
Hint**
Which numbers divide to give you 0.47?



$$\sin \theta = 0.47$$

Which numbers divide to give you 0.47?
In this case it is 8/17

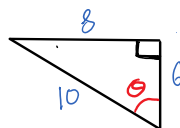
If θ is a reference, then the following triangle will be labelled like the triangle below



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

TRY!!

Given the values below what is the Sine Ratio?



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

$$\sin \theta = \frac{8}{10}$$

$$\sin \theta = 0.8$$

Given the sine ratio above, what is angle theta?

$$\theta = \sin^{-1}(0.8)$$

$$\theta \approx 63^\circ$$

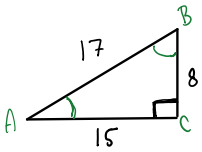
Lets Practice!!!

Given an angle, determine the Sine Ratio

- 1) $\sin 11^\circ = .19 \rightarrow 0.19$
- 2) $\sin 54^\circ = .82 \rightarrow 0.80$
- 3) $\sin 86^\circ = .99 \rightarrow 0.99$

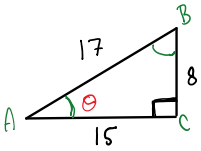
Given a ratio determine the angle

- 1) $\sin \theta = 0.1372 = 8^\circ$
- 2) $\sin \theta = 0.3991 = 24^\circ$
- 3) $\sin \theta = 0.8603 = 59^\circ$



The Cosine ratio is 0.88 label the sides. Theta is not given

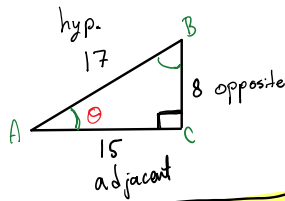
$$\cos \theta = 0.88$$



$$\cos \theta = 0.88$$

Which numbers divide to give you 0.88?
In this case it is 15/17

If θ is a reference, then the following triangle will be labelled like the triangle below

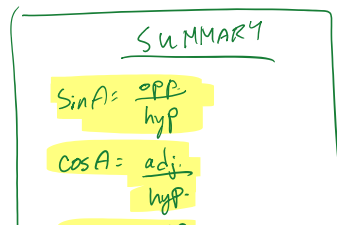


$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

TRY!!!

Given the angle, what is the cosine ratio?

- 1) $\cos 17^\circ = 0.96$
- 2) $\cos 49^\circ = 0.66$
- 3) $\cos 80^\circ = 0.17$



$$3) \cos 80^\circ = 0.17$$

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

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

Given the ratio, determine the angle to the nearest degree

$$1) \cos A = 0.2785 = 74^\circ$$

$$2) \cos A = 0.5392 = 57^\circ$$

$$3) \cos A = 0.9032 = 25^\circ$$

Feedback and ticket out the door. On the post-it-note, answer the following question

1. What is one thing you understood? (be specific)
2. What is one thing you did not understand? (be specific)

HW \rightarrow Pg 95 #4, 5, 6, 7, 8, 10

ab