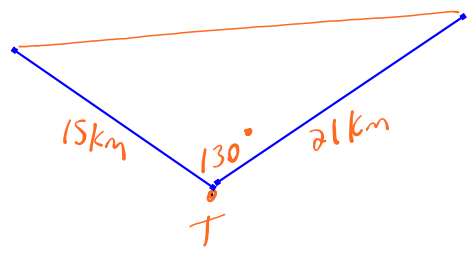


Homework...

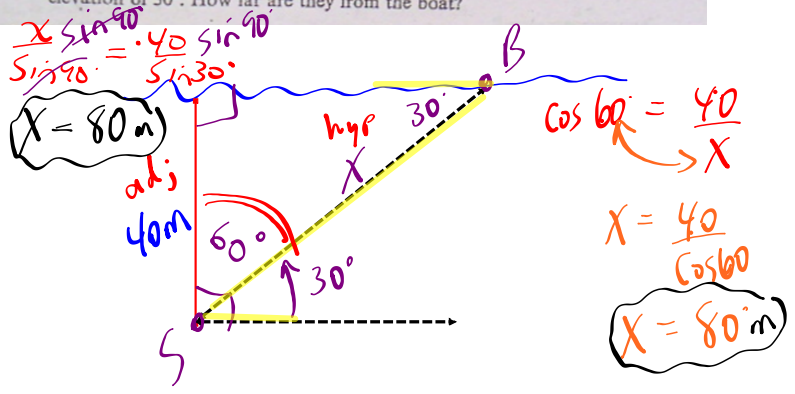
10.12 S 10.13 #2, 5
 Worksheet - Law of Cosines.doc QUESTIONS???

5 Two jets were sighted from Vancouver Airport in the same vertical plane as the airport. The sighting distances from the planes to the airport are 15 km and 21 km with an angle of 130° between the sightings. Find the distance between the jets.

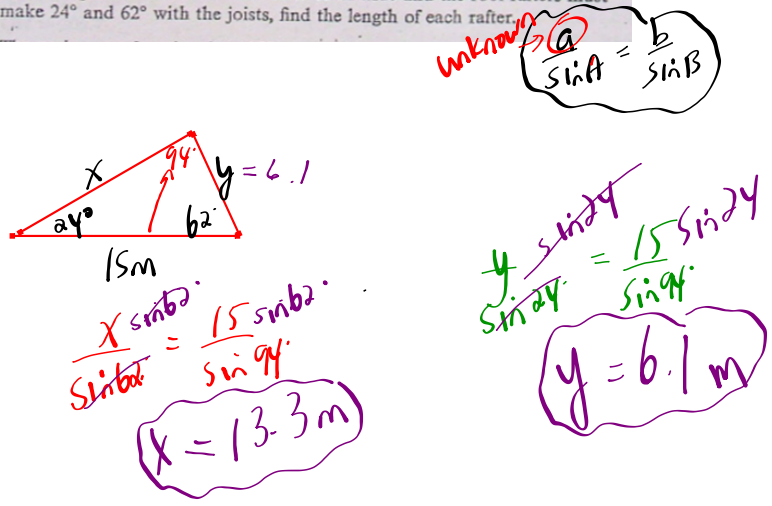


10.13
 #2

2 Scuba divers, 40 m below the water surface, see their boat at an angle of elevation of 30° . How far are they from the boat?

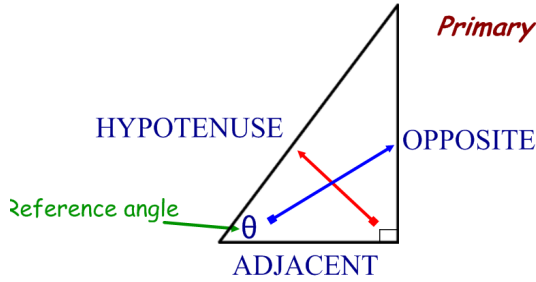


5 To meet the solar heating tolerances, a house roof line must be constructed to exact specifications. If the house is 15 m wide and the roof rafters must make 24° and 62° with the joists, find the length of each rafter.



REVIEW - What formula do I use? Ask yourself...

- Is it a right triangle? If Yes, then...



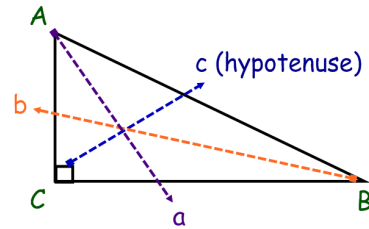
Primary Trigonometric Ratios

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

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

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

Pythagorean Theorem



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

Memory Aid: "SOH CAH TOA"

- If you are finding a side, do you have **SAS**? If Yes, then...

Law of Cosines

$$a^2 = b^2 + c^2 - 2bc \cos A$$

- If you are finding an angle, do you have **SSS**? If Yes, then...

Law of Cosines (rearranged)

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

- Anything else...use your Law of Sines!

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

"when looking for a side"

"when looking for an angle"

EXTRA PRACTICE TIME...Finish for HW!!!

Puzzle Review - Primary Trig, Law of Sines_Cosines.pdf



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

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

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

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

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$

Attachments

Worksheet - Law of Cosines.doc

Puzzle Review - Primary Trig, Law of Sines_Cosines.pdf