

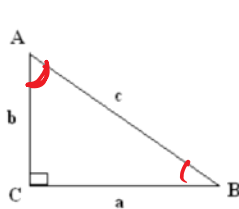
# Day 3: Trig Ratio Review

Tuesday, November 26, 2013 12:18 PM

## AW Math 11

### Day 3: Trig Ratio Review (SohCahToo) Finding Sides class notes

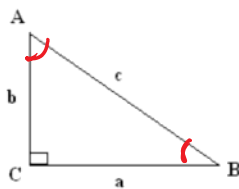
Sine: Opposite side ÷ hypotenuse (SOH)



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

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

Cosine: Adjacent side ÷ hypotenuse (CAH)



$$\cos A = \frac{b}{c}$$

$$\cos B = \frac{a}{c}$$

Keep calculator in *DEGREE* mode.

Sin 60°	0.8660
Sin 45°	0.7071
Cos 72°	0.3090
Cos 16°	0.9613

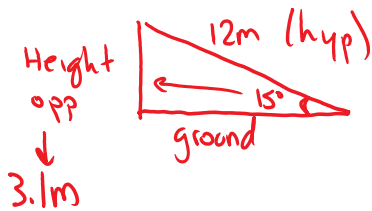
Sin A = 0.2419	Angle A = 14°
Sin B = 0.9848	Angle B = 80°
Cos X = 0.5000	Angle X = 60°
Cos Y = 0.6691	Angle Y = 48°

2nd Sin or Cos

**Example 1:** SOH CAH TOA

Jordan uses a portable conveyor for stockpiling landscaping materials such as gravel in his maintenance yard. The conveyor has a length along the belt of 12 m, and makes a maximum angle of 15° with the ground.

a) Sketch the conveyor. Label your diagram with the information you have.

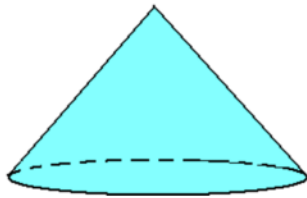


b) What is the maximum height of gravel stockpile that this conveyor can make?

$$\sin 15 = \frac{\text{opp (Height)}}{\text{hyp (Belt)}} \quad \sin 15 = \frac{x}{12} \quad \sin 15 \times 12 \div 1 = \boxed{3.1\text{m}}$$

Assignment pg 13-16

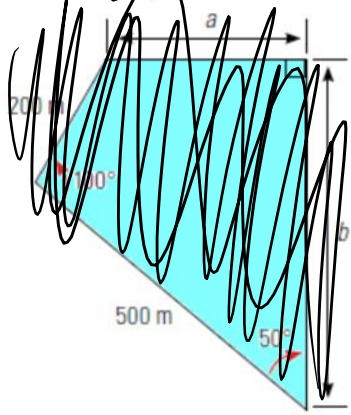
c) The gravel stockpile is in the shape of a cone and makes an angle of 37° with the ground. What volume of material can Jordan store in the stockpile?



**AW Math 11**

~~Example 2 (Enriched) (only if time)~~

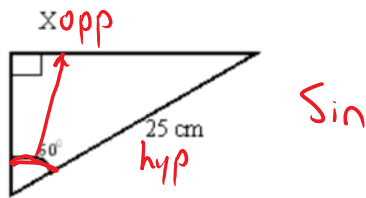
~~Danielle is a rancher living near 100 Mile House, BC, and has a piece of property shown on the plan below. She is planning to build a new fence, using 3 strands of barbed wire, around the perimeter. How much wire will she need for the fence?~~



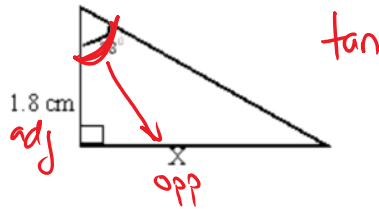
Day 3: Trig Ratio Review - Finding Sides assignment

Find the length of X in the following

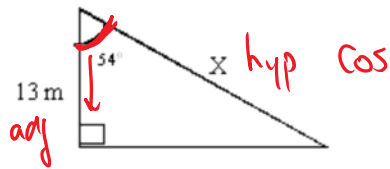
1.



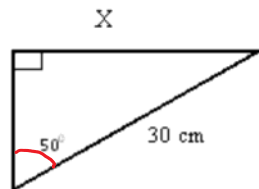
2.



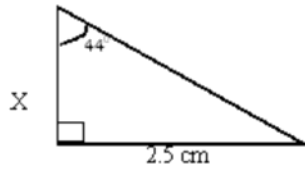
3.



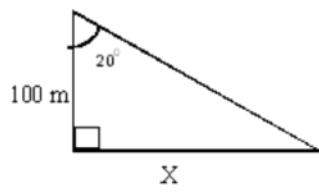
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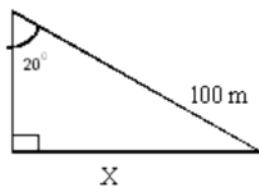
5.



6.



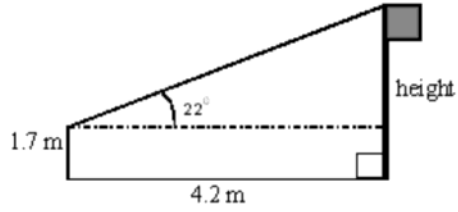
7.



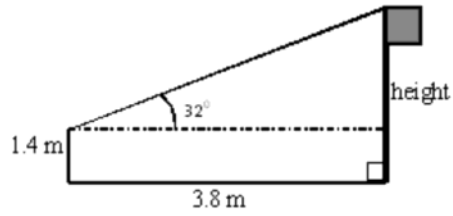
8.



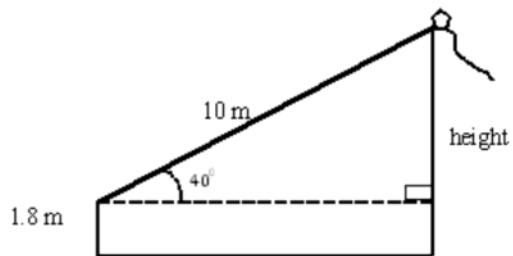
9. Find the height of the flagpole



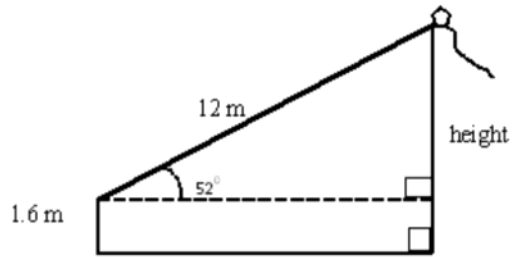
10. Find the height of the flagpole



11. Find the height of the kite. The length of the string is 10 m



12. Find the height of the kite. The length of the string is 12 m



13. Find the height of the tree

