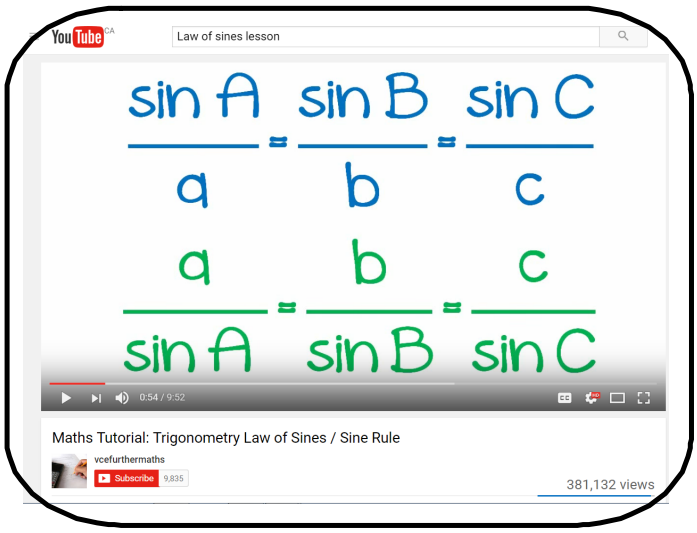
Foundations of Math 11 - Friday, March 17th

1) watch the video on Law of Sines

2) copy down the notes/examples with solutions

3) work on homework

Click on the Globe to get the link!!!



Law of Sines

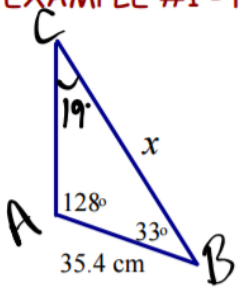
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

"when looking for a side"

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

"when looking for an angle"

EXAMPLE #1 - Finding a side.



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

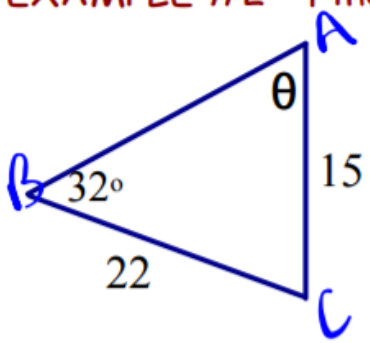
$\frac{x}{\sin 128} = \frac{35.4}{\sin 19}$ $\sin 128$

$x =$

```
35.4*sin(128)/si
n(19)
          85.6827681
35.4/sin(19)*sin
(128)
          85.6827681
```

$x = 85.68$ (cm)

EXAMPLE #2 - Finding an angle.



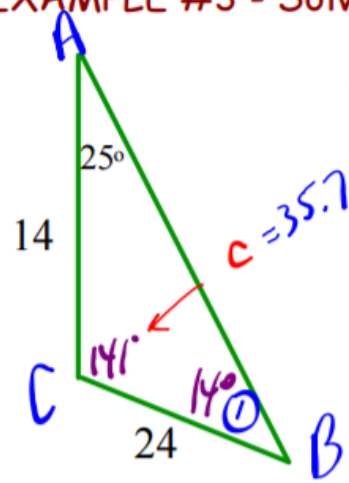
$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$

$\frac{22\sin\theta}{22} = \frac{22\sin 32^\circ}{15}$

$\sin^{-1}\sin\theta = \sin^{-1}(0.7772)$

$\theta = 51^\circ$

EXAMPLE #3 - Solve the triangle.



$\frac{14 \sin B}{14} = \frac{14 \sin 25}{24}$

$\sin^{-1} \sin B = \sin^{-1}(0.2465)$

$\angle B = 14°$

$\angle C = 141°$

$\frac{\sin 141° \, c}{\sin 141°} = \frac{24 \sin 141°}{\sin 25°}$

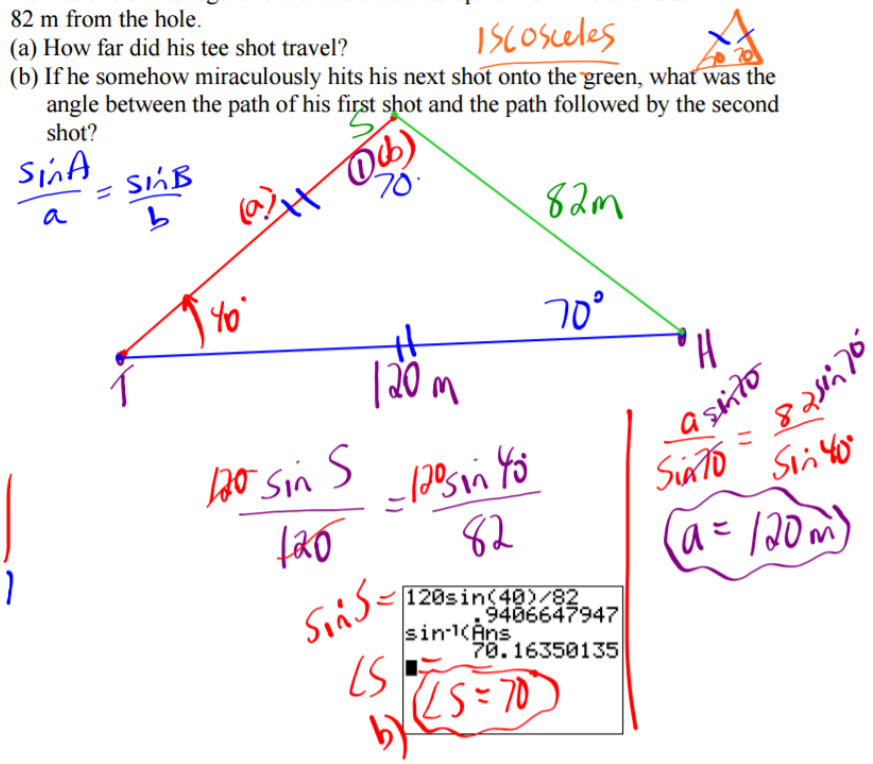
$c = 35.7$

EXAMPLE #4 - Application

Suppose that Mr. Watters was playing a straight par-3 golf hole that was 120 m long. He hits one of his regular old slices that ends up 40 ° off line and is still 82 m from the hole.

(a) How far did his tee shot travel?

(b) If he somehow miraculously hits his next shot onto the green, what was the angle between the path of his first shot and the path followed by the second shot?



Homework...

Worksheet - Law of Sines.doc

Exercise 10.9

#1 - 6

Exercise 10.10

#1 - 3