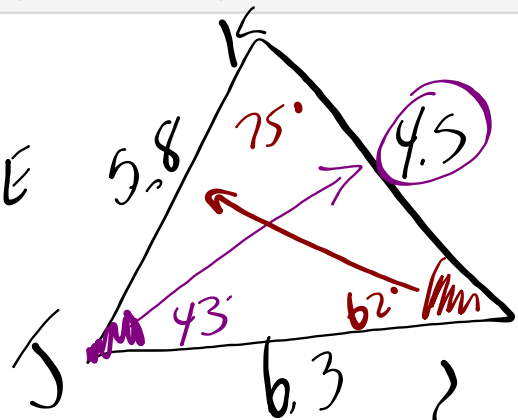
Foundations of Math 11 - March

HOMEWORK: 10.11 #1, 2, 5ac, 7ab AND 10.12 #1, 2, 5, 6

Attachment	Size
foundations_of_math_per._2_-_march_16.pdf	1.7 MB
foundations_of_math_per._4_-_march_16.pdf	2.02 MB

10.11 #5)

SOLVE



SSS

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

$\cos J = \frac{6.3^2 + 5.8^2 - 4.5^2}{2(6.3)(5.8)}$

$\cos^{-1}(\cos J) = \left(\frac{53.08}{73.08}\right)$

$\cos^{-1}$

$\angle J = 43°$

$\angle F = 75°$

$\frac{\sin F}{5.8} = \frac{\sin 43°}{4.5}$

$\sin^{-1}(\sin F) = (0.8790)$

$\sin^{-1}$

$\angle F = 62°$

6 A golfer hits a tee shot on a 350 m long golf hole. The ball is sliced 18° to the right. If the ball travelled 200 m, how far is the ball from the golf hole, (to the nearest metre)?

SAS

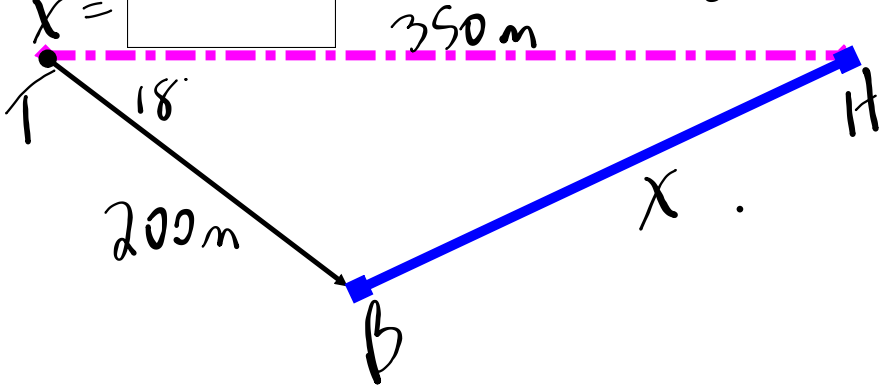
$a^2 = b^2 + c^2 - 2bc\cos A$

$x^2 = 200^2 + 350^2 - 2(200)(350)\cos 18$

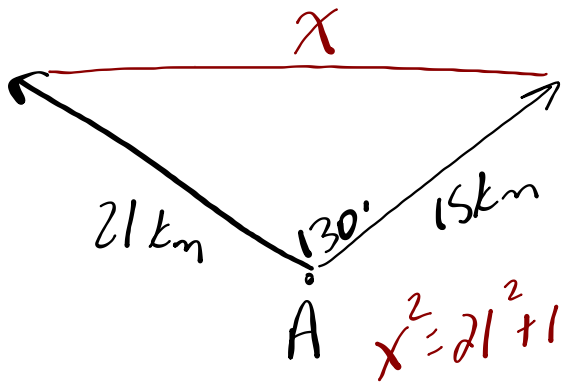
$x^2 =$ $200^2+350^2-2*200*350*\cos(18)$ = 29352.08772

$x =$ $\sqrt{\text{Ans}}$ = 171.32451

Distance = 171.3 m



5)



$x^2 = 21^2 + 15^2 - 2(21)(15)\cos 130°$

$x^2 =$

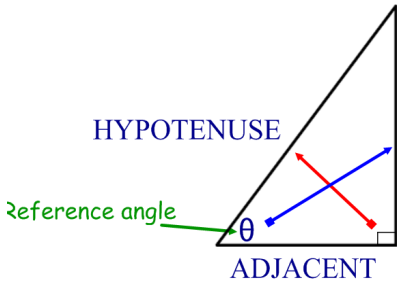
$x =$

```
21²+15²-2*21*15*
cos(130)
      1070.956194
√(Ans
      32.72546706
```

Distance → 32.7km

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

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



Primary Trigonometric Ratios

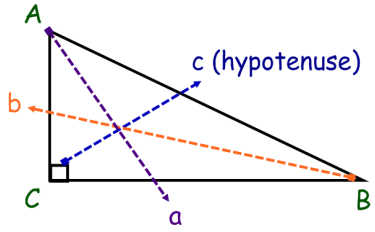
$$\sin\theta = \frac{opp}{hyp}$$

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

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

Memory Aid: "SOH CAH TOA"

Pythagorean Theorem



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

- 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)

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

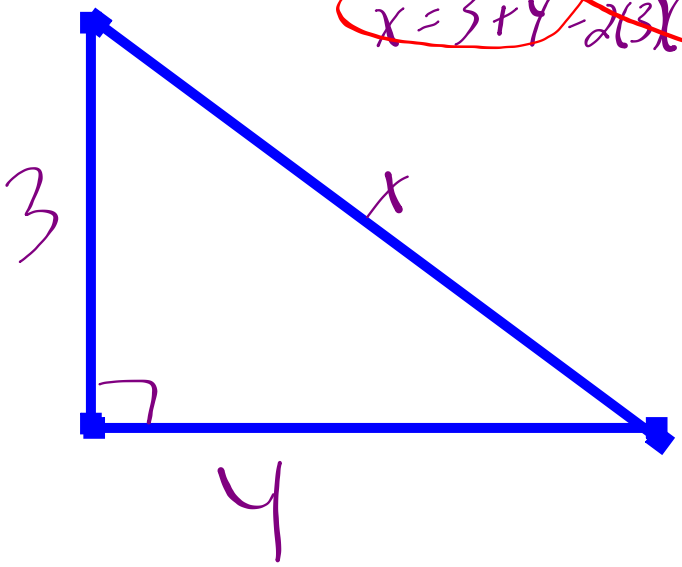
- Anything else...use your Law of Sines!

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

"when looking for a side"

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

"when looking for an angle"


$x^2 = 3^2 + 4^2 - 2(3)(4)\cos 90°$
zero
3
x
4

HOMEWORK...

Puzzle Review - Primary Trig, Law of Sines_Cosines.pdf

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

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

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

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

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

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

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

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

In Class Assignment on Wednesday!

Attachments

Puzzle Review - Primary Trig, Law of Sines_Cosines.pdf