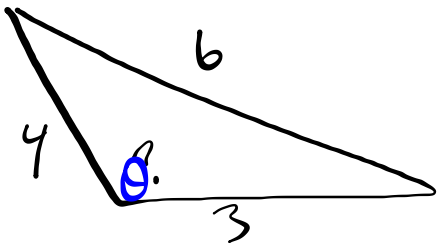
Homework Questions

opposites

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

26)

10.11



$$\cos\theta = \frac{4^2 + 3^2 - 6^2}{2(4)(3)}$$

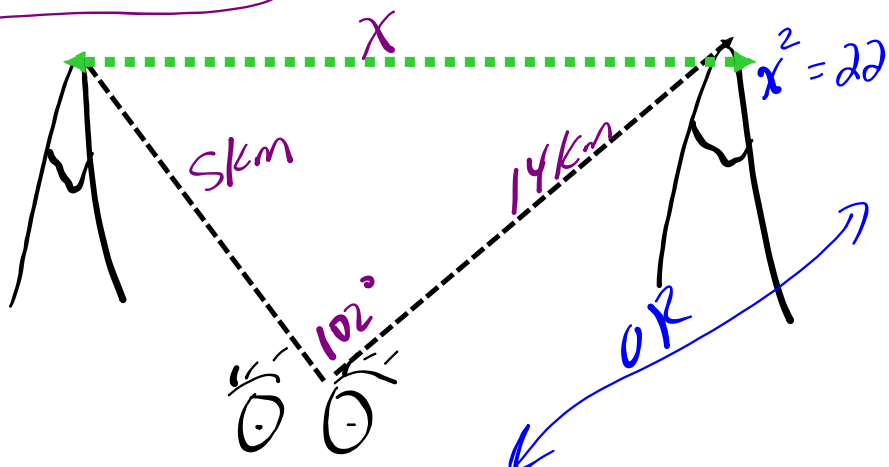
$$\cos^{-1}\cos\theta = \cos^{-1}\left(\frac{-11}{24}\right)$$

$$\theta = 117^\circ$$

10.12

3 From a point on a plain the distances from Jean's eyes to the peaks of two mountains at the same height are 5 km and 14 km. If the angle between her lines of sight is 102° find, to the nearest kilometre, the distance between the peaks.

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



$x^2 = 221 - 140\cos 102°$

OR

$x^2 = 5^2 + 14^2 - 2(5)(14)\cos 102°$

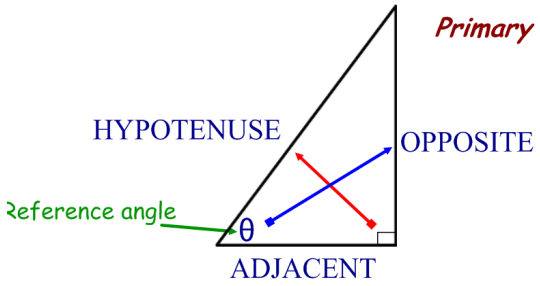
x^2

5²+14²-2*5*14*cos(102)
250.1076367
√(Ans
15.81479171
■ X=

$x = 15.8$ km

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

- Is it a right triangle? If Yes, then... Triples... 1) 3-4-5 2) 5-12-13 3) 7-24-25



Primary Trigonometric Ratios

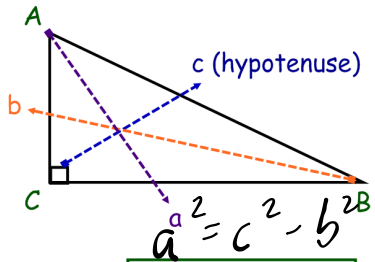
$$\sin\theta = \frac{opp}{hyp}$$

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

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

Memory Aid: "SOH CAH TOA"

Pythagorean Theorem



$a^2 = c^2 - b^2$

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

- 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"

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

Review - Primary Trig Ratios_Law of Sines_Cosines.pdf

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

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

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

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

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

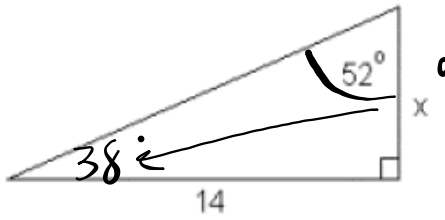
$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

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

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

1

a)



adj

$\tan 52^\circ = \frac{14}{x}$

$x = \frac{14}{\tan 52^\circ}$

$x = 10.9$

OR

press =

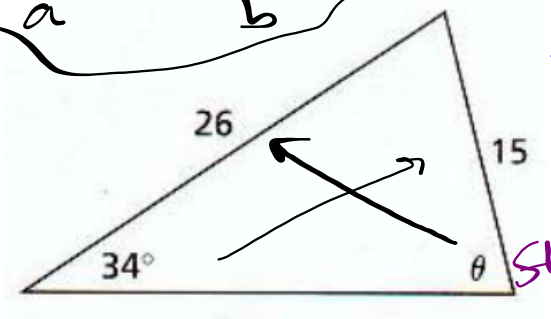
opp

$\frac{x}{\sin 38^\circ} = \frac{14}{\sin 52^\circ}$

$x = 10.9$

2-)

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



$\frac{26 \sin\theta}{26} = \frac{26 \cdot \sin 34}{15}$

$\sin\theta = (0.9693)$

$\sin^{-1}$

$\theta = 76°$

Attachments

Review - Primary Trig Ratios_Law of Sines_Cosines.pdf