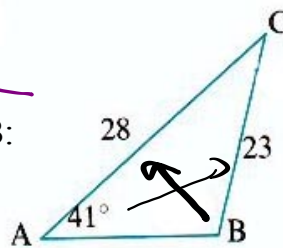


Warm Up

\* Ambiguous

Determine the measure of the obtuse angle B:



$$\frac{28}{28} \sin B = \frac{28}{23} \sin 41^\circ$$

$$\sin B = 0.7987$$

$\sin B =$ 

$28 \sin(41) / 23$ $.798680557$ $\sin^{-1}(\text{Ans})$ $53.00428891$
--

  
 $B =$

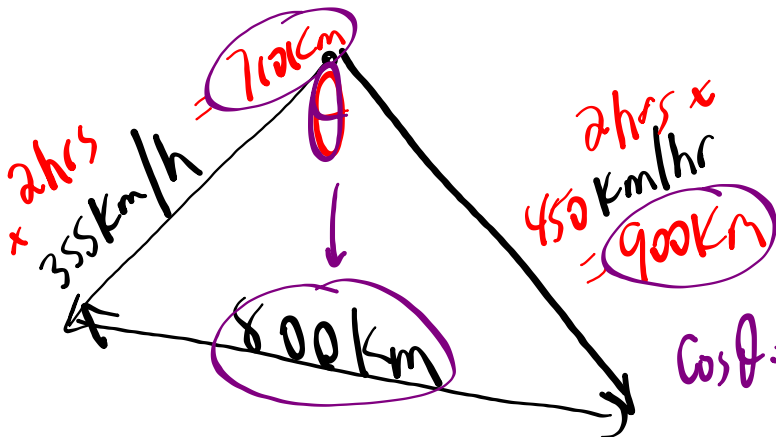
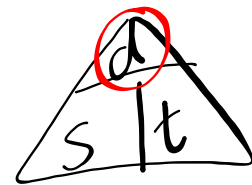
Foundations of Math 11 - March 23

Posted: March 23, 2016

HOMEWORK: p. 254 #5, #9, 12 and p. 272 #9, 12, & 14

9. Two airplanes leave the Hay River airport in the Northwest Territories at the same time. One airplane travels at 355 km/h. The other airplane travels at 450 km/h. About 2 h later, they are 800 km apart. Determine the angle between their paths, to the nearest degree.

$$S = \frac{d}{t}$$

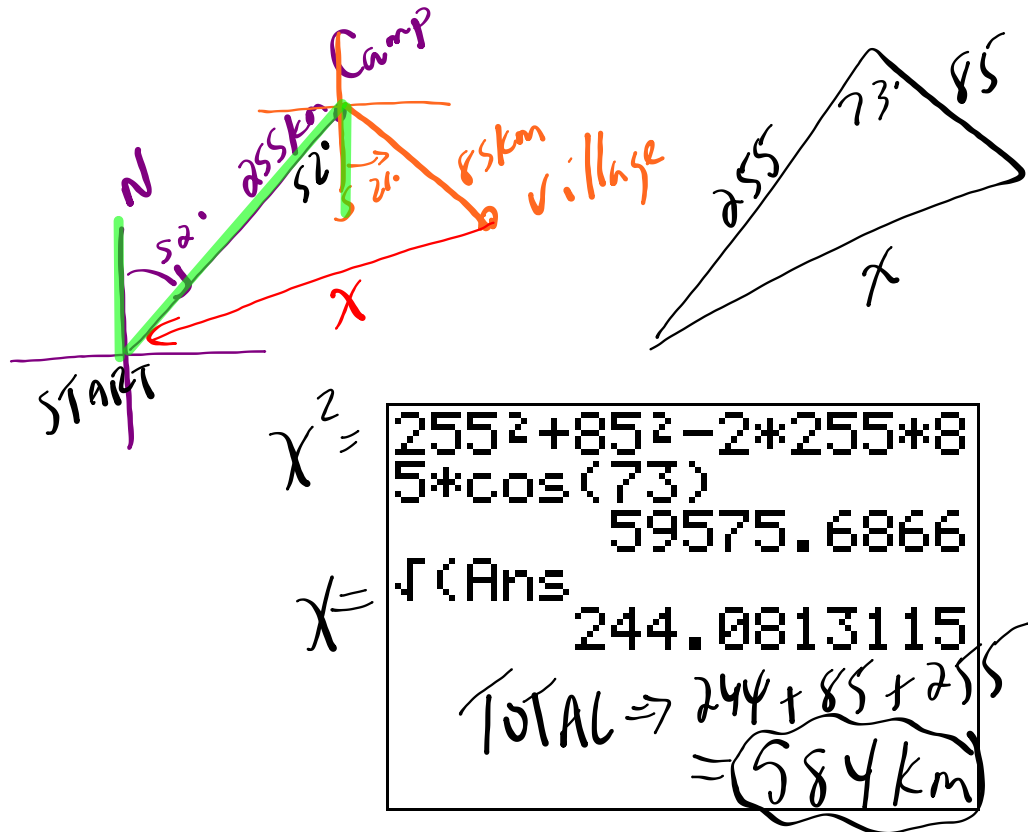


$$\cos \theta = \frac{710^2 + 900^2 - 800^2}{2(710)(900)}$$

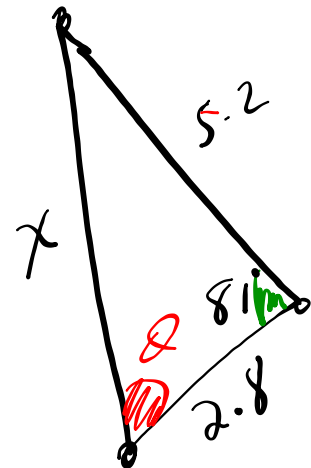
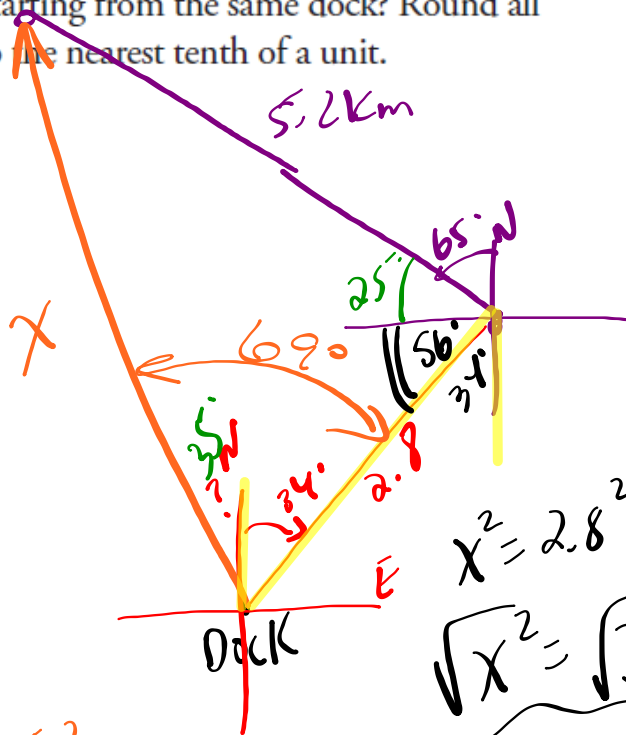
$$\cos^{-1} \cos \theta = \left( \frac{674}{100} \right) / \left( \frac{1278000}{100} \right)$$

$$\theta = 58^\circ$$

11. A bush pilot delivers supplies to a remote camp by flying 255 km in the direction  $N52^\circ E$ . While at the camp, the pilot receives a radio message to pick up a passenger at a village. The village is 85 km  $S21^\circ E$  from the camp. What is the total distance, to the nearest kilometre, that the pilot will have flown by the time he returns to his starting point?



12. A canoeist starts from a dock and paddles 2.8 km N34°E. Then she paddles 5.2 km N65°W. What distance, and in which direction, should a second canoeist paddle to reach the same location directly, starting from the same dock? Round all answers to the nearest tenth of a unit.



$$X^2 = 2.8^2 + 5.2^2 - 2(2.8)(5.2)\cos 81^\circ$$

$$\sqrt{X^2} = \sqrt{30}$$

$$X = 5.5 \text{ km}$$

N35°W

$$\frac{5.2 \sin \theta}{5.2} = \frac{5.2 \sin 81}{5.5}$$

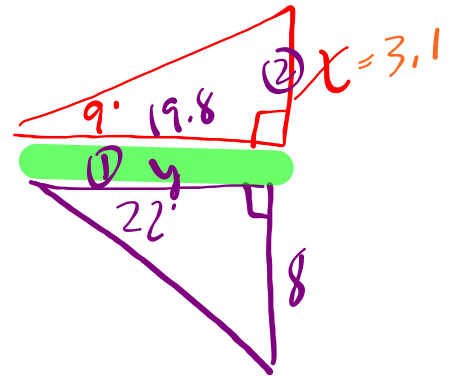
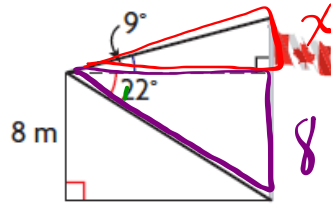
$$\sin \theta = \frac{5.2 \sin(81)}{5.5}$$

```

    .9338144311
    sin-1(Ans)
    69.03744448
    
```

$\theta =$

10. From a window in an apartment building, the angle of elevation to the top of a flagpole across the street is  $9^\circ$ . The angle of depression is  $22^\circ$  to the base of the flagpole. How tall is the flagpole, to the nearest tenth of a metre?



$$\textcircled{2} \tan 9^\circ = \frac{x}{19.8}$$

$$3.1 = x$$

$$h = 3.1 + 8$$

$$h = 11.1 \text{ m}$$

$$\textcircled{1} \tan 22^\circ = \frac{8}{y}$$

$$y = \frac{8}{\tan 22^\circ}$$

$$y = 19.8$$

Assgn # 7

