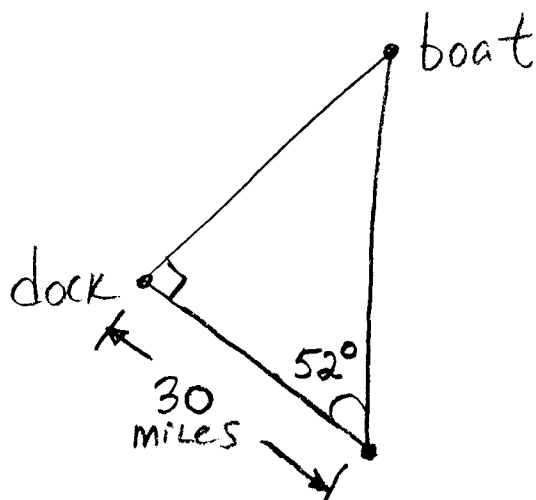


Alg 2 - BE

Thursday 12-8-11

ACT ① According to the measurements in the figure below, which of the following expressions gives the distance, in miles, from the boat to the dock?



(A) $30 \tan 52^\circ$

(B) $30 \cos 52^\circ$

(C) $30 \sin 52^\circ$

(D) $\frac{30}{\cos 52^\circ}$

(E) $\frac{30}{\sin 52^\circ}$

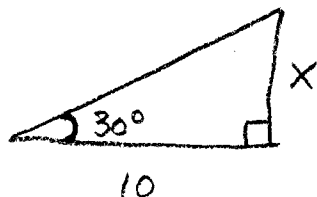
ANS

$$\tan 52^\circ = \frac{d}{30}$$

(A) $30 \tan 52^\circ = d$

Homework review: Pg. 707 #21-23, 25, 26

(21)



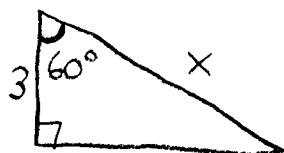
$$\tan 30^\circ = \frac{X}{10}$$

$$10 \tan 30^\circ = X$$

$$10(.5774) = X$$

$$\boxed{5.8 = X}$$

(22)

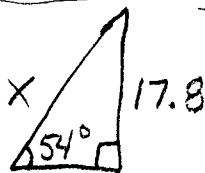


$$\cos 60^\circ = \frac{3}{X}$$

$$X \cos 60^\circ = 3$$

$$X = \frac{3}{\cos 60^\circ} = \frac{3}{(.5)} = \boxed{6 = X}$$

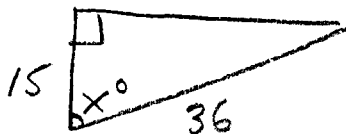
(23)



$$\sin 54^\circ = \frac{17.8}{X}$$

$$X = \frac{17.8}{\sin 54^\circ} = \frac{17.8}{(.8090)} = \boxed{22.0 = X}$$

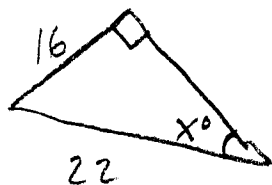
(25)



$$\cos X = \frac{15}{36} = \frac{5}{12} = .4167$$

$$\cos^{-1}(.4167) = 65.37 \approx \boxed{65^\circ = X}$$

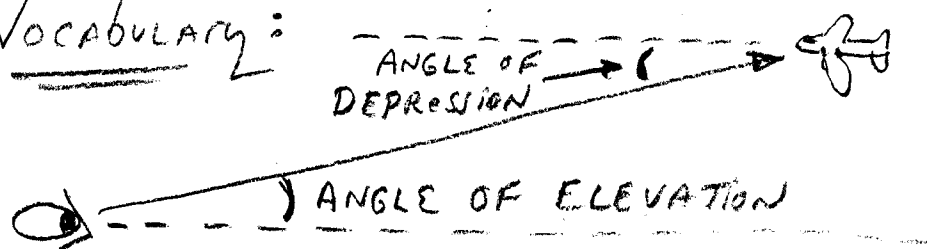
(26)



$$\sin X = \frac{16}{22} = \frac{8}{11} = .7273$$

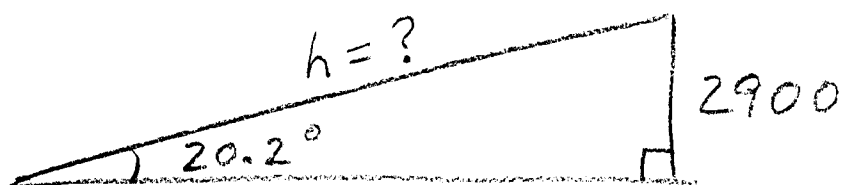
$$\sin^{-1}(.7273) = 46.66 \approx \boxed{47^\circ = X}$$

Vocabulary:



EX 7
PS 705

Ski run has angle of elevation = 20.2°
Vertical drop = 2900 ft. Estimate
length of run.



$$\sin 20.2^\circ = \frac{2900}{h}$$

$$h \sin 20.2^\circ = 2900$$

$$h = \frac{2900}{\sin 20.2^\circ} = \frac{2900}{0.3453} = \boxed{8398 \text{ ft}}$$

Practice $\Rightarrow$ Pg. 707 # 41, 42

Pg 708 # 49, 50

ACT practice/mini-topic review
