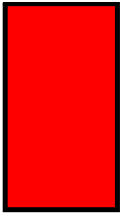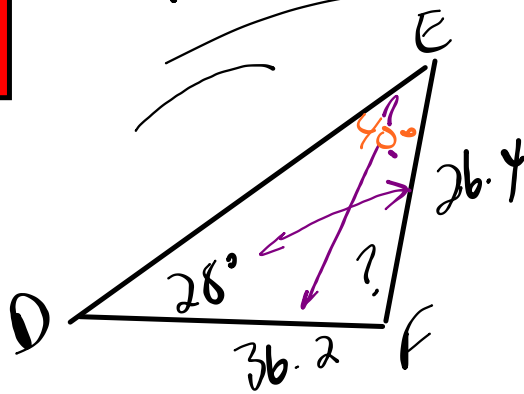HW Questions?

2b)

Find a side

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

Find an angle

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

E

40°   26.4

28°   ?

D   36.2   F

$$\dfrac{36.2 \sin E}{36.2} = \dfrac{36.2 \sin 28°}{26.4}$$

$$\sin^{-1} \sin E = \sin^{-1}(0.6437)$$

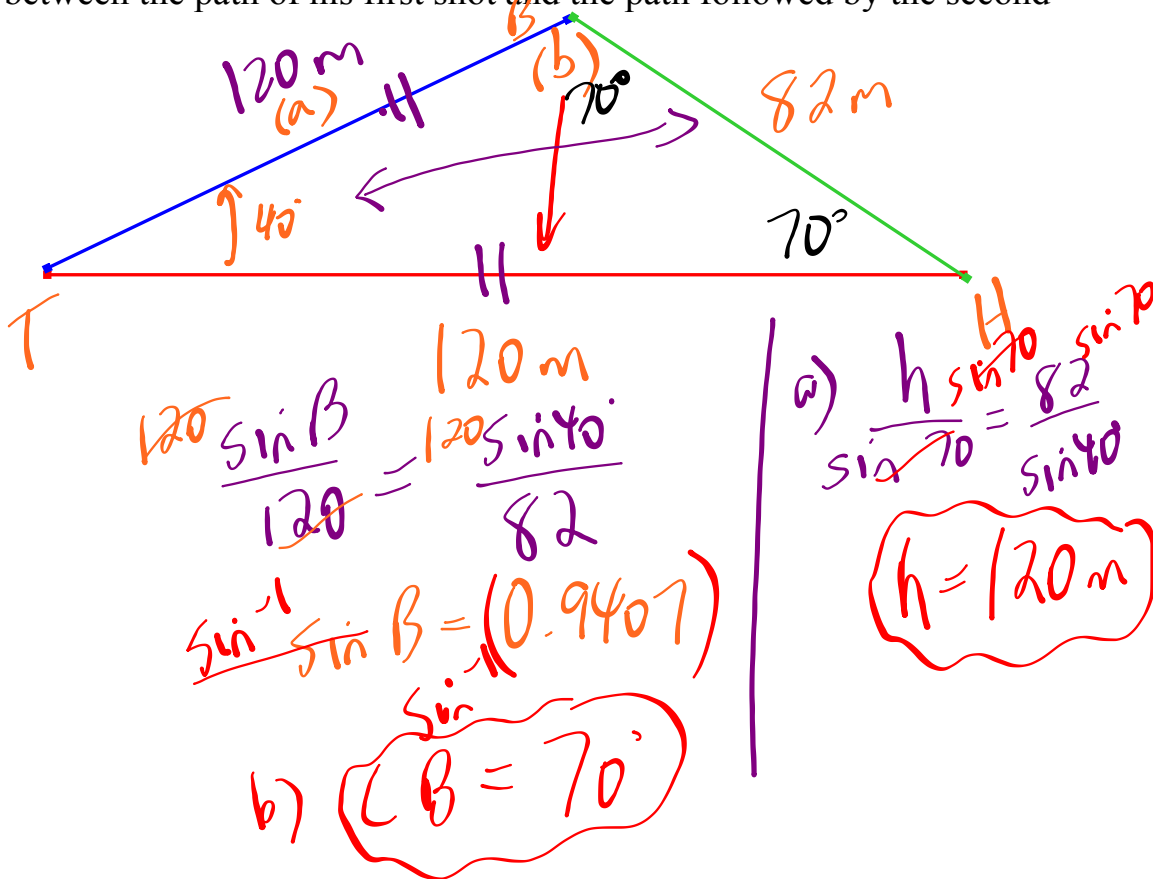$$\angle E = 40°$$

$\angle F = 180$
$\quad - 28$
$\quad - 40$

$\angle F = 112°$

EXAMPLE #4 - Application

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

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 40º 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?

120 m (a)   B (b) 70°   82 m

40°   70°

T   H

$$120 \frac{\sin B}{120} = \frac{120 \sin 40°}{82}$$

$$\sin^{-1} \sin B = (0.9407)$$

b) $\angle B = 70°$

120 m

a) $\frac{h}{\sin 70} = \frac{82}{\sin 40}$

$\frac{h \sin 70}{\sin 70} = \frac{82 \sin 70}{\sin 40}$

$h = 120 m$

HW: 10.10 $\Rightarrow$ # 1-4
[Applications]

* 10.9 $\Rightarrow$ # 1-6
[Revisit!]