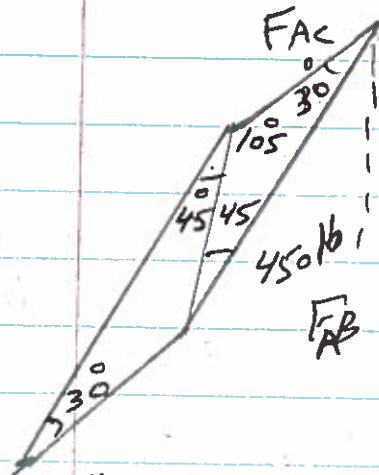
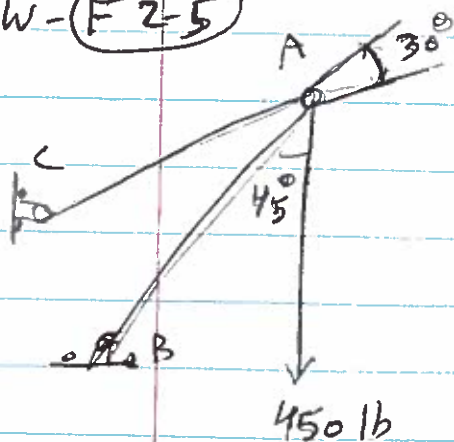


METCIII-50C Judo Abaker

HW- (F2-5)



$$\frac{450 \text{ lb}}{\sin 30^\circ} = \frac{F_{AC}}{\sin 45^\circ}$$

$$\frac{F_{AC} \sin 30^\circ}{\sin 30^\circ} = \frac{450 \text{ lb} \sin 45^\circ}{\sin 30^\circ}$$

$$F_{AC} = \frac{450 \text{ lb} \sin 45^\circ}{\sin 30^\circ}$$

$$F_{AC} = 636.396$$

$$F_{AC} = 636 \text{ lb}$$

$$\frac{450 \text{ lb}}{\sin 30^\circ} = \frac{F_{AB}}{\sin 105^\circ}$$

$$\frac{F_{AB} \sin 30^\circ}{\sin 30^\circ} = \frac{450 \text{ lb} \sin 105^\circ}{\sin 30^\circ}$$

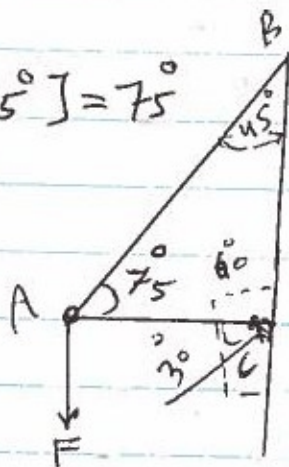
$$F_{AB} = \frac{450 \text{ lb} \sin 105^\circ}{\sin 30^\circ}$$

$$F_{AB} = 869.333 \text{ lb}$$

$$= 869 \text{ lb}$$

2-4

$$180^\circ - [60^\circ + 45^\circ] = 75^\circ$$



$$90^\circ - 30^\circ = 60^\circ$$

2-4'



(2-4)
 $F = 500 \text{ N}$
 $F = 500 \text{ N}$

$$\frac{F}{\sin 75^\circ} = \frac{F_{AB}}{\sin 60^\circ}$$

$$F_{AB} \sin 75^\circ = F \sin 60^\circ$$

$$F_{AB} = \frac{F \sin 60^\circ}{\sin 75^\circ}$$

$$F_{AB} = \frac{500 \text{ N} \sin 60^\circ}{\sin 75^\circ}$$

$$F_{AB} = 448.287 \text{ N}$$

$$F_{AB} = 448$$

$$F = 500 \text{ N}$$

$$\frac{F}{\sin 75^\circ} = \frac{F_{AC}}{\sin 45^\circ}$$

$$F_{AC} = \frac{F (\sin 45^\circ)}{\sin 75^\circ}$$

$$F_{AC} = \frac{500 \text{ N} \sin 45^\circ}{\sin 75^\circ}$$

$$F_{AC} = 366.025 \text{ N}$$

$$= 366 \text{ N}$$

$$\textcircled{2-5} \quad F = 350 \text{ lb}$$

$$\frac{F}{\sin 75^\circ} = \frac{F_{AC}}{\sin 45^\circ}$$

$$\frac{F_{AC} \sin 75^\circ}{\sin 75^\circ} = \frac{F \sin 45^\circ}{\sin 75^\circ}$$

$$F_{AC} = \frac{350 \text{ lb} \sin 45^\circ}{\sin 75^\circ}$$

$$F_{AC} = 256.2177 \text{ lb} \\ = 256 \text{ lb}$$

$$\frac{F_{AB}}{\sin 60^\circ} = \frac{F}{\sin 75^\circ}$$

$$\frac{F \sin 60^\circ}{\sin 75^\circ} = \frac{F_{AB} \sin 75^\circ}{\sin 75^\circ}$$

$$F_{AB} = \frac{F \sin 60^\circ}{\sin 75^\circ}$$

$$F_{AB} = \frac{350 \text{ lb} \sin 60^\circ}{\sin 75^\circ}$$

$$F_{AB} = 313.8 \text{ lb} \\ = 314 \text{ lb}$$