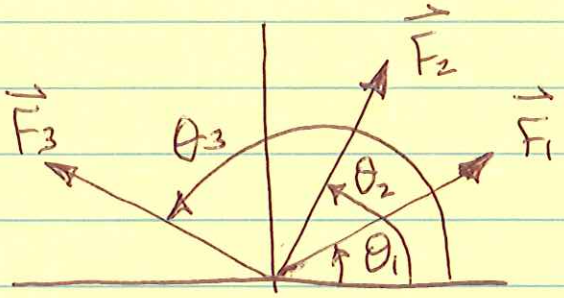
PROB. 2.21



$\theta_1 = 40°$, $\theta_2 = 70°$

$\theta_3 = 180 - 35 = 145°$

$\vec{F}_1 = F_1 \cos\theta_1 \hat{i} + F_1 \sin\theta_1 \hat{j} = (80\cos 40°)\hat{i} + (80 \sin 40°)\hat{j}$

$\vec{F}_1 = (61.28)\hat{i} + (51.42)\hat{j}$ N

$\vec{F}_2 = (120 \cos 70°)\hat{i} + (120 \sin 70°)\hat{j} = (41.04)\hat{i} + (112.8)\hat{j}$ N

$\vec{F}_3 = (150 \cos 145°)\hat{i} + (150 \cdot \sin 145°)\hat{j}$

$\vec{F}_3 = (-122.9)\hat{i} + (86.04)\hat{j}$ N