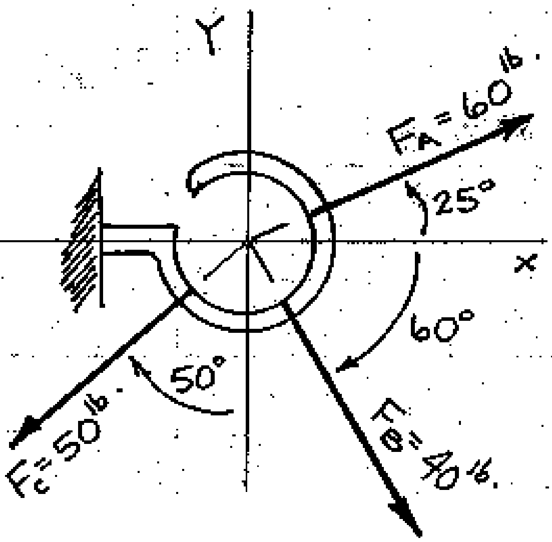
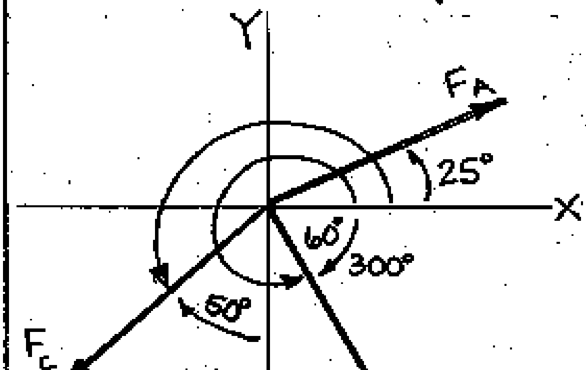


$$\vec{F}_A = F_{A_X}\,\hat{i} + F_{A_Y}\,\hat{j}$$
$$\vec{F}_B = F_{B_X}\,\hat{i} + F_{B_Y}\,\hat{j}$$
$$\vec{F}_C = F_{C_X}\,\hat{i} + F_{C_Y}\,\hat{j}$$



$$\begin{array}{r} 270 \\ -\,50 \\ \hline 220° \end{array}$$

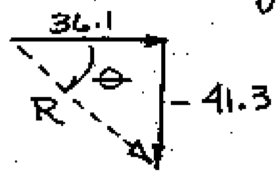
$$\vec{F}_A = 60^{lb} \angle 25°$$
$$F_{A_X} = 60 \cos 25° = +54.4^{lb.}$$
$$F_{A_Y} = 60 \sin 25° = +25.4^{lb.}$$
$$\vec{F}_B = 40^{lb} \angle 300°$$
$$F_{B_X} = 40 \cos 300° = +20^{lb.}$$
$$F_{B_Y} = 40 \sin 300° = -34.6^{lb.}$$
$$\vec{F}_C = 50^{lb} \angle 220°$$
$$F_{C_X} = 50 \cos 220° = -38.3^{lb.}$$
$$F_{C_Y} = 50 \sin 220° = -32.1^{lb.}$$

IF YOU WANT THE RESULTANT FORCE

$$\vec{R} = \vec{F}_A + \vec{F}_B + \vec{F}_C$$

where $\vec{R} = R_X\,\hat{i} + R_Y\,\hat{j}$ and $R_X = \sum F_X$, $R_Y = \sum F_Y$

$$\vec{R} = [+54.4 + 20 - 38.3]\,\hat{i} + [+25.4 - 34.6 - 32.1]\,\hat{j}$$
$$\vec{R} = +36.1\,\hat{i} - 41.3\,\hat{j}$$



$$\text{MAG.} = \sqrt{(36.1)^2 + (41.3)^2} = 54.85^{lb.}$$

$$\text{DIR.} = \theta = \tan^{-1}\left[-\frac{41.3}{36.1}\right] = -48.8°$$
$$\begin{array}{r} +\,360 \\ \hline 311.2° \end{array}$$

$$\boxed{\vec{R} = 54.85^{lb.} \angle 311.2°}$$ 4^{th} quadrant.