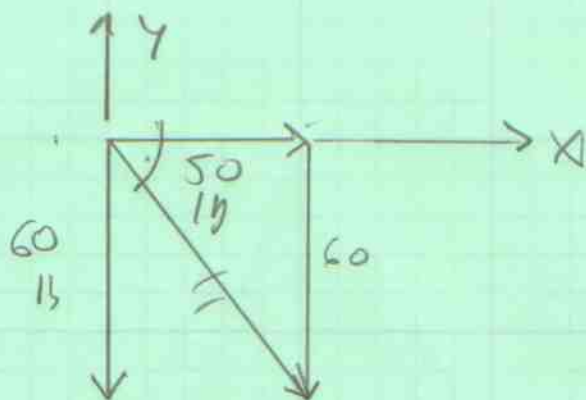


2.1a)



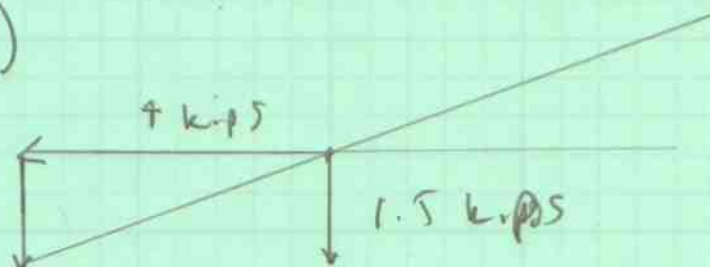
$$\bar{R} = 78.10 \text{ lb}$$

$$\phi = \text{ATAN}\left(\frac{60}{50}\right)$$

$$\left[\text{TAN}^{-1}\left(\frac{60}{50}\right) \right]$$

$$\phi = 50.19^\circ$$

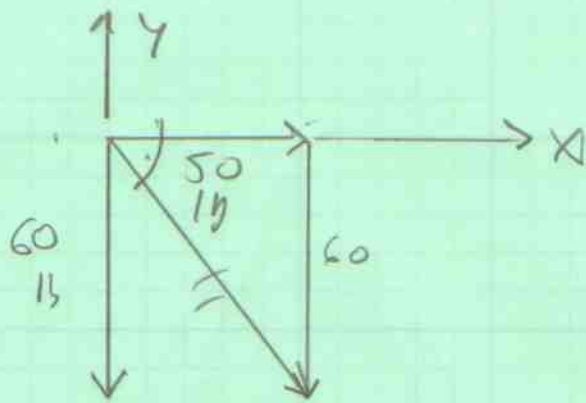
2.1c)



$$\bar{R} = 4.27 \text{ kips}$$

$$\phi = 200.56^\circ$$

2.1a)



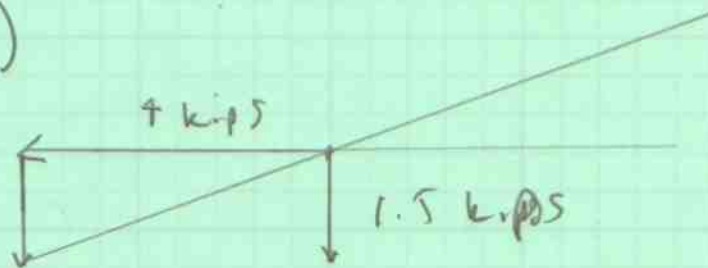
$$\bar{R} = 78.10 \text{ lb}$$

$$\phi = \text{ATAN}\left(\frac{60}{50}\right)$$

$$\left[\text{TAN}^{-1}\left(\frac{60}{50}\right) \right]$$

$$\phi = 50.19^\circ$$

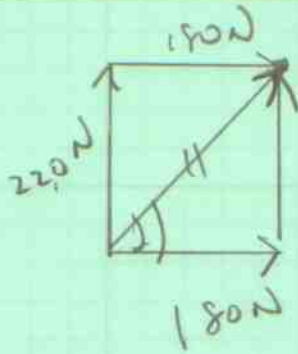
2.1c)



$$\bar{R} = 4.27 \text{ kips}$$

$$\phi = 200.56^\circ$$

2.1 b)



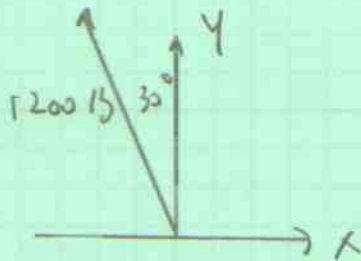
$$\bar{r} = ? \quad 289.25$$

$$\bar{\alpha} = ?$$

$$\sin^{-1}\left(\frac{220}{289.25}\right)$$

$$= 50.71^\circ$$

2.3 e)



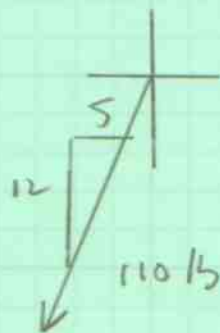
$$x = 1200 \cos(120)$$

$$= -600$$

$$y = 1200 \sin(120)$$

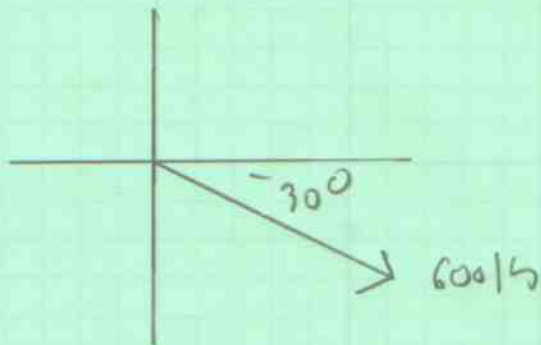
$$= 1039.23$$

2.4 b)



$$x =$$

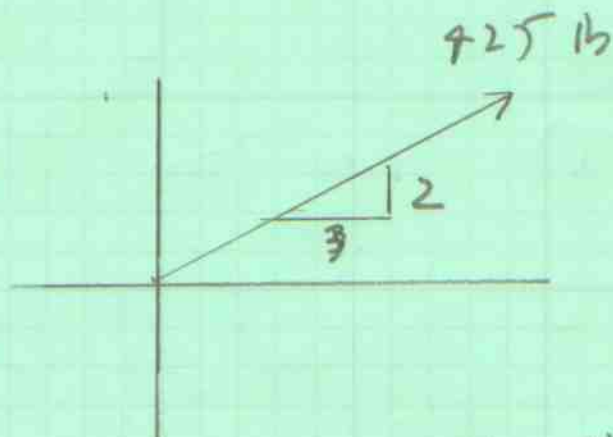
$$y =$$



$$x = 600 \cos(30) = 519.62 \text{ lb}$$

$$y = 600 \sin(30) = -300 \text{ lb}$$

2.4a)

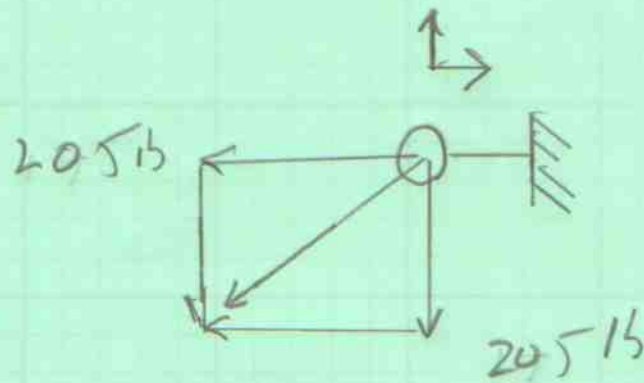


$$\begin{aligned}\theta &= \tan^{-1}\left(\frac{2}{3}\right) \\ &= \underline{\underline{33.69^\circ}} \text{ANS}\end{aligned}$$

$$x = 425 \cos 33.69 = 353.62$$

$$y = 425 \sin 33.69 = 235.75$$

2-7



$$\bar{R} = ? \quad 289.91$$

$$\phi = \tan^{-1}\left(\frac{-205}{-205}\right)$$

$$= 45^\circ + 180 \text{ (corr.)}$$

$$= \underline{\underline{225^\circ}} \quad \text{[3rd QUANT]}$$