

$$\alpha = \tan^{-1} \left(\frac{19.32}{10 + 5.17} \right) = 51.86^\circ$$

$\Sigma M_A:$

$$19.32 \cdot F \cos 51.86 - 5.17 \cdot F \sin 51.86 = -1500$$

$$11.93 F - 4.06 F = -1500$$

$$7.87 F = -1500$$

$$F = -190.59 \text{ lb}$$

$$|F| = 190.6 \text{ lb}$$