



$$\sum F_x = 0: A_x + E_x - 4000 \sin 30^\circ = 0$$

$$\sum F_y = 0: A_y - 4000 \cos 30^\circ + 500 = 0$$

$$\sum M_A = 0: E_x(3) + 500(8) - 4000 \cos 30^\circ(4) = 0$$

$$\Rightarrow \underline{A_x = -1285 \text{ N}}, \underline{A_y = 2960 \text{ N}}, \underline{E_x = 3290 \text{ N}}$$

$$\text{For maximum } P: E_x = 0 \text{ and } \sum M_A = 0:$$

$$P(8) - 4000 \cos 30^\circ(4) = 0, \underline{P = 1732 \text{ N}}$$

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