

Three pairs of coupled forces act on the triangular plate. Find the magnitude and direction of the resultant couple moment.

Assuming counterclockwise rotation is positive:

$$\begin{split} M_R &= \Sigma(r \cdot F) = d_1 \cdot F_A + d_1 \cdot F_C + d_1 \cdot F_E \\ \Rightarrow M_R &= d_1(F_A + F_C + F_E) \end{split}$$

Since  $M_R$  is positive, the rotation is **counterclockwise**