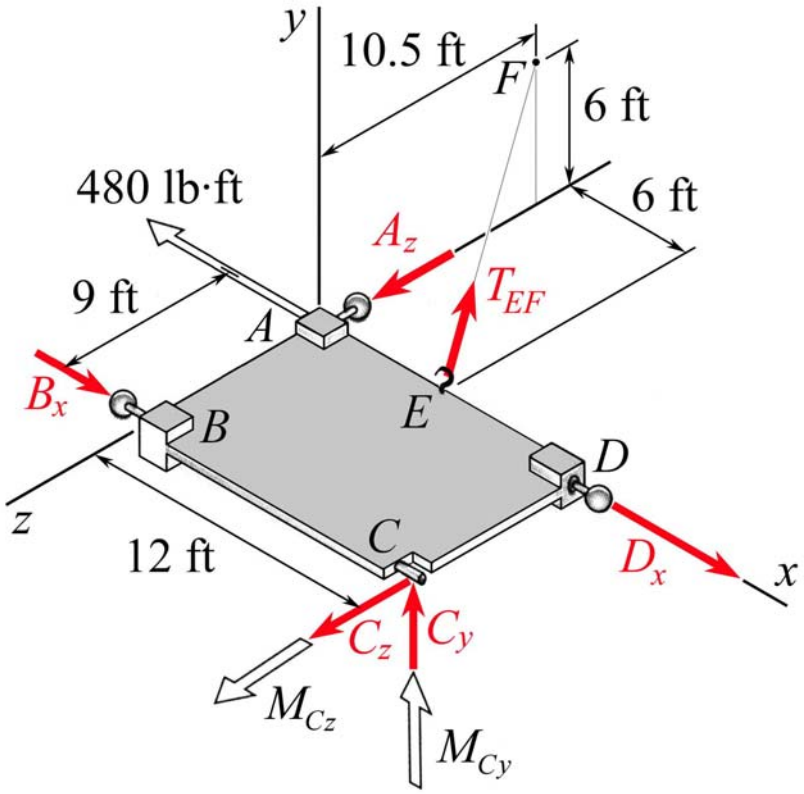
Quiz #4

Units for all forces are in lb. For ***just*** the force $\mathbf{T}_{EF}$, determine (*a*) its moment $\mathbf{M}_A^{T_{EF}}$ about the origin at *A*, (*b*) shortest distance d_{s1} between point *A* and its line of action, (*c*) its moment $M_y^{T_{EF}}$ about the *y* axis, (*d*) shortest distance d_{s2} between the *y* axis and its line of action.



Answers:

(*a*) $\mathbf{M}_A^{T_{EF}} = \dfrac{2T_{EF}}{3}(7\mathbf{j}+4\mathbf{k})\ \text{lb}\cdot\text{ft}$ ③

(*b*) $d_{s1} = \dfrac{2\sqrt{65}}{3}\ \text{ft} = 5.37\ \text{ft}$ ②

(*c*) $M_y^{T_{EF}} = \dfrac{14T_{EF}}{3}\ \text{lb}\cdot\text{ft}$ ②

(*d*) $d_{s2} = \dfrac{42}{\sqrt{65}}\ \text{ft} = 5.21\ \text{ft}$ ③