

NAME \_\_\_\_\_

DATE \_\_\_\_\_

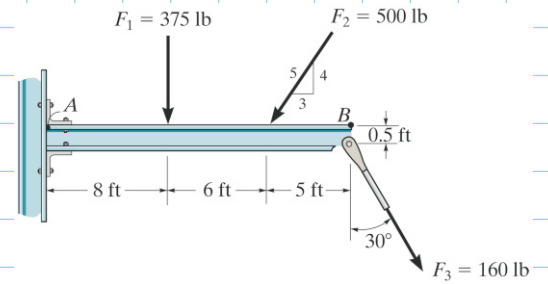
**PROBLEM AP-16**

**GIVEN:**

Determine the moment about point *A* of each of the three forces acting on the beam.

**REQUIRED:**

**SOLUTION:**



**SOLUTION**

$$\zeta + (M_{F_1})_A = -375(8)$$

$$= -3000 \text{ lb} \cdot \text{ft} = 3.00 \text{ kip} \cdot \text{ft} \text{ (Clockwise)}$$

$$\zeta + (M_{F_2})_A = -500\left(\frac{4}{5}\right)(14)$$

$$= -5600 \text{ lb} \cdot \text{ft} = 5.60 \text{ kip} \cdot \text{ft} \text{ (Clockwise)}$$

$$\zeta + (M_{F_3})_A = -160(\cos 30^\circ)(19) + 160 \sin 30^\circ(0.5)$$

$$= -2593 \text{ lb} \cdot \text{ft} = 2.59 \text{ kip} \cdot \text{ft} \text{ (Clockwise)}$$