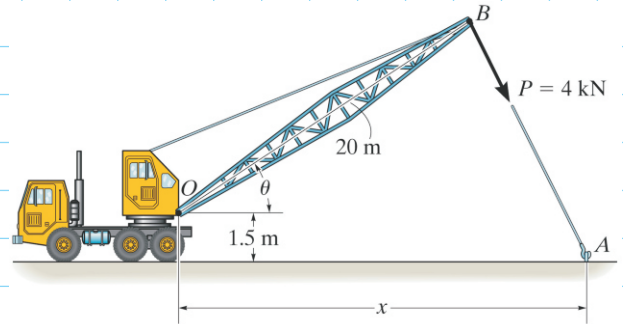
**PROBLEM AP-17****GIVEN:**

The towline exerts a force of  $P = 4 \text{ kN}$  at the end of the 20-m-long crane boom. If  $\theta = 30^\circ$ , determine the placement  $x$  of the hook at  $A$  so that this force creates a maximum moment about point  $O$ . What is this moment?

**REQUIRED:****SOLUTION:**