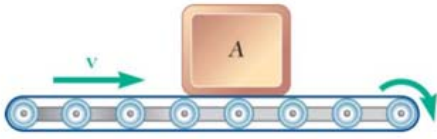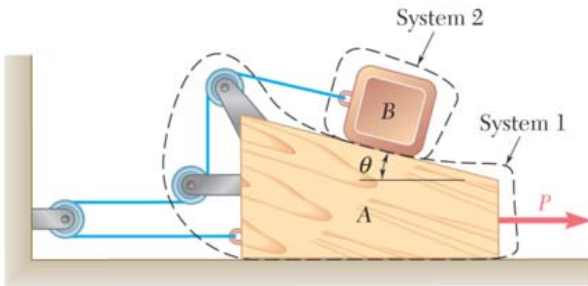# HW #2 – Chapter 12

PROBLEM 12.F1

Crate A is gently placed with zero initial velocity onto a moving conveyor belt. The coefficient of kinetic friction between the crate and the belt is μ_k. Draw the FBD and KD for A immediately after it contacts the belt.
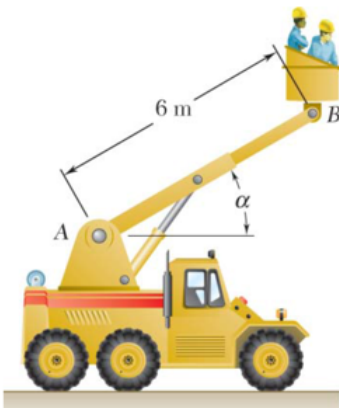
PROBLEM 12.F5

Blocks A and B have masses m_A and m_B respectively. Neglecting friction between all surfaces, draw the FBD and KD for the two systems shown.

PROBLEM 12.F7
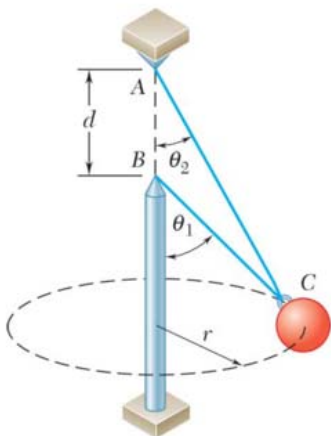
Wires AC and BC are attached to a sphere which revolves at a constant speed v in the horizontal circle of radius r as shown. Draw a FBD and KD of C.

PROBLEM 12.F10

At the instant shown, the length of the boom AB is being *decreased* at the constant rate of 0.2 m/s, and the boom is being lowered at the constant rate of 0.08 rad/s. If the mass of the men and lift connected to the boom at Point B is m, draw the FBD and KD that could be used to determine the horizontal and vertical forces at B.