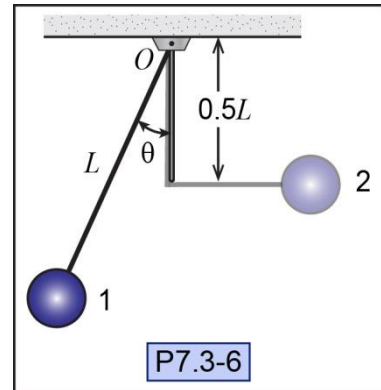


P7.3-6)^{fe} Consider the pendulum shown where the bob is released from rest at position 1 and swings to position 2 after the string comes in contact with the vertical wall. Conservation of energy can be employed to analyze the motion of this pendulum. Explain why this is so. Now using the fact that energy is conserved, determine the minimum angle θ necessary for the pendulum to swing to position 2.



Given:

Find:

Solution:

Draw a free-body diagram of the crate and block pendulum.



Explain why each force in the free-body diagram is either conservative or does no work.

Use the conservation of energy to determine θ .

$\theta =$ _____