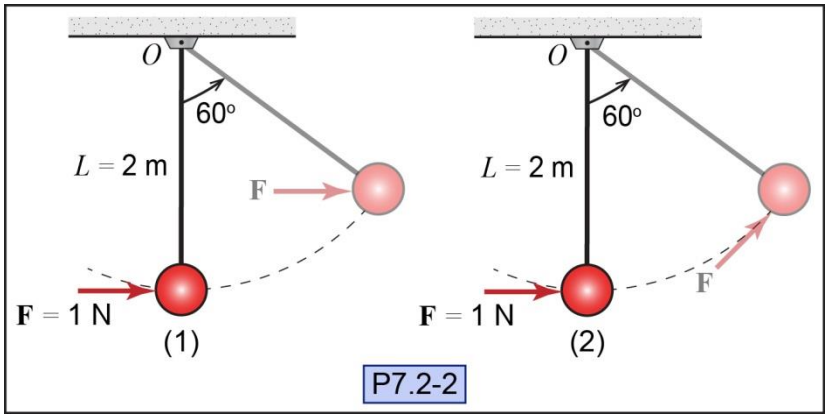
P7.2-2)[fe] A pendulum is initially hanging straight down when a 1-N force **F** is applied to the bob of the pendulum. In one case the force **F** remains horizontal as it pushes the bob, while in another case the force **F** changes direction so as to always point in the direction of the bob's motion. Calculate the work done by the force **F** in moving the pendulum from its initial position to an angle of 60 degrees in each of the two cases.



P7.2-2

Given:

Find:

Solution:

Calculate the work done by the force in case (1).

$U_{(1)}$ = _____

Calculate the work done by the force in case (2).

$U_{(2)}$ = _____