Problem 450A

As sketched below a two-dimensional open channel flow proceeds over the crest of a spillway (where the depth $h_c = 0.2m$), down the spillway and onto a section where the bed is horizontal. Shortly downstream a hydraulic jump occurs



If the depth of the flow at the bottom of the spillway, $h_1 = 0.1m$, find the depth of the flow downstream of the hydraulic jump, h_2 . Neglect frictional effects upstream of the jump.