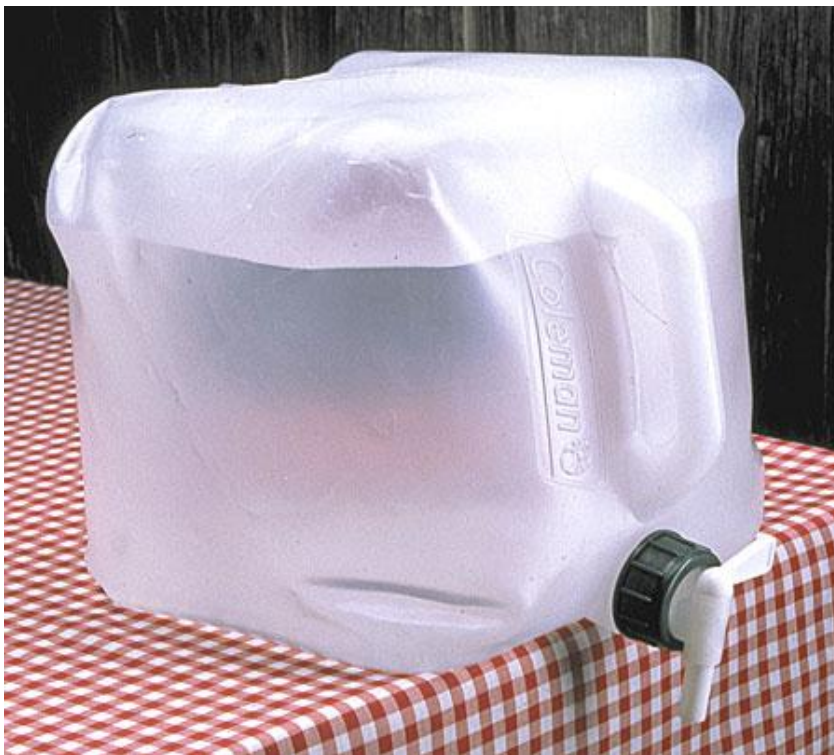


MECHROSFT

PROBLEM STATEMENT FOR 3RD YEAR:

A common problem with water dispensers is the decreasing flow rates when the water level falls, at times this becomes extremely irritating when flow rates become extremely low. Think about what could be done to eliminate this problem and ensure maximum possible flow rates at all time.

Imagine yourself filling a bottle from this dispenser how irritating would it be when the level goes down to the orifice itself and it takes hours filling up a bottle. And eventually you are left with the only choice of tilting the container to increase the flow



Now let us be logical when could we get a maximum flow rate????

YOU MAY ASSUME :

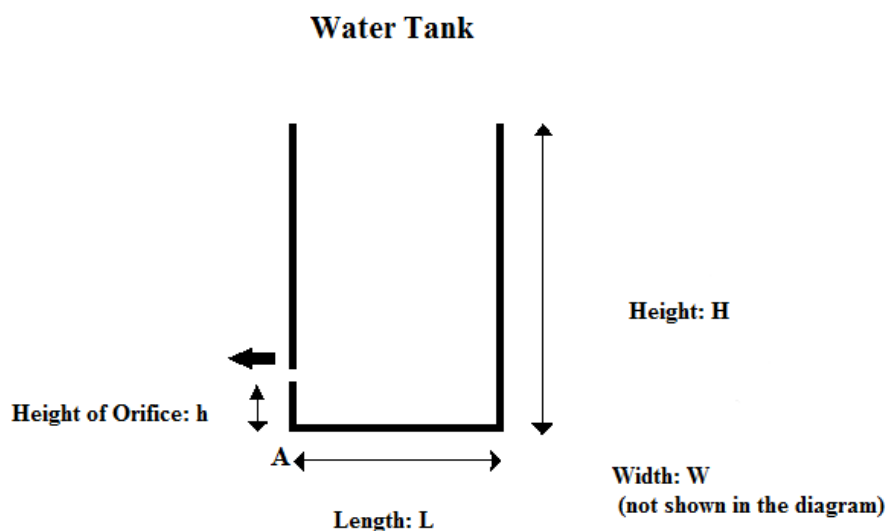
A water tank of a cuboidal shape has water filled up to the brim initially. The dimensions of the tank are:

Length = L

Height = H

Width = W

There is an orifice on the side of the tank at a height ' h '. Water flows out of the orifice and the level of water in the tank starts receding. In order to maintain maximum flow rate of water at all times the tank is tilted about the vertical axis at point A.



Input:

Height of the orifice 'h' .

Dimensions of the tank 'L', 'H', 'W' .

Output:

Plot a graph between angle of tilt ' α ' and time 't' and find the time in which the water would flow out when ensuring maximum flow rates at all times.

Last date for submission of the solution of the problem is 16-09-2011 before 2400 hrs.

The solution must be submitted with the soft copy of the program along with the algorithm.

Mail your :-

- *Team name.*
- *Participant's name.*
- *Registration number.*
- *College name.*
- *Branch.*

To msft.mechrocosm2k11@gmail.com