Pipes and Cisterns: Tips & Tricks

* INLET: A pipe connected with a tank or cistern or a reservoir,that fills it, it is known as Inlet.

* OUTLET:A pipe connected with a tank or a cistern or a reservoir, emptying it, is known as Outlet.

* If a pipe can fill a tank in x hours, then :part filled in 1 hour=1/x.

* If a pipe can empty a tank in y hours, then :part emptied in 1 hour=1/y.

* If a pipe can fill a tank in x hours and another pipe canempty the full tank in y hours(where y>x), then onopening both the pipes, the net part filled in 1 hour=(1/x -1/y).

* If a pipe can fill a tank in x hours and another pipe canempty the full tank in y hours(where x>y), then on openingboth the pipes, the net part filled in 1 hour=(1/y -1/x).

* Two pipes can fill an empty reservoir in t1 and t2 min respectively. If both the pipes are opened simultaneously then the time after which the second pipe is closed so that the total time taken to fill the reservoir is T min, is given by (1 + T / t1) t2 min.

* There is a hole in a reservoir which empties it in T1 hours. If a tap is turned on which admits the water in the reservoir at the rate of x litres/hour due to which the reservoir is now emptied in T2 hours, then the volume of the reservoir is given by [x (T1*T2 / (T2 - T1)] litres.