

Problem T1			10 Points total		
A1			3.0		
(SOLN1)	Forces correctly: Weight,	0.2			
	Forces correctly: Buoyancy	0.2			
	Forces correctly: Pressure difference	0.2			
	Pressure force: P times area	0.4			
	Torques applied correctly (wrt to O and correct arms)	0.6			
	Understands critical vanishing condition	0.5			
***** Notice below****	Correctly evaluates height	0.7			
	Units are used correctly	0.2			
*****	If height wrong numerically, by small algebra mistake only	0.3			
B1			1.0		
(SOLN1)	Writes correct energy equation and calculates it	0.3			
	Writes condition for critical point correctly	0.3			
	Chooses correct solution numerically	0.2			
	Units of a_0 correctly	0.2			
(SOLN2)	Writes correct energy equation and calculates it	0.3			
	Notifies that one is at one of the turning points	0.15			
	Computes a (in the hint equation we give them)	0.15			
	Chooses correct solution numerically	0.2			
	Units of a_0 correctly	0.2			
(SOLN3)	Writes correct energy equation and calculates it	0.3			
	Notifies that one is at one of the turning points	0.15			
	Computes semi-major axis	0.15			
	Chooses correct solution numerically	0.2			
	Units of a_0 correctly	0.2			
B2			2.5		
(SOLN 1)	Numerically tabulates the energy and finds it positive	0.8			
	Computes eccentricity correctly (needs to be >1)	0.8			
	Finds parameter a correctly	0.4			
	Finds angle correctly (denominator vanishing)	0.5			
C1	Momentum conservation correct	0.2	2.5		
(SOLN1: pure algebra)	Energy conservation correct	0.2			

[illegible]