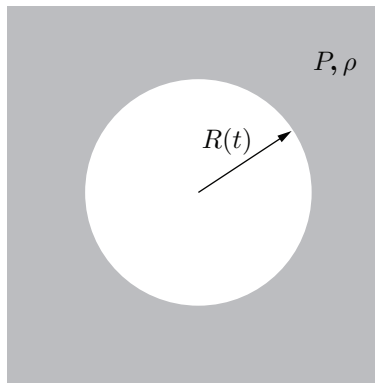


**M09M.1 - Bubble in an Incompressible Fluid (J07M.3, J94M.1)****Problem**

An ideal incompressible fluid of density  $\rho$  contains a bubble of radius  $R(t)$ . The fluid pressure is held constant at  $P$ . Take the bubble to be empty (no pressure within the bubble), neglect surface tension and gravity, and take the motion of the fluid as the bubble collapses to be radial.



Find the rate of change  $dR/dt$  of the bubble radius after it has collapsed from rest by a factor of two in radius.