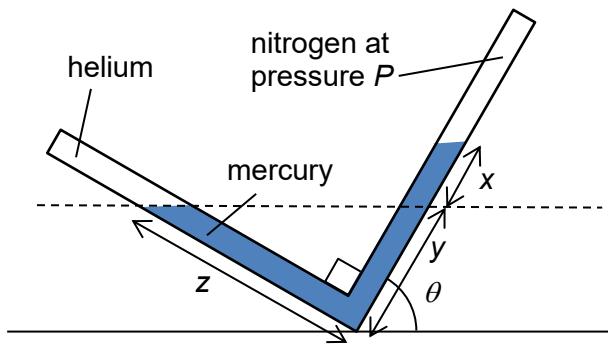


- 5 An L-shaped tube is sealed at both ends and tilted at angle θ as shown. One arm contains nitrogen gas at pressure P and the other arm contains helium gas. The gases are separated by mercury of density ρ with dimensions as shown.



What is the pressure of the helium gas?

- A $z\rho g \cos \theta$
- B $P + x\rho g$
- C $P + x\rho g \sin \theta$
- D $P - (x + y)\rho g \sin \theta$