1.78

1.78 When a fluid flows through a sharp bend, low pressures may develop in localized regions of the bend. Estimate the minimum absolute pressure (in psi) that can develop without causing cavitation if the fluid is water at 160 °F.

Cavitation may occur when the local pressure equals the vapor pressure. For water at 160 °F (from Table B.1 in Appendix B)

$$p_v = 4.74 \text{ psi (abs)}$$

Thus, minimum pressure = $\underline{\underline{4.74 \text{ psi (abs)}}}$