

59. With $p = 1.01 \times 10^5$ Pa and $\rho = 1.29$ kg/m³, we use the result of part (b) of the previous problem to obtain

$$\gamma = \frac{\rho v^2}{p} = \frac{(1.29 \text{ kg/m}^3) (331 \text{ m/s})^2}{1.01 \times 10^5 \text{ Pa}} = 1.40 .$$