20. The molar mass of argon is 39.95 g/mol. Eq. 20-22 gives

$$v_{\text{rms}} = \sqrt{\frac{3RT}{M}} = \sqrt{\frac{3\left(8.31\,\frac{\text{J}}{\text{mol}\cdot\text{K}}\right)(313\,\text{K})}{39.95\times10^{-3}\,\text{kg/mol}}} = 442\ \text{m/s}\ .$$