

68. We assume this to be an ideal gas, so that  $C_p = C_V + R = 6.0R$ . Therefore,  $\gamma = C_p/C_V = 1.2$ , and the result of exercise 58 divided by Eq. 20-2 becomes

$$\frac{v_s}{v_{\text{rms}}} = \frac{\sqrt{\gamma RT/M}}{\sqrt{3RT/M}} = \sqrt{\frac{\gamma}{3}} = \sqrt{0.40} = 0.63 .$$