

34. If we use the approximate formula discussed in problem 32, we obtain

$$frac = \frac{3(8.62 \times 10^{-5} \text{ eV/K})(961 + 273 \text{ K})}{2(5.5 \text{ eV})} \approx 0.03 .$$

The numerical approach is briefly discussed in part (c) of problem 32. Although the problem does not ask for it here, we remark that numerical integration leads to a fraction closer to 0.02.