5. At $T = 300\,\mathrm{K}$, the average kinetic energy of the neutrons is (using Eq. 20-24)

$$K_{\mathrm{avg}} = \frac{3}{2}kT = \frac{3}{2}(8.62 \times 10^{-5}\,\mathrm{eV/K})(300\,\mathrm{K}) \;\approx\; 0.04\ \mathrm{eV}\ .$$