

3. If R is the fission rate, then the power output is $P = RQ$, where Q is the energy released in each fission event. Hence, $R = P/Q = (1.0 \text{ W}) / (200 \times 10^6 \text{ eV})(1.60 \times 10^{-19} \text{ J/eV}) = 3.12 \times 10^{10} \text{ fissions/s}$.