

Question # 10790

An earthquake released $7.79 \cdot 10^{13}$ joules of energy. What is the magnitude on the Richter scale. Compute the answer to one decimal place.

Solution. It is known that $0.4 \cdot 10^{12}$ J is equivalent to 1 in the Richter scale magnitude, thus $7.79 \cdot 10^{13}$ is equivalent to $\frac{7.79 \cdot 10^{13}}{0.4 \cdot 10^{12}} = 194.75$.

Answer 194.75.