HW#4

1) find ratio of M b/w a 9.0M & 8.6M Earthquake

$$\frac{M_2}{M_1} = 10^{(\log M_2 - \log M_1)} = 10^{9.0-8.6} = 10^{.4} = \boxed{2.5} = \frac{M_2}{M_1}$$

2) find E_2/E_1 b/w 9.0M & 8.6 M Earthquake

$$\frac{E_2}{E_1} = 10^{1.5(9.0-8.6)} = 10^{.6} = \boxed{3.981} = \frac{E_2}{E_1}$$

a 9.0M earthquake has 3.981 times the energy of an 8.6M earthquake