

5) In 1935 Charles Richter defined the magnitude of an earthquake to be

where I is the intensity of the earthquake (measured by the amplitude of a seismograph reading taken 100 km from the epicenter of the earthquake) and S is the intensity of a "standard earthquake" (whose amplitude is 1 micron $=10^{-4}$ cm).

Sketch the graph of the magnitude of the Richter scale as a function of the intensity of the earthquake. Use the graph to find the intensity of the three most recent earthquakes in the world, occurred early today, November the 9th.

Place	Magnitude on the Richter scale
Solomon Islands	4.6
Southeast Honshu, Japan	6.0
Coast of Chile	4.9

