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Instructor: Denise White
Course: Math 135 Intro to Probability &
Statistics Spring 2014
Book: Triola: Elementary Statistics Using
Excel, 5e

Assignment: ASSN #5-6R

6.3.29-T. Assume that the Richter scale magnitudes of earthquakes are normally distributed with a mean of 1.186 and a standard deviation of 0.535. Complete parts a through c below.

a. Earthquakes with magnitudes less than 2.000 are considered "microearthquakes" that are not felt. What percentage of earthquakes fall into this category?

%

(Round to two decimal places as needed.)

b. Earthquakes above 4.0 will cause indoor items to shake. What percentage of earthquakes fall into this category?

%

(Round to two decimal places as needed.)

c. Find the 95th percentile.

(Round to three decimal places as needed.)

Will all earthquakes above the 95th percentile cause indoor items to shake?

- ☐ A. No, because no earthquakes above the 95th percentile have magnitudes above 4.0.
- ☐ B. Yes, because earthquakes above the 95th percentile are very rare and powerful.
- ☐ C. Yes, because all earthquakes above the 95th percentile have magnitudes above 4.0.
- ☐ D. No, because not all earthquakes above the 95th percentile have magnitudes above 4.0.