

Name _____

Date _____

Problems Involving Both Logarithms and Exponents - Guided Lesson

Complete the following problems:

1) Find the monthly payments on a \$500,000, 25-year mortgage, with monthly payments at 12.50%.

How much will be paid monthly on the mortgage?



2) The Richter scale is used to measure the intensity of earthquakes. The Richter scale is based on the equation: $R = \log(I \div I_0)$

Early in the century, an earthquake with the magnitude of 5 struck in San Francisco. During the same year, Japan recorded an earthquake that was four times greater. What was the magnitude of earthquake in Japan?

3) In a school, the growth of student population was 15% every 2 years. If this continues, how long will it take for the student population to grow four times greater than it is now?

Hint: Use the growth formula: $A = P(1+i)^n$

