


Name _____ Date _____ Period _____

Integrated Math 3B Homework Week of May 14th, 2018

7-43. A rule-of-thumb used by car dealers is that the trade-in value of a car decreases by 20% each year. [Homework Help](#) 

- a. Explain how the phrase “decreases by 20% each year” tells you that the trade-in value decreases exponentially with time (i.e., can be represented by an exponential function).

- b. Suppose the initial value of your car is \$23,500. Write an equation expressing the trade-in value of your car as a function of the number of years from now.

- c. How much will your car be worth in four years?

- d. What is the average rate of change in the value of your car during the first four years? Explain what the average rate of change means in this context.

- e. In how many years will the trade-in value of your car be \$6000?

- f. If your car is really 2.7 years old now, what was its value when it was new?