1. According to a survey by the U-M Transportation Research Institute, gasoline prices are projected to reach $5.00 a gallon by the year 2020.

   (a) (5 points) Assuming that the average gas price in 2007 is $2.00 per gallon (yes, we know that is wishful thinking), find an exponential function, P, that models the average gas price t years after 2007. Show either an "exact" answer or at least 4 decimal places in your answer.

   (b) (2 points) What is the *annual* percent change in the average gas price according to this model? (Show to at least one decimal place.)

   (c) (2 points) What is the yearly *continuous* percent rate of change for this model? (Show to two decimal places.)

   (d) (5 points) If, instead, gasoline prices grow linearly between 2007 and 2020, find a linear function, L, to model the price t years after 2007.

   (e) (2 points) The survey indicates that prices may be $4.00 per gallon eight years from now. Which of the two models best predicts this projection?