1)For a five year period, Ken deposited $800 each quarter into an account paying 2.6% annual interest compounded quarterly. (Round your answers to the nearest cent.)

(a) How much money was in the account at the end of 5 years?

(b) How much interest was earned during the 5 year period?

Ken then made no more deposits or withdrawals, and the money in the account continued to earn 2.6% annual interest compounded quarterly, for 3 more years.

(c) How much money was in the account after the 3 year period?

(d) How much interest was earned during the 3 year period?

2) The average temperature in Metropolis in 1970 was 51.5 degrees. In 2010, the average

temperature in Metropolis was 56.7 degrees. Let y be the average temperature in Metropolis in year x, where x = 0 represents the year 1970.

(a) Which of the following linear equations could be used to predict the average Metropolis temperature y in a given year x, where x = 0 represents the year 1970?

A. y = 5.2x + 51.5

B. y = 5.2x − 10,192.5

C. y = 0.13x + 51.5

D. y = 0.13x − 204.6

(b) Use the equation from part (a) to predict the average temperature in Metropolis in the year 2040.

(c) Fill in the blanks to interpret the slope of the equation: The rate of change of temperature with respect to time is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ per \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (Include units of measurement.)