Quiz

Student Name:

Each question is worth two points. You must show all your work to receive full credit.

1. Evaluate the following expression. Round your answer to the nearest tenth.

    $40(1+0.02)^{23-10}$

2. Algebraically solve the following equation for x. Round your answer to the nearest tenth.

    $52=13(2.05)^x$

The following three questions are all based on Capital City, USA. The population of Capital City in 2000 was 3,271. The city was growing at a rate of 1.19%.

3. Write an exponential function that models population P as a function of year t.

4. Use this model to predict the population of Capital City, USA in 2020.

5. Use this model to estimate the year in which the population of Capital City, USA will reach 5,000.

6. Explain how you arrived at your answer to #5. (This explanation can include an explanation of your computation as well as any rounding that may have happened.)