

Math 111 Worksheet #5
October 12, 2007

1. Account one starts with \$10000 and increases by 10% a day. Account two begins with one penny and doubles each day (grows by 100% a day).
 - (a) Fill in the following table for the two functions. How much do you have in each account after 1 day? 2 days? 3 days?
 - (b) Let A_1 = the amount in account one on day t and A_2 = the amount in account two on day t . Write formulas for A_1 and A_2 in terms of t .
 - (c) How much does each account have on day 15? How much on day 25? How much does each account have after 31 days?
2.
 - (a) Find the point on the graph of $y = 2x^2 - 2x - 24$ whose x -coordinate is 1.
 - (b) Find the zeros of $y = 2x^2 - 2x - 24$.
3. Suppose the population of town A (in thousands) is given by $P_A = 24(1.08)^t$ and the population of town B (in thousands) is given by $P_B = 35(.78)^t$ for year t after 2000.
 - (a) What is the population of each town in 2000?
 - (b) What is the growth rate of each town?
 - (c) Sketch the graphs of each town on the axes below by plotting at least 3 points.

