Name: _____ **Show work needed to justify your answer.** Date: _____

HW: # 18b: Math IBSL - Standard 18 - Arithmetic and Geometric Sequences 5 points

For each question below, first decide whether the situation is arithmetic or geometric, then solve accordingly.

1 A frog fell into a 1 m well and wanted to go back up to the top of the well. Every day it moved up half the distance to the top. After 10 days, how much did the frog have left to climb?

2 Your grandparents deposit $2000 into a bank account to start a college fund for you. They will continue to deposit a fixed amount each month if you deposit $5 a month as well. In 36 months, you would like to have $6500 in the account. How much will they have to contribute each month?

4 A scientist puts six bacteria, which multiply at a constant rate, in a Petri dish. She records the number of bacteria each minute thereafter. If she counts 324 bacteria 20 minutes later, at what rate are the bacteria reproducing?