# RULE OF 72 (read before taking Quiz)

One of the problems on the Quiz refers to the rule of 72. It's useful to know - but doesn't get much emphasis in the lecture or textbook.

The rule of 72 helps you estimate  how long it will take for an initial amount, that is growing exponentially, to double. For example, interest rates are 3% and you put your money in the bank. Assume it grows continuously ($A=Pe^{.03t}$).  Then, the rule tells you that it will take approximately 72 divided by 3 years (or 24 years) for your money to double.  It actually takes 23.45 years, but 24 is pretty close.

To see another example, if a population is growing by 10% per year, then the population will double in about 7.2 years (because 72/10 = 7.2). Again, this is an approximate, not an exact answer, but it is pretty close.

To learn more about the rule of 72 (and similar rules), search for it in Wikipedia.