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| **Question** | **Exponential Growth or Decay?** | **Write a function that represents this situation** | **Answer:** |
| http://www.lietaer.com/wp-content/uploads/2010/09/money.jpg1. You buy a house for $130,000. It appreciates 6% per year. How much is it worth in 10 years? |  | **Initial Amount =** |  |
| **Growth/Decay Rate:**  Percent = Decimal = |
| Equation that represents this situation: |
| 2. If you invest $40 in an account at a 3% interest rate, how much money will you have after 10 years? |  | **Initial Amount =** |  |
| **Growth/Decay Rate:**  Percent = Decimal = |
| Equation that represents this situation: |
| 3. A population of 100 frogs increases at an annual rate of 22%. How many frogs will there be in 5 years? |  | **Initial Amount =** |  |
| **Growth/Decay Rate:**  Percent = Decimal = |
| Equation that represents this situation: |
| http://cdn2.disneybaby.com/images/2012/01/nemo-plush-character-photo-1800x1800-dcp-200837.jpg4. A species of extremely rare, deep water fish are slowly becoming extinct. If there are a total 821 of this type of fish and there are 15% fewer fish each month, how many will there be in a year? |  | **Initial Amount =** |  |
| **Growth/Decay Rate:**  Percent = Decimal = |
| Function that represents this situation: |
| 5. The population of Austin is growing at a rate of 5% per year. In 2010, the population was 500,000. What would be the predicted current population? |  | **Initial Amount =** |  |
| **Growth/Decay Rate:**  Percent = Decimal = |
| Function that represents this situation: |
| 6. A mouse population is 25,000 and is decreasing in size at a rate of 20% per year. What is the mouse population after 3 years? |  |  |  |