Math 2

Name: _____

Exponential Growth Worksheet

1. In 1990, the cost of tuition at a state university was $4300. The tuition increases at a rate of 4% each year.
   a. How much would it cost to attend the university in 2010?

   b. How much would it cost to attend in 2025?

2. You buy a house for $130,000. It appreciates 6% per year. How much is it worth in 10 years?

3. If you invest $40 in an account for 10 years at a 3% interest rate how much money will you have?

4. If you invest $2040 in an account with 5% interest rate for 15 years how much money will you have?

5. You invested $475 in an account with 8.5% interest for 12 years. How much money will you have at the end of 12 years?

6. A population of 100 frogs increases at an annual rate of 22%. How many frogs will there be in 5 years?

7. A type of bacteria has a very high exponential growth rate at 80% *every hour*. If there are 10 bacteria, determine how many there will be in 5 hours, in 1 day and in 1 week?

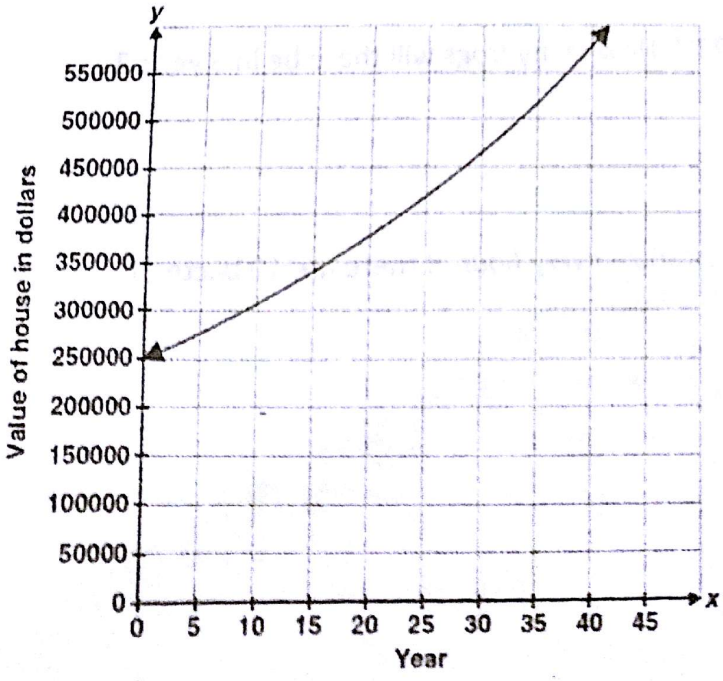
8) Mike buys a phone for $350. Its value depreciates by 5% each month. How much is his phone worth at the end of one year? After two years?

9) Tribbles reproduce at an incredibly high rate. Every 10 hours, their population doubles. If you start with 5 tribbles, how many will you have after 10 days?

12. $1400 invested with compound interest at a rate of 9% per year for 6 months.

13. $600 invested with compound interest at a rate of 4% per year for 10 years.

14. Use the graph to determine when ....



a. The house will be worth $350,000.

b. The house will be worth $400,000.

c. The house will be worth $520,000.