Math 2   Name: _____

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. A species of extremely rare, deep water fish has an extremely long lifespan and rarely have children. If there are a total 821 of this type of fish and their growth rate is 2% *each month*, how many will there be in half of a year? What will be the population be in 10 years and in 100 years?

9. $1000 invested with compound interest at a rate of 15% per year for 9 years.

10. $400 invested with compound interest at a rate of 3% per year for 2 years.

11. $1250 invested with compound interest at a rate of 5% per year for 4 years.

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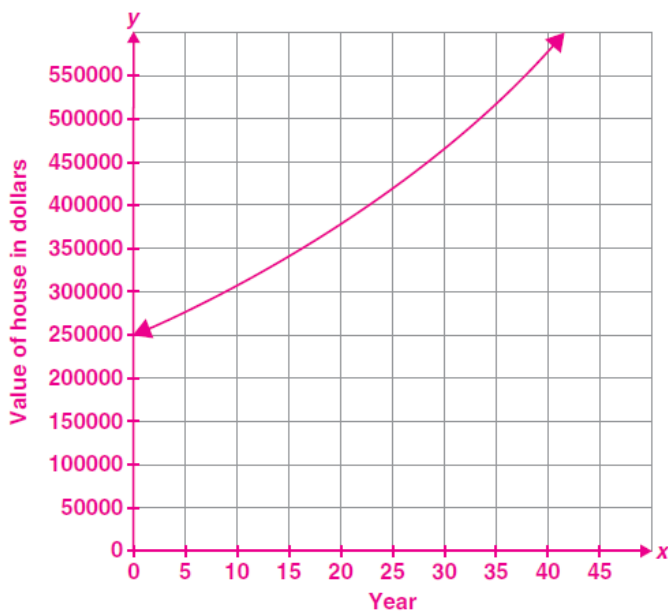
a. The house will be worth $350,000.

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

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