Math 2   Name:_____

Solve the following.

1. Kelly plans to put her graduation money into an account and leave it there for 4 years while she goes to college. She received $750 in graduation money that she puts into an account that earns 4.25% interest. How much will be in Kelly's account at the end of four years?

2. Jeff bought a car that is expected to lose 6.8% interest for the next 5 years and be worth $9,750. How much did Jeff pay for his car?

3. Susie bought a new computer for $400 last year. A year after she purchased it, the price dropped to $335. Find the rate at which the computers value was dropping.

4. The cold is spreading through the school. It started off with 20 people being sick and a day later 35 people were infected. Find the rate at which people were getting sick.

5. If Julia invests $1300 in an account with 2.7% interest compounded semi-annually, how much money would she have after 7 years?

6. If Jessica invests $450 in an account with 1.75% interest compounded monthly, how much money would she have after 5 years?

7. Bill is estimated to have $15000 in his 401K account when he retires in 25 years. The interest on the 401K earns 1.12% interest compounded quarterly. How much money does Bill have now?

8. MeChelle deposits $2750 in an account at a bank that earns 5.5% interest compounded monthly. How much money is in her account after 5 years?

9. Your mom is so smart, she decides to open a savings account for your college fund when you are born. The account starts with $500 compounded continuously with an interest rate of 2.3%. How much money will you have for college when you are 20?

10. You get a credit card with 18.75% interest compounded continuously. You go to Disneyland and spend $3800 on your card. How much money will you have paid on the card when you pay it off in 5 years?

11. An expensive car was purchased and is expected to lose value can be modeled by $y = 24{,}000(.92)^t$ where t is the number of years since the car was purchased. When will the car be worth $15000?

12. A beautiful diamond ring was purchased for Valentine's day and is expected to gain value over the years. The situation can be modeled by $y = 1200(1.05)^t$, where t is the number of years since the diamond was purchased. When will the ring be worth $2000?

13. An exponential function decreases when what is inside the parenthesis is _____ than 1.

15. Growth or decay: $f(x) = 25(1.15)^t$

14. An exponential function increase when what is inside the parenthesis is _____ than 1.

16. Growth or decay: $f(x) = 14(.98)^t$