

Answer each of the following questions in the space provided. Include the equation used to find each.

*If you invest \$2,000 in a mutual fund that yields 5% yearly interest. Calculate how much money you will have in 5 years if the interest is compounded. . .*

1. yearly?                      2. quarterly?                      3. monthly?                      4. daily?                      5. continuously?

*You deposit \$225 in an account that pays 8% annual interest compounded quarterly. Find the balance after the given time period.*

6. 1 year?                      7. 10 years?                      8. 15 years?                      9. 20 years?                      10. 30 years?

*Upon graduating Leyden High School at the age of 18 you decide to invest \$500 into a mutual fund. Assuming the mutual fund increased at a rate of 11% per year compounded monthly.*

11. How much will the mutual fund be worth when you retire at the age of 65?  
12. How many years will it be before your money doubles? (Use the table feature in your calculator to estimate)  
13. If you need \$50,000 to retire, how old will you be when you can retire? (Estimate using the table feature in your calculator)

*You invest 5,000 dollars in a pyramid scheme that loses 12% per year...*

14. How much money will you have in 2 years?  
15. How long before you are down to \$4,000 (Estimate using the table feature in your calculator)  
16. How many years before you money is half gone? (Estimate using the table feature in your calculator)

*Bob buys an '88 Gremlin for \$6,000. If it continually depreciates at a rate of 10% per year, what will the car be worth when he sells it in...*

17. 3 years?                      18. 10years?                      19. 22 years?

*Gremlins reproduce very quickly, and left unabated, their population will grow at a rate of 20% per day. Starting with 2 gremlins...*

20. How many will there be in 10 days?                      21. How long before there is 1,000 of them?

*Bolanium is a radioactive element that decays continuously (losses its mass to radiation) at a rate of 0.2% per year. If a rock of Bolanium starts off at 100 lbs...*

22. How many pounds will there be in 100 years?                      23. How long will it take for the mass to be halved?

*Mr. B bought a \$10,000 boat that depreciated at a rate of 8% per year. Three years later, a seamonkey crashed it and it began to depreciate at a rate of 23% per year. How much is the boat worth....*

24. 3 years after purchase?                      25. 10 years after purchase?                      26. How many years before it is worth \$500