

APPL. OF LOGS WS

- 1 9.06 years
- 2 25.5 years
- 3 13.18 years
- 4 9.16 years
- 5 10.66 years
- 6 93,184 bacteria
- 7 7.5 hours
- 8 11.1 mg
- 9 7.4 hours
- 10 #3064.53

Log Application problems.

11. Mary saved \$500 of the money she earned working at the Dairy Dream last summer. She deposited the money in a certificate of deposit that earns 8.75% interest compounded monthly. If she rolls over the CD at the same rate each year, when will Mary's CD have a balance of \$800? *5.39 years*
12. Dwain withdrew all of the \$2500 in his savings account to pay the tuition for his first semester of college. The account had earned 12% interest compounded monthly, and no withdrawals or additional deposits were made.
- If Dwain's original deposit was \$1250, how long ago did he open the account? *5.8 yrs.*
 - If Dwain's original deposit was \$1500, how long ago did he open the account? *4.2 yrs*
13. You deposit \$2000 in an account that pays 7.5% interest, compounded quarterly. How long will it take for the balance to reach \$2400? *2.45 yrs*
14. The Thomas family includes several generations of farmers. They have an opportunity to buy 50 acres adjacent to their farm for \$800 per acre. In the past, the price of farmland has gone up 3% a year. If this continues, how long will it be before the land is worth \$1000 per acre? *7.55 years*
15. Mr. And Mrs. Sawyer bought a condominium for \$75,000. Assuming that its value will appreciate 6% a year, how much will the condo be worth in five years when the Sawyers are ready to move? *\$100,366.92*
16. Of an original 100 g of a radioactive substance, 70 g remained after 12 days. How much will be left after 20 days? *55g*
17. The population of Ubetchakan grew from 65.6 million in 1975 to 80 million in 1985. What is the percent rate of annual growth, compounded annually? *2%*
18. How long does it take for an amount deposited at 10% interest compounded annually to double in value? *8 yrs.*
19. Zeller industries bought a piece of weaving equipment for \$50,000. It is expected to depreciate at a steady rate of 10% each year. When will the value have depreciated to \$25,000? *7 yrs.*
20. Ten years ago, Cathy's mother bought a new car for \$6000. Cathy is now going to buy the car for \$600. Assuming a steady rate of depreciation what was the annual rate of depreciation? *20.57%*