7-4A Lesson Master

VOCABULARY
1. In the General Compound Interest Formula \( A = P(1 + \frac{r}{n})^{nt} \), give the meaning of
   a. \( r \) b. \( n \) c. \( P \)

2. What does APY stand for?

USES Objective G
3. Asdrubal puts $12,000 in a certificate of deposit paying 4.8% annually.
   a. Find the value of the account after 5 years.
   b. How much interest does he earn in the 6th year?

4. Write the General Compound Interest Formula, if interest is compounded quarterly.

5. Toni opens a bank account with $500. Find the amount in the account after 3 years if the bank pays 2.9% interest, compounded quarterly.

6. Find the APY on a bank account that pays 3.20% compounded daily for 360 days per year.

7. Bank A pays 1.9% interest on a savings account, compounded monthly. Bank B pays 1.85% interest, compounded daily for 360 days per year.
   a. Which bank should you use?
   b. You have $2000 to save for five years. How much more money will you have at the end of five years with Bank A than you would have at the other bank?

8. A credit card charges 18.6% interest, compounded monthly. If you charge $1500 on the card, how much interest will you pay in the first month?

9. If you take a loan at a 6% annual rate with monthly payments, each month you will pay one-twelfth of 6%, or 0.5% interest. Some “payday lending” stores charge a $15 fee to get a two-week advance of $100. Find the annual rate that corresponds to 15% every two weeks (use 1 year = 52 weeks).

10. In 1986, Bill Gates, the founder of Microsoft, had approximately $234 million. Over the next twenty years, his wealth grew at an annual rate of approximately 23.4%. How much money did he have in 2006?