

## Savings & Loans Review

1. You are excited to find a savings account that pays 1.2% APR compounded *quarterly*. You initially invest \$400 in this account. Each *month* thereafter, you deposit \$25.
  - a) Write a recursive formula for the balance of your account.
  - b) What is your balance after 3 years?
  - c) How much of this amount in 3 years is earned interest?
  - d) When will your account be worth \$2000?
2. You borrow \$15,700 from the Permaculture Credit Union in Santa Fe to install a photovoltaic (PV) solar panel system at your house. The normal interest rate for home equity loans at the credit union is 6.85%, but they offer a 0.75% reduction in the rate for projects that support sustainable living.
  - a) What monthly payments are necessary in order to repay the loan in 10 years?
  - b) How much do you actually pay for the PV system?
3. You want to buy a house and can afford \$1,700 a month payments (ignoring escrow, etc.).
  - a) To the nearest dollar, how much of a mortgage can you afford at 6.375% APR on a 30-year loan?
  - b) How much interest do you pay for the loan?
  - c) You get the loan as stated above for the amount found in part (a). You then decide to pay an additional \$50 per month. How much quicker do you repay the mortgage? How much money do you save?

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