1. (*Compound value*) Stanford Simmons, who recently sold his Porsche, placed $10,000 in a savings account paying annual compound interest of 6 percent.

1. Calculate the amount compound of money that will have accrued if he leaves the money in the bank for 1, 5, and 15 years.
2. If he moves his money into an account that pays 8 percent or one that pays 10 percent rework part (a) using these new interest rates.
3. What conclusions can you have completed in this problem?

2. (*Compound interest with nonannual periods*) Calculate the amount of money that will be in the each of the following accounts at the end of the given deposit period.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Account** | **Amount Deposited** | **Annual Interest Rate** | **Compounding Period (Months)** | **Deposit Period (Years)** |
| Theodore Logan III | $ 1,000 | 10 % | 12 | 10 |
| Vernell Coles | 95,000 | 12 | 1 | 1 |
| Thomas Elliott | 8,000 | 12 | 2 | 2 |
| Wayne Robinson | 120,000 | 8 | 3 | 2 |
| Eugene Chung | 30,000 | 10 | 6 | 4 |
| Kelly Cravens | 15,000 | 12 | 4 | 3 |

3. (*Compound interest with nonannual periods*)

1. Calculate the future sum of $5,000, given that it will be held in the bank 5 years at an annual interest rate of 6 percent.
2. Recalculate part (a) using compounding periods that are (1) semiannual and (2) bimonthly.
3. Recalculate parts (a) and (b) for a 12 percent annual interest rate.
4. Recalculate part (a) using a time horizon of 12 years (annual interest rate is still 6 percent).
5. With respect to the effect of changes in the stated interest rate and holding periods of future sums in parts (c) and (d), what conclusions do you draw when you compare these figures with the answers found in parts (a) and (b)?