Section 1.12
1. Classify each of the following as a violation of *confidentiality*, of *integrity*, of *availability*, or of some combination thereof.
    a. John copies Mary's homework.
    b. Paul crashes Linda's system.
    c. Carol changes the amount of Angelo's check from $100 to $1,000.
    d. Gina forges Roger's signature on a deed.
    e. Rhonda registers the domain name "AddisonWesley.com" and refuses to let the publishing house buy or use that domain name.
    f. Jonah obtains Peter's credit card number and has the credit card company channel the card and replace it with another card bearing a different account number.
    g. Henry spoofs Julie's IP address to gain access to her computer.

4. Give an example of a situation in which a compromise of confidentiality leads to a compromise in integrity.

7. For each of the following statements, give an example of a situation in which the statement is true.
    a. Prevention is more important than detection and recovery.
    b. Detection is more important than prevention and recovery.
    c. Recovery is more important than prevention and detection.

Exercise 34.4
2. Use the logical connectives of propositional logic to express the following sentences in propositional logic. Be sure to define all propositional atoms.
    a. If the sun shines, we can make hay.
    b. For dinner I can have potato or rice but not both.

3. Use mathematical induction to prove that, for n≥1,

$$1^2 + 2^2 + 3^2 + \ldots + n^2 = n\ (n+1)\ (n+2)/6$$

4. Use predicate logic to state the following sentences. Be sure to define all predicates, constants, and variables.
    a. Not all birds can fly.
    b. Every child is younger than its mother.