Critical Thinking Chapter 3

1.
  a) Four legal names: RectanglePerimeter, ComSci, UofC, percentage1234
  b) Four illegal names:
      - Minh Le: identifier names can not contain spaces
      - class: identifier names can not be a reserved keyword in Java
      - ELA-20: identifier names can not contain special characters like hyphens
      - 1lifetolive: identifier names can not start with a digit

2.
  a) int numBeads;
     numBeads = 5;
  b) int numBeads = 5;

3.
  a) The final last value of yourNumber is
     myNumber + 5 = yourNumber * 2 + 5 = 4 * 2 + 5 = 13
  b) The final last value of yourNumber is
     myNumber = yourNumber + 7 = 4 + 7 = 11

4.
  a) integer
  b) float
  c) integer
  d) float
  e) boolean
  f) character

5.
  a) The primitive data type is a data type representing values.
     The abstract data type is used to organize data, usually used for solving complex problems.
  b) A class is like a template, it shows the structure that functions look like.
     An object is an instance of a class. It can be assigned a value and interact with functions.

11.
  a) y = (int) Math.round(j * k);
  b) z = j * k;
     j * k is double * double, and z is a double, so no type casting is needed.
  c) z = k * k;
     k * k is double * double, and z is a double, so no type casting is needed.
  d) j = (int) Math.round(k);
  e) k = j;
     j is an integer and k is a double so no type casting is needed.
  f) y = j + 3;
     j + 3 is an integer and y is also an integer so no type casting is needed.