1. TTTTTTTFFF
2a. 5, true.
2b. a date, a student, a book
3. An ordered sequence of instructions to accomplish a task.
   4.1 c, 4.2 a, 4.3 e, 4.4 c, 4.5 b, 4.6 e
5. byte, short, int, long, float, double, boolean, char, String.

6. The number of siblings a person has: byte
   Whether a switch is off or on: boolean
   The current temperature: float
   The number of students at a large state university: int
   The population of the world: long
   The wavelength of a radio signal: double
   The amount of interest paid by your bank today: float
   The first line of your favorite sonnet: String
   What you write in a single crossword puzzle square: char

7. a 4, 5. b. 4, 4. c 4, 2, d. 4, 2.

8. package meters;

   /**
   * This class models a taxi cab meter.
   */
   public class FareMeter {
   /**
    * creates and initializes values for initial cost of fare, interval of time
    * for an increment, cost of increment.
    */
   public FareMeter(double init, double incrCost, int incrSeconds, double tax){
   }
   /**
    * returns current cost of fare without taxes.
    */
   public double currentCost(){
      return 0.0;
   }
   /**
    * returns cost of fare with taxes.
    */
   public double finalCost(){
      return 0.0;
   }
   /**
    * returns initial fare cost.
    */
   public double initialCost(){
   }
return 0.0;
}

/**
 * returns amount of cost increment after time lapsed.
 */
public double increment(){
    return 0.0;
}

/**
 * returns time for a fare increment.
 */
public double incrementTime(){
    return 0.0;
}

/**
 * returns taxe for a fare.
 */
public double tax(){
    return 0.0;
}

/**
 * updates current cost of fare based on new time lapsed.
 */
public void incrementCurrentFare(){
}

/**
 * updates the initial cost of a fare.
 */
public void setInitialCost(double newCost){
}

/**
 * updates the cost of a fare increment after time interval.
 */
public void setIncrementCost(double newIncrement){
}

/**
 * updates the time interval in a fare.
 */
public void setIncrementTime(int newSeconds){
}

9a. in the body of a query.
b. It’s not legal as return value is not of type int.
c. In computer science “=” means assignment; the right hand side expression’s value is given as the value for the variable in its left hand side.
d. Change of state is implemented in commands via an assignment statement to one or more instance variables.

10. a. width(), length(), area(), perimeter().
b. magnify()
c. length, width.
d. magnify uses one parameter named ratio. The constructor uses two parameters w, and h.
e. Client will provide the values when he invokes the methods with parameters.
f. result, theArea.
g. magnify() can not be used by a client as it is private.

11. Understand problem, design, specify, implement and test. The last 4 steps must be done using Java.
12a.

    data: account number
    account balance.

    functionality:
    withdraw
    deposit

    b. account number = 123456-ABN
    account balance = 123.45

    c. Next page.

package accounts;

    /**
     * Models a checking account with no interest.
     */

    public class CheckingAccount {

        private double balance;
        private String accountNumber;

        /**
         * creates and initializes a checking account.initialBalance > 0.
         */
        public CheckingAccount(String accountNumber, double initialBalance){
            this.accountNumber = accountNumber;
            this.balance       = initialBalance;
        }

        /**
         * returns current balance.
         */
        public double balance(){
            return balance;
        }
    }
/**
 * amount is added to balance(). amount > 0.
 */
public void deposit(double amount){
    balance = balance + amount;
}

/**
 * amount is removed from current balance. amount <= balance().
 */
public void withdraw(double amount){
    balance = balance - amount;
}