# Encapsulation Name\_\_\_\_\_\_\_\_\_\_\_\_\_

***Encapsulation* means hiding the details of a class by making the data private and forcing client programmers to use public "get" and "set" methods (called *accessors* and *mutators*) to access and modify the data.**

1. Fill in the blanks with **public** or **private**:

**class Widget**

**{**

**\_\_\_\_\_\_\_\_\_\_\_\_ double dNum;**

**\_\_\_\_\_\_\_\_\_\_\_\_ String sWord;**

**\_\_\_\_\_\_\_\_\_\_\_\_\_ Widget()**

**{**

**dNum = 2.5;**

**sWord = "Hello";**

**}**

**\_\_\_\_\_\_\_\_\_\_\_\_\_ double sum()**

**{**

**double dTemp = dNum + sWord.length();**

**return dTemp;**

**}**

**//and lots more java**

2. Circle the one variable that is NOT a data member, and should not be declared as **public** or **private.**

3. Write *accessor* and *mutator* methods for the **double** member variable:

**\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ getNum()**

**{**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ;**

**}**

**\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ setNum( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ )**

**{**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ;**

**}**

4. Write *accessor* and *mutator* methods for the **String** member variable

5. Create an *instance* of the **Widget** class named Bob. Use the **set** methods to set Bob's **dNum** to 5.5 and Bob's **sWord** to be "Hi!".

6. Create a second *instance* of the **Widget** class named Sue. Use the **get** and **set** methods to set Sue's member variables to the same values as Bob's.