

Name _____ Period _____

Skill 18.1 Exercise 1

Consider the following partial class declaration

```
public class SomeClass{
    private int myA;
    public int myB;
    public int myC;

    public someClass() {}
}
```

The following declaration appears in another class. For each line of code, indicate whether or not it will compile without error. If it does not compile indicate why.

SomeClass obj = new SomeClass();

obj.myA = 5;

int x = 10;
obj.myB = x;

double d = 3.14;
obj.myC = d;

int x = obj.myA;

int x = obj.myB;

double x = obj.myC;

System.out.println(obj.myA);

Skill 18.1 Exercise 2

The Element class represents different elements on the periodic table. The following instance variables are used to define each element, *symbol*, *atomicMass*, *atomicNumber*, *isMetal*. Write the *encapsulated* Element class below.

What does it mean for a class to be encapsulated?

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Skill 18.2 Exercise 1

Write getter and setter methods for each of the instance variables in the `Element` class from the previous example.

Skill 18.2 Exercise 2

Modify the constructor of the `Element` class to accept parameters which can be used to initialize the instance variables: *symbol*, *atomicMass*, and *atomicNumber*. In the constructor, assign the value of *isMetal* to `true`.

Skill 18.2 Exercise 3

The `ElementMaker` class creates elements by instantiating the `Element` class above. Write code that could be used to create the element Nitrogen and print all the values of the instance variables.

Write code that could be used to change the *atomicMass* of Nitrogen to a different value.

AP Computer Science A
Ticket Out the Door
Set 18: Getters and Setters

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