



Section 2 - Encapsulation and Subclassing Quiz Answers

1.

```
public boolean isNegative(int n)
{
    if (n < 0)
    {
        return true;
    }

    return false;
}
```

Notice that we don't need an else statement because if we return true, then we exit the function (or method, whichever name you prefer) immediately. If you want to add this method to your main class, then you need to add the `static` keyword after `public` and before `boolean` in the method header above.

2.

```
public class Building
{
    private int mNumberPeople;
    private int mAge;
```

```
private double mConstructionCost;

public Building(int age, int numPeople)
{
    mAge = age;
    mNumberPeople = numPeople;
}

public int getNumberPeople()
{
    return mNumberPeople;
}

public int getAge()
{
    return mAge;
}

public double getConstructionCost()
{
    return mConstructionCost;
}

public void setNumberPeople(int people)
{
    mNumberPeople = people;
}

public void setAge(int age)
{
    mAge = age;
}

public void setConstructionCost(double cost)
{
    mConstructionCost = cost;
}
```

```
}
```

To construct a building, just do:

```
Building building = new Building(2, 100)
```

3.

```
public class GovernmentBuilding extends Building
{
    private String mAgencyName;
    private boolean mIsTopSecret;

    public GovernmentBuilding(String name, int age, int numPeople)
    {
        super(age, numPeople);
        mAgencyName = name;
    }

    public String getAgencyName()
    {
        return mAgencyName;
    }

    public void setAgencyName(String mAgencyName)
    {
        this.mAgencyName = mAgencyName;
    }

    public boolean isIsTopSecret()
    {
        return mIsTopSecret;
    }

    public void setIsTopSecret(boolean mIsTopSecret)
    {
        this.mIsTopSecret = mIsTopSecret;
    }
}
```

```
}
```

To construct a government building, just do:

```
GovernmentBuilding governmentBuilding = new  
GovernmentBuilding("NASA", 60, 2000)
```

4. See above classes

5. Add the following to your Building class:

```
public void incrementAge()  
{  
    mAge++;  
}
```