

Unit 1 Assignment 3:

Step 1:

Write a Java class called `RoachPopulation` that will simulate the growth of a roach population. Your class should have an instance field called `roaches` (an integer), which represents the actual population. It should also have a default constructor that starts the roach population at 100. The class should have a `timePasses` method that simulates a period in which the population doubles. It should also have a `spray` method which simulates spraying with insecticide. Calling the `spray` method should reduce the population by 75%. The class should have an accessor method called `getRoaches`. It should return the current size of the roach population.

Step 2:

Write a driver class called `U1A3` that will test the methods of the `RoachPopulation` class. The methods should be called in the following order...

```
timePasses()
getRoaches()
println size of population

spray()
getRoaches()
println size of population

spray()
getRoaches()
println size of population

timePasses()
getRoaches()
println size of population
```

Paste the output below the `U1A3` class. Print out both classes and turn them in.