Announcements:
Ch5 will be Thursday/friday. Read it, do hwk,
Honors section next mtg: 11:15 Friday. Room: CS BLDG 142
Captive Lab sessions: this afternoon 230-5, fri 10-1230

Program 3 collection instructions: on the website this
afternoon. Also, answer format info has been added to the
program 3 write-up – check it out! Prog 3 hand-in now up

Midterm: mon 10/17, 615 PM

1. public static void main(String[] args){
   for(int j = 0; j < 5; j++)
      System.out.println(j);
   System.out.println(j*j); // a bug: no j dec
}

public static void main(String[] args){
   int j;
   for( j = 0; j < 5; j++)
      System.out.println(j);
   System.out.println(j*j); // no bug! Look at scope of j
}

public static void main(String[] args){ // works fine
   for( double x = 0.0; x < 5; x = x + .5)
      System.out.println(x);
}

for (int n = 0; n < 50; n++)
   if ((n %3 ==2) && (n % 5) == 0)
      System.out.println(n); // prints what?

for (int n = 0; n < 20; n++)
   if ((n %3 ==2) && (n % 5) != 0)
      System.out.println(n); // prints what?

for (int n = 0; n < 20; n++)
   if ((n %3 != 2) && (n % 5) == 0)
      System.out.println(n); // prints what?

for (int n = 0; n < 20; n++)
   if ((n %3 ==2) || (n % 5) == 0)
      System.out.println(n); // prints what?

for (int n = 0; n < 20; n++)
   if ((n %3 !=2) || (n % 5) != 0)
      System.out.println(n); // prints what?

2. given this: double amt = 100.0;
   write a statement that increases amt by 10%
3. Look over this program (Uses Math.random()):

```java
import java.util.*;

public class FractionTest{
    public static void main(String[] args){
        Scanner s = new Scanner(System.in);
        System.out.println("Enter a number of trials");
        int trials = s.nextInt();
        double target = 11.0/17.0;
        int below = 0;
        for (int n = 0; n < trials; n++)
            if (Math.random() < target) below++;
        System.out.println("target:  " + target);
        System.out.println("target est: " +
            ((double) below)/trials);
    }
}
```

Some questions: why the import statement? What else could you have written? If trials = 170, what’s a good guess for the final value of “below”?

4. Create a Truck class, with a company field, a refrigerated field, a volume field, a cargo field, a cost/mile field. Before you write the class, use the (imagined) constructor to make a truck called ikesTruck – it’s owned by Allied, it isn’t refrigerated, it’s 8000 cubic ft in size, and its cargo is meat, and it costs 20 cents per mile to run. In addition to the usual methods, include a method called costPerTrip, which takes an int parameter (miles), and computes the cost per trip for that distance.