Name _____ Period_____

1. Consider the code below. Predict the result of each of the following numeric operations

```
double d1 = 37.9;
double d2 = 1004.128;
int i1 = 12;
int i2 = 18;
```

(a) `57.2 * (i1 / i2) + 1`

1.0

(b) `57.2 * ((double)i1 / i2) + 1`

39.13333333333333

(c) `15 – i1 * (d1 * 3) + 4`

-1345.3999999999999

(d) `15 – i1 * ((int)d1 * 3) + 4`

-1313

/4

A `RandomNumber` class below accepts a positive integer from the user and assigns this value to a variable called max. It then creates a random number within a range that spans the negative value of the `max` (inclusive) and the positive value (not inclusive) and prints the result to the console. Consider the following examples,

Run	Output
`Java RandomNumber 10`	`8`
`Java RandomNumber 5`	`-3`
`Java RandomNumber 8`	`0`
`Java RandomNumber 11`	`11`

Complete the `RandomNumber` class below.

```
public class RandomNumber{
     public static void main(String args[]){
          int max = args[0];

        int min = max*-1;
        int rand = (int)((Math.random()*(max - min))-max);
        System.out.println(rand);









}
```

/4

A `BinaryToDecimal` class below accepts a 3-digit positive binary integer from the user and assigns this value to a variable called `bin`. It then converts the number to its decimal equivalent and stores the result in a variable called `dec`. Consider the following examples,

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Run	value of dec
Java BinaryToDecimal 011	3
Java BinaryToDecimal 101	5
Java BinaryToDecimal 111	7
Java BinaryToDecimal 010	2

Complete the `BinaryToDecimal` class below.

```
public class BinaryToDecimal{
     public static void main(String args[]){
          int bin = args[0];

        int val1 = bin%10*(int)Math.pow(2,0);
        bin /= 10;
        int val2 = bin%10*(int)Math.pow(2,1);
        bin /= 10;
        int val3 = bin%10*(int)Math.pow(2,2);

        int dec = val1 + val2 + val3;









}
```

/4

Score _____/12