Name ____ Period__________

1. Write a driver class called “NumericVariables”. In the the driver class, (2 points)

Indicate each part below in your code with appropriate comments. For example, for part a type “//Part a”. (1 point)

a) Declare and initialize an int a1. Write a single line of code that will print to the console the value of a1 decremented by 1. (2 points)
b) Declare and initialize an integer b1. Declare and initialize an integer b2. Then write a single line of code that uses the compound operator, -=, to subtract b2 – 30 from the value of b1 and store the result back in b1. (2 points)
c) Initialize an integer variable c1 and another integer c2 to a value smaller than c1. Write a program that prints the remainder that results when these two numbers are divided. (2 points)
d) Write code that will create a constant variable D1 that is equal 2.718. (1 point)
e) Declare and initialize a double variable e1. Declare and initialize an int variable e2. Declare an int variable e3, and assign the value of e1 divided by e2 to e3. (2 points)

```
public class NumericVariables{

       public static void main(String args[]){
       //part a
       int a1 = 5;
       System.out.println(--a1);

       //part b
       int b1 = 2, int b2 = 3;
       b1 +=(b2 - 30);

       //part c
       int c1 = 5, c2 = 2;
       System.out.println(c1%c2);

       //part d
       final double D1 = 2.718;

       //part e
       double e1 = 5;
       int e2 = 10;
       int e3 = e1/e2;

       }

}
```

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2. For each of the following code segments, indicate the output. (1 point each)

(a)

```
        int a = 5;
        int b = 11;
        b*=a;
        System.out.println(b + 1);     56
```

(b)

```
        double m = 41;
        int j = 5;
        m = m/j;
        System.out.println(m);     8.2
```

The following code applies to (c) thru (h)

```
    int dividend = 6, divisor = 2, quotient = 0, remainder = 0;
    int dividend2 = 5, divisor2 = 3, quotient2 = 0, remainder2 = 0;

    quotient = dividend/divisor;
    remainder = dividend % divisor;
    quotient2 = divident2/divisor2;
    remainder2 = dividend2 % divisor2;
```

(c) System.out.println(quotient); **3**

(d) System.out.println(remainder); **0**

(e) System.out.println(quotient2); **1**

(f) System.out.println(remainder2); **2**

(g) System.out.println(quotient += quotient2); **4**

(h) System.out.println(++remainder); **1**

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3. 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

4. Write code that could be used to write a number backwards. Your code should work for any number with 4 digits. Consider the int data type below,

```
int number = 1234;
```

When your code is ran, “4321” should print to the console.

Below are more examples,

int data type	**result**
int n1 = 3455;	5543
int n2 = 8767;	7678
int n3 = 2468;	8642

```
      int n = 1234;
      int ones = n%10;
      int tens = (n/10)%10;
      int hundreds = (n/100)%10;
      int thousands = (n/1000)%10;

System.out.println(n + "-->" + ones + tens + hundreds + thousands);
```

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Score __________/27