

**Engr 101
Hour Exam 1
REVIEW**

September 11, 2019

1. Show how many lines of print are printed by each of the following:

```
int i, j, k;
for(i=0;i<10;i++)
    for(j=0;j<20;j++)
        for(k=0;k<30;k++)
            printf("Hello Mom!\n");
```

Lines Printed = _____

```
int i, j;
for(i=0;i < 10;i+=2)
    {printf("Hello Mom!\n");
      j = 16;
      while(j >= 0)
          {printf("I like Jello\n");
            j--;}
    printf("bananas are good.\n");
    }
```

Lines printed = _____

2. Write a line of C-code to implement the following equation. Take all variables to be doubles.

$$x = \frac{y + b/c - d^4}{13z + 12.5}$$

3. If $i = 3$, $j = 12$, and $k = 4$, determine whether each of the following is TRUE or FALSE.

A) $!((i+j) < 20) \&\& (i == 3)$ _____ B) $(!(j == 12) || !(k < 7))$ _____

4. What is printed by the following sequence.

```
int i = 3, j = 11;
double k;
k = j/i;
printf("%d, %2.3f", j/i, k);
```

Printed results

5. The statements below prompt the user to enter two integers called i and j . Write an *if block* to print the value of i and j only if the value of i is in the range $(10 \leq i < 100)$ and i is greater than j . If this is not the case your if block should print only the value of i .

```
int i, j;
printf("Enter an integer...");
scanf_s("%d", &i);
printf("Enter a second integer...");
scanf_s("%d", &j);
// Put your if block here
```

6. Write a program which prints the powers of 2 from 2^0 to 2^{16} on successive lines. *Do not use the pow function.*

7. Write a program which accepts an integer from the user and prints that int only if falls between -10 and + 10. If the int is greater than +10 print +1. If is less than -10 print -1.