

CS A110

Exam #1

1. **Short Answer.** Provide brief answers (1 word up to 3 sentences) to the following:

a. Which of the following identifiers are invalid and why?

i. KRUNK

ii. __FOO__

iii. C#

iv. State of Alaska

b. What values are stored in x, y, and z after executing the following code?

```
int x = 7 / 4;  
int y = 4 + 4 / 2;  
int z = 20 % 9;
```

c. What output is produced by the following code fragment?

```
int x = 3;  
  
if (x < 5)  
{  
    System.out.println("A");  
}  
else if (x < 10)  
{  
    System.out.println("B");  
}  
  
if (x < 5)  
{  
    System.out.println("C");  
}  
if (x < 10)  
{  
    System.out.println("D");  
}
```

d. What output is produced by the following code fragment?

```
int limit = 100, num1 = 15, num2 = 40;
if (num1 <= limit)
{
    if (num1 == num2)
    {
        System.out.println("lemon");
    }
    System.out.println("lime");
}
System.out.println("grape");
```

e. What is the difference between a class variable and a local variable?

2. Making Calculations. Assume that your form has:

Write code that could go into the main method that:

- Prompts the user to enter a length in feet
- Inputs as an integer a length in feet
- Calculates the corresponding length in meters as a double. One foot is 0.3048 meters.

For example, if the user enters 2 then 2×0.3048 or 0.6096 should be displayed.