

CSC 10A

Accelerated Introduction to Programming Logic

Homework #3

50 Points

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Creating Functions

The purpose of this assignment is to get you writing the body of functions when given a prototype and specifications. Complete the problems below for credit.

Problems

Write pseudo-code to solve the problems below:

Problem #1 (10 points): Write pseudocode that will create the following function:

Prototype: int find_big (int n1, int n2, int n3)

Specification: The function should find the largest value among the three parameters (n1, n2, and n3) and return the value contained in the largest one. This value should be returned.

Answer:

```
int find_big(int1,int2,int3){  
    int max=n1;  
    if(n2>max)  
        max=n2;  
    if(n3>max)  
        max=n3;  
    return max;  
}
```

Problem #2 (10 points): Write pseudocode that will create the following function:

Prototype: boolean is_equal (int n1, int n2)

Specification: The function should determine if n1 and n2 are equal. If so, return the boolean associated with true; otherwise, return false.

Answer:

```
boolean is_equal(int n1, int n2){  
    if(n1==n2)  
        return true;  
    }  
    return false;
```

Problem #3 (15 points): Write pseudocode that will create the following function:

Prototype: float fahrenheit_to_celsius (float f)

Specification: The function should take the Fahrenheit temperature and convert it to Celsius. The Celsius temperature should be returned. For reference: To convert from Fahrenheit to Celsius, you must first subtract 32 degrees from the Fahrenheit. You then take the difference and the Celsius temperature is 5/9 of that.

Answer:

```
return(f-32)*5/9
```

Problem #4 (15 points): Write pseudocode that will create the following function:

Prototype: float get_grand_total (float subtotal, float tax_rate)

Specification: The function should calculate the grand total of a retail sale after tax and return that figure. The subtotal is the cost of goods before tax and the tax rate is the percentage of sales tax, in decimal form. Therefore, 10% tax would be represented as 0.1

Answer:

```
return subtotal+(tax_rate*subtotal)
```

Submission

Submit this assignment on Canvas by the due date for credit. Use .doc, .pdf, or .txt format for code.

If you have any questions, let me know.