

Well Read

CS 161 Recitation

Quiz #6

9

1. (4 pts) Write a void function called "increment_by_x" that will add the second integer parameter to the first integer parameter (carefully consider which parameters should be passed by reference/value):

```
void increment_by_x (int base, int &inc) {  
    inc = base;  
}
```

// The function will be used as follows:

```
int main() {  
    int i = 6, x = 4;  
    increment_by_x(i, x);  
    cout << 6 << " + " << x << " = " << i << endl;  
}
```

2. (2 pts) Inserted into an otherwise correct program, will the code below compile? Explain why in one sentence

```
int add(int n) {  
    return n+1;  
}  
int add(int n, int k) {  
    return n+k;  
}
```

sure it will - overloading - provided
the rest of the code is
good, structured to
allow

3. (2 pts) Define what a **precondition** is? Give an example of what a precondition would be for the function below:

```
int divide(int num, int denom) {  
    return num/denom;  
}
```

Value of num and denom
will be the pre cond.
these
fn's
to work

denom != 0

4. (2 pts) Define what a **postcondition** is? Give an example of what a postcondition would be for the function below:

```
void swap(int &x, int &y) {  
    int temp=x;  
    x=y;  
    y=temp;  
}
```

Temp holds y's new
val
Post condition: y holds x's val,
x, y "returned" x holds y's value
by reference

5. Extra Credit: (1 pt) Inserted into an otherwise correct program, will the code below compile?

Explain why in one sentence:

```
void print_sum(int x, int y) {  
    int z = x + y;  
    cout << "The sum is: " << z << endl;  
    return z;  
}
```

NO!

✓