Name: _____

Quiz #3 **CS 120**

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Answer questions as indicated. All problems are worth 2 points each unless otherwise noted. Closed book/Closed Notes.

What is the value of k in the following statements using *integer* arithmetic:

Problem 1. `k = -4 + 2 / 5 - 1;` _____

Problem 2. `k = 3 - 2 % 4 + 3;` _____

Problem 3. `k = 1 * 3 / 2 - 4;` _____

What is printed by the function `func()` for the values below:

```
void func( int  i, int j )
{
    int  iRetVal;

    if( i >= -2 && j <= 2 )
       if( j % 3 )
          iRetVal = i - j ;
       else
          iRetVal =  i + j ;
    else
       iRetVal =  i - j * 2 ;

   cout << iRetVal << endl;
}
```

Problem 4. `i = 4 and j = 2` _____

Problem 5. `i = 5 and j = 3` _____

Problem 6.
Write a C++ function that will return the location of the largest element in an one dimensional integer array of size N. The input to this function are an array $val[N]$, and two indices i and j such that $i \geq 0$ and $j <= N$. It will return the position k to the calling function such that $i \leq k \leq j$. [5 points]

Problem 7.
Write a C++ function that will swap two elements of an integer array $val[N]$ of size N when it is called with the array, and two indices c and p such that $0 \leq c \leq p \leq N$, and return nothing. [5 points]

Problem 8.
Write a C++ main function that will sort an integer array $x[N]$ of size N using the two functions you just wrote in problems 6 and 7. No global variables can be used. [5 points]