CS261 Quiz #1

Last Name: ____________________  First Name: ____________________

1. For the following code segment, express the execution time in Big-Oh notation (2 pts):

   ```c
   for(int i=n; i > 0; i = i -1)
       for(j =0; j < n; j++)
           printf(...)
   ```

   1. O(n)
   2. O(n^2)
   3. O(log n)
   4. None of the above

2. What is the output of the following C code (Fill in the blanks below) (3 pts)?

   ```c
   #include <stdlib.h>
   #include <stdio.h>
   int main(int argc, char **argv)
   {
       int a;
       int *pint;
       int b[5] = {5, 4, 20, 6, 1};

       a = 5;
       pint = &a;
       printf("a = %d\n", a);

       *pint = 10;
       *pint = *pint + 2;
       printf("a = %d\n", *pint);

       printf("*(b+2) = %d\n", *(b+2));
   }
   ```

   a = _____5_____
   a = _____12_____
   *(b+2) = _____20_____

3. What is the order property of the Stack ADT (2pts)?

   **LIFO**

4. What are the three behaviors of the Stack ADT (3 pts)? **Push, Pop, Top**