HW2

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1) hiding data implementation

   example: private variables, public assessor methods

2) int fun(int n) - O(1)

   int count = 0 - O(1)

   for(int i=n; i>0 ; i/=2) - O(n)

   for(int j=0; j<i ; j++) - O(n)

   count += 1; - O(1)

   return count; - O(1)

O(1+1 + (n x n x 1) +1)

= O(3+ n^2) - drop constant

= O(n^2)

3) floor(log n) + 1

   n - positive int

4)

Reference	Pointer
- More like a constant pointer	- a variable that holds mem. address of another variable
- Cannot be reassigned	- Can be reassigned

5) 1- all namespace available : using namespace ns_name;

   2- Only specific item in namespace : using ns_name:: name;

   3- Use any item at certain point: scu_coen79_2A:: throttle apollo;

6) Code is missing second '<' in line 8

   ↳ ignoring syntax error: code outputs "20" to console

Result will change by throwing an error that variable 'x' is private

7) Line 7 produces error - can't add variable of data type 'double' w/ object of data type 'point'

   ↳ data types need to match

Solution: myPoint1 = myPoint2.operator+ (shift);

8) Output : 1

   1

   4

   4

The reason the output is this is because static variables in a class are shared by the objects of that class. Meaning that multiple class objects share one variable and the changes to that variable through one object affects all other objects of that class.