Midterm 2 Sample Questions

1. Objects

Write a Python class **Movie** defined as follows:
- attributes:
    - name;
    - lead_actor_list;
    - genre.

- methods (not all methods that are reasonable are specified here due to time constraints):
    - a method that takes the movie's name and genre as arguments, and initializes the object appropriately when it is first created (lead_actor_list is initially []);
    - a getter for the **name** attribute;
    - a setter for the **lead_actor_list** attribute; and
    - a rich comparison method to determine when two **Movie** objects are equal using the **==** operator. Two **Movie** objects are equal if they have the same name and same list of lead actors.

2. Complexity

For each of the fragments of code, state its worst-case big-O complexity as precisely as possible (obviously imprecise answers will not get credit).

(a)
```
x = x + 1
x = x + 1
x = x + 1
x = x + 1
x = x + 1
```

(b)
```
n = int( input() )
for i in range(n):
    x = x + 1
```