CS 140: Practice Problems for Quiz 1

The following are study problems for the first quiz. I'll post solutions on Wednesday. Please try these problems on your own before referring to the solutions.

1. Predict the output of the following Python program:

```
x = 3 + 9/2**2
print x
```

2. What is a *syntax error*? Give an example of one in Python.
3. What is a *run-time error*? Give an example of one in Python.
4. What is a *logic error*? Give an example of one in Python.
5. What is the value of `x` after the following lines have executed?

```
x = 0
x = x + 1
print x
```

6. True/False: `hello` is a valid variable name.
7. True/False: `volume1` is a valid variable name.
8. True/False: `1volume` is a valid variable name.
9. True/False: `the_volume` is a valid variable name.
10. True/False: `_volume` is a valid variable name.
11. True/False: `vo&*@#lume` is a valid variable name.
12. True/False: `the volume` is a valid variable name.
13. Python is an *interpreted* programming language as opposed to a *compiled* programming language. Explain the meaning of *interpreted* and *compiled* in this context. Hint: See Chapter 1 of reading.
14. What is the difference between a Python *expression* and a *statement*. Hint: See Chapter 2 in the reading.
15. What is the problem with the Python program below? Check your answer in IDLE.

```
x = y * 10
print x,y
```

16. What is the problem with the Python program below? Check your answer in IDLE.

```
import math
radius = 7
area = pi * radius**2
print area
```

17. Find all of the errors (syntax, run-time, and logic) in the program below:

```
import Math
radius = input("Enter the radius of a circle:)
area = math.Pi * Radius*2
print "The area of the circle with radius", r 'is', area
```

18. Predict what gets printed by `print 2**2**3` Check your answer in Python.
19. *Be sure to review your solutions to the homework problems and the examples from class.*