COSC 175 Dierbach
Spring, 2011

EXERCISE SET 1 ** ANSWER SHEET **

23 pts.

Due Tuesday, February 15th

Literal Values

1. What is the difference between a literal value and a variable? (1 pt.)

   Anything reasonable

2. Give one example literal value for each of the following: (2 pts.)

   a. An integer literal value ____142_____ *any number without a decimal point*

   b. A float literal value ____142.08_____ *any number with a decimal point, e.g., 12.02 12.0 12.*

Identifiers

3. Indicate which of the following are valid identifiers (circle): (1 pt.)

   Total2005Sales 2005TotalSales

Expressions

4. Evaluate each of the following arithmetic expressions. (4 pts.)

   a. (2 + 4) * 3 ___18__

   b. 2 + (4 * 3) ___14__ (corrected 2-21)

   c. 2 + (3 * 4) – 9 ___5__ (corrected 2-21)

   d. ((2 + 10) / 4) / 2 __1.5___ *don't worry about integer div at this point*

5. Evaluate the following expressions (as True or False): (5 pts.)

   a. 12 <= 14 ___True___

   b. 6 < 10 __True___

   c. (20 < 10) and (20 > 5) ___False___

   d. (20 < 10) or (20 > 5) _True____

   e. not (6 < 10) __False___

6. For the following assignment of variables, evaluate the expressions below: (3 pts.)

num1 = 10
num2 = 20
num3 = 35

a. num3 / num1 __3.5___

b. num1 < (num3 – num2) __True___

c. (num1 < num3) AND (num1 < num2) _True__

Selection Control

7. For the following variables:

temperature
swimmingDay

Give an if statement that assigns swimmingDay to be True if temperature is greater than 78. (2 pts.)

```
if temperature > 78
    swimmingDay = True
else
    swimmingDay = False
```
OK if didn't include the else part

8. For the following variables:

temperature
cloudyDay
swimmingDay

Give an if statement that assigns swimmingDay to be true if either it is a sunny day and the temperature is greater than 72, or it is a cloudy day and the temperature is greater than 78. (2 pts.)

```
if (not cloudyDay and temperature > 72) or (cloudyDay and temperature > 78)
    swimmingDay = True
else
    swimmingDay = False
```

9. Give a set of chained if-else statements that checks the value of an integer variable named Credits, and outputs "Freshman" if the number of credits is less than 30, "Sophomore" if the number of credits is less then 60, "Junior" is the number of credits is less than 90, and "Senior" otherwise. (3 pts.)

NOTE: Use print "Freshman", etc. to display output to screen.

(USE BACK OF PAGE)

```
if credits >= 90
   print ‘Senior
else
if credits >= 60
   print ‘Junior
else
if credits >= 30
   print ‘Sophomore’
else
   print ‘Freshman’
```

either single quotes (‘) or double quotes (“) may be used for strings

OR

```
 if credits < 30
   print ‘Freshman’
else
if credits < 60
   print ‘Sophomore’
else
if credits < 90
   print ‘Junior’
else
   print ‘Senior’
```