CSC 108   Quiz # 2   Name __Answer Key__

Multiple Choice: /* 2 points each */

_____C_____ 1. How could the mathematical test radius ≤ 100 be written in a Processing if statement?

```
A) if ( radius < 100 ) {          C) if ( radius <= 100 ) {
B) if ( radius =< 100 ) {          D) if ( radius < || = 100 ) {
                                   E) None of these
```

_____B_____ 2. What does the test in the statement `if ( x != 0 )` mean?

A) x is equal to zero   C)   x might or might not be equal to zero
B) x is not equal to zero   D)   x is REALLY REALLY equal to zero
                                                     E)   None of these

Short Answer:

1. What would be printed by the following Processing code? /* 4 points */

```
int score = 15*4;
String grade = "Fail";
if ( score >= 60 ) {
    grade = "Pass";
}
print( "Grade is " );
println( grade );
```

Grade is Pass

2. What is printed by the following code for each given pair of values of a and b?: /* 2 points for each part */

```
if ( a <= 5 ) {
    b = b + a;
}
print("b = ");
println(b);
```

a)   a = 7 and b = 4   c)   a = 5 and b = –3

    b = 4   b = 2

b)   a = 4 and b = 7   d)   a = 0 and b = 3

    b = 11   b = 3

3. Shirts are on sale for $10 each if more than three are purchased, and $12 each otherwise. Write an if statement that prints the total amount of money due for the sale of `numSold` shirts. /* 3 points */

```
print("total amount due = $");
if ( numSold > 3 ) {
  print( numSold * 10 );
}
else {
  print( numSold * 12 );
}
```

Short Answer (continued):

4. Fill in the blank in this program so that it prints whether or not the value of the variable `age` is at least 21. /* 3 points */

```
if ( _____age >= 21_____ ) {

    print( age );
    println(" is at least 21");
}
else {
    print( age );
    println(" is under 21");
}
```

5. Draw a picture of the shapes that would be drawn by this Processing code: /* 3 points */

```
int x1, x2, x3;
x1 = 100;
x2 = 70 + 2 * x1 - 90;
x3 = x2 / 10 + 10 * x1 / 100;

if ( x1 > x2 ) {
    ellipse(100, 100, 100, 100);
}

else if ( x2 < x3 ) {
    rect(100, 100, 100, 100);
}

else {
    rect(100, 100, 300, 30);
}

ellipse(300, 100, 100, 100);
```