

**Multiple Choice:** /\* 2 points each \*/

\_\_\_\_\_ 1. How could the mathematical test  $\text{radius} \leq 100$  be written in a Processing if statement?

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

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

- A) x is equal to zero
- B) x is not equal to zero
- C) x might or might not be 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 );
```

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) a = 4 and b = 7

d) a = 0 and 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 \*/

*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 ( _____ ) {  
    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);
```