

Multiple Choice and true/false ODD #1-23 pg 187

1. The if statement is an example of a ____.

- a. sequence structure
- b.** decision structure
- c. pathway structure
- d. class structure

decision sequence

3. $>$, $<$, and \geq are ____.

- a.** relational operators
- b. logical operators
- c. conditional operators
- d. ternary operators

relational operator

5. This is an empty statement that does nothing.

- a. missing statement
- b. virtual statement
- c.** null statement
- d. conditional statement

null statement

7. This is a boolean variable that signals when some condition exists in the program.

- a.** flag
- b. signal
- c. sentinel
- d. siren

flag

9. This is an if statement that appears inside another if statement.

- a.** nested if statement
- b. tiered if statement
- c. dislodged if statement

nested if statement

11. When determining whether a number is inside a range, it's best to use this operator.

- a. &&
- b. !
- c. ||
- d. ?:

13. The conditional operator takes this many operands.

- a. one
- b. two
- c. three
- d. four

three

15. When using arrow case syntax in a switch statement, the arrow operator is ____.

- a. ==>
- b. =>
- c. →
- d. >>

→

17. You can use this method to display formatted output in a console window.

- a. Format.out.println
- b. Console.format
- c. System.out.printf
- d. System.out.formatted

System.out.printf

19. True or False: A conditionally executed statement should be indented one level from the if clause.

True

21. True or False: When an if statement is nested in the if clause of another statement, the only ~~#~~ time the inner if statement is executed is when the boolean expression of the outer if statement is true.

23. True or False: The scope of a variable is limited to the block in which it is defined.

25. True or False: When using arrow case syntax in a switch statement, if you need to write more than one statement in a case section, you must enclose those statements in curly braces.

Fix the error

1.

```
// code contains errors
if (x==1);           the semicolons
    y=2;             are blocking the if
else if (x==2);     statement + c
    y=3;
else if (x==3);
    y=4;
```

3. // contains error
if (num2 == 0)

```
System.out.println("Division by zero is not possible.");
System.out.println("Please run the program again");
System.out.println("and enter a number besides zero.");
```

} else {

$$\text{Quotient} = \text{num1} / \text{num2}$$

```
System.out.print("The quotient of " + Num1);
System.out.print(" divided by " + Num2 + " is ");
System.out.println(Quotient);
```

}

The code is missing brackets

print("The quotient of " + Num1 + "

- 1.) Explain what is meant by the phrase "conditionally executed."

conditionally executed means that it is executed under a condition, such as a expression being false or true

- 3.) Why is it good advice to indent all the statements inside a set of braces ?

This makes it more visually appealing and allows for a better understanding of where the statements are being executed

- 5.) Explain the purpose of a flag variable. Of what data type should a flag variable be?

The flag is a boolean variable. It signals when there is a condition in the program. A flag variable set to false means that the condition does not exist. True means the condition does exist.

7.) Briefly describe how the && operator works.

takes two boolean as operands and is
only true when both subexpressions are
true

9.) Why are the relational operators called "relational"

They are called "relational" because they
determine the relation between two expressions
or values such as equals to, greater than
and less than

11.) What can you expect to happen with a program
if it contains a switch expression that is
not exhaustive

A error will occur in the compiler