

**Academia Java**

**Xideral**

**EXAMEN SEMANA 1**

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## Chapter 3

**1. Which of the following Java operators can be used with boolean variables? (Choose all that apply.)**

1. ==

2. +

3. −

4. !

5. %

6. <=

7. Cast with (boolean)

**2. What data type (or types) will allow the following code snippet to compile? (Choose all that apply.)**

1. byte apples = 5;

2. short oranges = 10;

3. \_\_\_\_\_ bananas = apples + oranges;

1. int

2. long

3. boolean

4. double

5. short

6. byte

Manzanas + naranjas se logra a int, por lo que funcionarán int y los tipos de datos que se puedan manejar desde int. El booleano no es un tipo de datos numérico. Las opciones short y byte no funcionarán porque son un tipo de datos más pequeño.

**3. What change, when applied independently, would allow the following code snippet to compile? (Choose all that apply.)**

```
3: long ear = 10;  
4: int hearing = 2 * ear;
```

1. No change; it compiles as is.

2. Cast ear on line 4 to int.

3. Change the data type of ear on line 3 to short.

4. Cast 2 \* ear on line 4 to int.

5. Change the data type of hearing on line 4 to short.

6. Change the data type of hearing on line 4 to long.

**6. What is the output of the following program?**

```
1: public class CandyCounter {  
2: static long addCandy(double fruit, float vegetables) {  
3: return (int)fruit+vegetables;  
4: }  
5:  
6: public static void main(String[] args) {  
7: System.out.print(addCandy(1.4, 2.4f) + "- ");  
8: System.out.print(addCandy(1.9, (float)4) + "-");  
9: System.out.print(addCandy((long)(int) (short)2, (float)4)); } }
```

1. 4-6-6.0

2. 3-5-6

3. 3-6-6

4. 4-5-6

5. The code does not compile because of line 9.

6. None of the above

**9. What are the unique outputs of the following code snippet? (Choose all that apply.)**

```
int a = 2, b = 4, c = 2;  
System.out.println(a > 2 ? --c : b++);  
System.out.println(b = (a!=c ? a : b++));  
System.out.println(a > b ? b < c ? b : 2 : 1);
```

1. 1

2. 2

3. 3

4. 4

5. 5

6. 6

7. The code does not compile.

**17. Given the following code snippet, what is the value of the variables after it is executed? (Choose all that apply.)**

```
int ticketsTaken = 1;  
int ticketsSold = 3;  
ticketsSold += 1 + ticketsTaken++;  
ticketsTaken *= 2;  
ticketsSold += (long)1;
```

1. ticketsSold is 8

2. ticketsTaken is 2

3. ticketsSold is 6

4. ticketsTaken is 6

5. ticketsSold is 7

6. ticketsTaken is 4

7. The code does not compile.

## Chapter 4

### 2. What is the output of the following code snippet? (Choose all that apply.)

```
3: int temperature = 4;  
4: long humidity = -temperature + temperature * 3;  
5: if (temperature >= 4)  
6: if (humidity < 6) System.out.println("Too Low");  
7: else System.out.println("Just Right");  
8: else System.out.println("Too High");
```

1. Too Low

2. Just Right

3. Too High

4. A NullPointerException is thrown at runtime.

5. The code will not compile because of line 7.

6. The code will not compile because of line 8.

### 6. Which statements, when inserted independently into the following blank, will cause the code to print 2 at runtime? (Choose all that apply.)

```
int count = 0;  
BUNNY: for(int row = 1; row <= 3; row++)  
RABBIT: for(int col = 0; col < 3; col++) {  
    if((col + row) % 2 == 0)  
        _____;  
    count++;  
}  
System.out.println(count);
```

1. break BUNNY
2. break RABBIT
3. continue BUNNY
4. continue RABBIT
5. break
6. continue

**9. What is the output of the following code snippet?**

```
2: boolean keepGoing = true;
3: int result = 15, meters = 10;
4: do {
5:   meters--;
6:   if(meters==8) keepGoing = false;
7:   result -= 2;
8: } while keepGoing;
9: System.out.println(result);
```

1. 7
2. 9
3. 10
4. 11
5. 15
6. The code will not compile because of line 6.
7. The code does not compile for a different reason.

**20. What is the output of the following code snippet? (Choose all that apply.)**

```
9: int w = 0, r = 1;  
10: String name = "";  
11: while(w < 2) {  
12: name += "A";  
13: do {  
14: name += "B";  
15: if(name.length()>0) name += "C";  
16: else break;  
17: } while (r <=1);  
18: r++; w++; }  
19: System.out.println(name);
```

1. ABC
2. ABCABC
3. ABCABCABC
4. Line 15 contains a compilation error.
5. Line 18 contains a compilation error.
6. The code compiles but never terminates at runtime.
7. The code compiles but throws a NullPointerException at runtime.

## Chapter 5

### 1. What is output by the following code? (Choose all that apply.)

```
1: public class Fish {  
2:     public static void main(String[] args) {  
3:         int numFish = 4;  
4:         String fishType = "tuna";  
5:         String anotherFish = numFish + 1;  
6:         System.out.println(anotherFish + " " +  
fishType);  
7:         System.out.println(numFish + " " + 1);  
8:     } }
```

1. 4 1

2. 5

3. 5 tuna

4. 5tuna

5. 51tuna

6. The code does not compile.

### 4. What is the result of the following code?

```
7: StringBuilder sb = new StringBuilder();  
8: sb.append("aaa").insert(1, "bb").insert(4, "ccc");  
9: System.out.println(sb);
```

1. abbaaccc

2. abbaccca

3. bbaaaccc

4. bbaaccca

5. An empty line



6. The code does not compile.

**5. What is the result of the following code?**

```
12: int count = 0;
13: String s1 = "java";
14: String s2 = "java";
15: StringBuilder s3 = new StringBuilder("java");
16: if (s1 == s2) count++;
17: if (s1.equals(s2)) count++;
18: if (s1 == s3) count++;
19: if (s1.equals(s3)) count++;
20: System.out.println(count);
```

1. 0

2. 1

3. 2

4. 3

5. 4

6. An exception is thrown.

7. The code does not compile.

**6. What is the result of the following code?**

```
public class Lion {
    public void roar(String roar1, StringBuilder
    roar2) {
        roar1.concat("!!!");
        roar2.append("!!!");
    }
    public static void main(String[] args) {
        String roar1 = "roar";
```

```
StringBuilder roar2 = new  
StringBuilder("roar");  
new Lion().roar(roar1, roar2);  
System.out.println(roar1 + " " + roar2);  
}}
```

1. roar roar

2. roar roar!!!

3. roar!!! roar

4. roar!!! roar!!!

5. An exception is thrown.

6. The code does not compile.

**13. Which of the following can replace line 4 to print "avaJ"? (Choose all that apply.)**

3: var puzzle = new StringBuilder("Java");

4: // INSERT CODE HERE

5: System.out.println(puzzle);

1. puzzle.reverse();

2. puzzle.append("vaJ\$").substring(0, 4);

3. puzzle.append("vaJ\$").delete(0,3).deleteCharAt(puzzle.length() - 1);

4. puzzle.append("vaJ\$").delete(0,3).deleteCharAt(puzzle.length());

5. None of the above