Java Questions & Answers – Arithmetic Operators

1. Which of the following can be operands of arithmetic operators?  
a) Numeric  
b) Boolean  
c) Characters  
d) Both Numeric & Characters  
**Answer:d**Explanation: The operand of arithmetic operators can be any of numeric or character type, But not boolean.

2. Modulus operator, %, can be applied to which of these?  
a) Integers  
b) Floating – point numbers  
c) Both Integers and floating – point numbers.  
d) None of the mentioned  
**Answer:c**Explanation: Modulus operator can be applied to both integers and floating point numbers. .

3. With x = 0, which of the following are legal lines of Java code for changing the value of x to 1?  
1. x++;  
2. x = x + 1;  
3. x += 1;  
4. x =+ 1;  
a) 1, 2 & 3  
b) 1 & 4  
c) 1, 2, 3 & 4  
d) 3 & 2  
**Answer: d**Explanation: Operator ++ increases value of variable by 1. x = x + 1 can also be written in shorthand form as x += 1. Also x =+ 1 will set the value of x to 1.

4. Decrement operator, –, decreases value of variable by what number?  
a) 1  
b) 2  
c) 3  
d) 4

**Answer: a**Explanation: None.

5. Which of these statements are incorrect?  
a) Assignment operators are more efficiently implemented by Java run-time system than their equivalent long forms.  
b) Assignment operators run faster than their equivalent long forms.  
c) Assignment operators can be used only with numeric and character data type.  
d) None  
**Answer: d**Explanation: None.

6. What is the output of this program?

1. **class** increment {
2. **public** **static** **void** main(String args[])
3. {
4. **double** var1 = 1 + 5;
5. **double** var2 = var1 / 4;
6. **int** var3 = 1 + 5;
7. **int** var4 = var3 / 4;
8. System.out.print(var2 + " " + var4);
10. }
11. }

a) 1 1  
b) 0 1  
c) 1.5 1  
d) 1.5 1.0  
**Answer:c**Explanation: None  
output:  
$ javac increment.java  
$ java increment  
1.5 1

7. What is the output of this program?

1. **class** Modulus {
2. **public** **static** **void** main(String args[])
3. {
4. **double** a = 25.64;
5. **int** b = 25;
6. a = a % 10;
7. b = b % 10;
8. System.out.println(a + " " + b);
9. }
10. }

a) 5.640000000000001 5  
b) 5.640000000000001 5.0  
c) 5 5  
d) 5 5.640000000000001  
**Answer: a**Explanation: Modulus operator returns the remainder of a division operation on the operand. a = a % 10 returns 25.64 % 10 i:e 5.640000000000001. Similarly b = b % 10 returns 5.  
output:  
$ javac Modulus.java  
$ java Modulus  
5.640000000000001 5

8. What is the output of this program?

1. **class** increment {
2. **public** **static** **void** main(String args[])
3. {
4. **int** g = 3;
5. System.out.print(++g \* 8);
6. }
7. }

a) 25  
b) 24  
c) 32  
d) 33  
**Answer:c**Explanation: Operator ++ has more preference than \*, thus g becomes 4 and when multiplied by 8 gives 32.  
output:  
$ javac increment.java  
$ java increment  
32

9. What is the output of this program?

1. **class** Output {
2. **public** **static** **void** main(String args[])
3. {
4. **int** x , y;
5. x = 10;
6. x++;
7. --x;
8. y = x++;
9. System.out.println(x + " " + y);
10. }
11. }

a) 11 11  
b) 10 10  
c) 11 10  
d) 10 11  
10. What is the output of this program?

1. **class** Output {
2. **public** **static** **void** main(String args[])
3. {
4. **int** a = 1;
5. **int** b = 2;
6. **int** c;
7. **int** d;
8. c = ++b;
9. d = a++;
10. c++;
11. b++;
12. ++a;
13. System.out.println(a + " " + b + " " + c);
14. }
15. }

a) 3 2 4  
b) 3 2 3  
c) 2 3 4  
d) 3 4 4  
**Answer: d**Explanation: None.  
output:  
$ javac Output.java  
$ java Output  
3 4 4