

Programming 1 final revision by Eng Ihap El-Galaly

What change would allow the following code snippet to compile? (Choose all that apply)

```
long x = 1;      // line 3
int y = 2 * x; // line 4
```

- A. No change; it compiles as is.
- B. Change the data type of x on line 3 to short.
- C. Cast x on line 4 to int.
- D. Cast `2 * x` on line 4 to int.
- E. Change the data type of y on line 4 to short.
- F. Change the data type of y on line 4 to long.

Answer

[Click for the answer](#)

B, C, D, F.

Note

A is not correct.

The code will not compile as is since the `2 * x` promotes to long. The value `2 * x` is promoted to long and cannot be automatically stored in y, which is in an int value.

B, C, and D changed the long value to int.

E is wrong since it makes the value in a smaller data type.

F solves the problem by increasing the data type to long, which is allowed.

What is the result of the following code snippet?

```
3: final char a = 'A', d = 'D';
4: char grade = 'B';
5: switch(grade) {
6:   case a:
7:   case 'B': System.out.print("B");
8:   case 'C': System.out.print("C"); break;
9:   case d:
10:  case 'F': System.out.print("F");
11: }
```

- A. B
- B. BC
- C. The code will not compile because of line 3.
- D. The code will not compile because of line 6.
- E. The code will not compile because of lines 6 and 9.

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The code above generates the following result.

BC

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What is the output of the following code snippet?

```
3: int x = 4;
4: long y = x * 4 - x++ + --x;
5: if(y<10) System.out.println("A");
6: else System.out.println("B");
7: else System.out.println("C");
```

- A. A
- B. B
- C. C
- D. The code will not compile because of line 6.
- E. The code will not compile because of line 7.
- F.

Note

The code does not compile since there are two else statements without additional if-then statements.

- What is the output of the following application?

```
1: public class Main {
2:   public static void main(String[] args) {
3:     int x = 0;
4:     while(x++ < 5) {}
5:     String message = x > 5 ? "Greater than" : false;
6:     System.out.println(message+","+x);
7:   }
8: }
```

- A. Greater than,5
- B. false,5
- C. Greater than,6
- D. false,6
- E. The code will not compile because of line 4.
- F. The code will not compile because of line 5.

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Answer

Click for the answer

F.

Note

The ternary operator has two expressions, one of them is of type String and the other is of boolean value.

The ternary operator allows to unmatched types.

The assignment of the ternary operator is asking for the String reference.

What is the output of the following code snippet?

```
3: do {  
4:     int x = 1;  
5:     System.out.print(x++ + " ");  
6: } while(x <= 10);
```

- A. 1 2 3 4 5 6 7 8 9 10
- B. 1 2 3 4 5 6 7 8 9
- C. 1 2 3 4 5 6 7 8 9 10 11
- D. The code will not compile because of line 6.

D.

Note

The variable x is declared within the do-while statement, so it is out of scope on line 6.



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What is the result of the following code snippet?

```
3: int m = 9, n = 1, x = 0;
4: while(m > n) {
5:     m--;
6:     n += 2;
7:     x += m + n;
8: }
9: System.out.println(x);
```

- A. 1
- B. 2
- C. 3
- D. 6
- E. 7
- F. The code will not compile because of line 7.

Answer

[Click for the answer](#)

D.

What is the output of the following code snippet?

```
3: int count = 0;
4: ROW_LOOP: for(int row = 1; row <=3; row++)
5:     for(int col = 1; col <=2 ; col++) {
6:         if(row * col % 2 == 0) continue ROW_LOOP;
7:         count++;
8:     }
9: System.out.println(count);
```

- A. 1
- B. 2
- C. 3
- D. 4
- E. 6
- F. The code will not compile because of line 6.

Answer

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B.

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What is the output of the following code snippet?

```
public class Main{
    public static void main(String[] argv){
        3: boolean checked = true;
        4: int result = 15, i = 10;
        5: do {
        6:     i--;
        7:     if(i==8) checked = false;
        8:     result -= 2;
        9: } while(checked);
       10: System.out.println(result);
    }
}
```

- A. 7
- B. 9
- C. 10
- D. 11
- E. 15
- F. The code will not compile because of line 8.

Answer

[Click for the answer](#)

D.

What data types will allow the following code snippet to compile? (Choose all that apply)

```
byte x = 1;
byte y = 2;
_____ z = x + y;
```

- A. int
- B. long
- C. boolean
- D. double
- E. short
- F. byte

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Answer

[Click for the answer](#)

A, B, D.

Note

x and y are both type of byte.

x + y is automatically promoted to int.

int and data types that can be promoted automatically from int will make the code compile.

A, B, D are correct answers.

C is wrong since boolean is not a numeric data type.

E and F will work for a casting. They are smaller data type.

What is the output of the following code?

```
1: public class Main {  
2:   public static void main(String[] args) {  
3:     int x = 5;  
4:     System.out.println(x > 2 ? x < 4 ? 10 : 8 : 7);  
5:   }  
6: }
```

- A. 5
- B. 4
- C. 10
- D. 8
- E. 7
- F. The code will not compile because of line 4.

The code above generates the following result.

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What is the output of the following code snippet?

```
public class Main{
    public static void main(String[] argv){
        3: int c = 2;
        4: int result = 4;
        5: result += ++c;
        6: System.out.println(result);

    }
}
```

- A. 8
- B. 6
- C. 7
- D. 9
- E. 10
- F. The code will not compile because of line 5.

The code above generates the following result.

7

19

What is the output of the following code snippet?

```
public class Main{
    public static void main(String[] argv){
        3: int x = 1, y = 5;
        4: while x < 8
        5:     y--;
        6:     x++;
        7: System.out.println(x+, " +y);

    }
}
```

- A. 7, 5
- B. 7, 6
- C. 7, 5
- D. The code will not compile because of line 3.
- E. The code will not compile because of line 4.
- F. The code contains an infinite loop and does not terminate.

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Answer

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E.

Note

The while statement on line 4 is missing parentheses.



What is the output of the following code?

```
3: byte a = 40, b = 50;  
4: byte sum = (byte) a + b;  
5: System.out.println(sum);
```

- A. 40
- B. 50
- C. 90
- D. The code will not compile because of line 4.
- E. An undefined value.

Answer

[Click for the answer](#)

D.

Note

Line 4 generates a possible loss of precision compiler error.

It only casts one operand, the following code changes the casting to cast the result of the addition.



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What is the output of the following code snippet?

```
3: int x = 0;
4: String s = null;
5: if(x == s)
6:     System.out.println("Success");
7: else
8:     System.out.println("Failure");
```

- A. Success
- B. Failure
- C. The code will not compile because of line 4.
- D. The code will not compile because of line 5.

Answer

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D.

Note

The variable x is an int and s is String type.

The two data types are incomparable.



What is the output of the following code snippet?

```
3: int x1 = 5, x2 = 7;
4: boolean b = x1 >= x2;
5: if(b = true) System.out.println("Success");
6: else System.out.println("Failure");
```

- A. Success
- B. Failure
- C. The code will not compile because of line 4.
- D. The code will not compile because of line 5.

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Answer

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A.

Note

The code compiles successfully.

The value of b after line 4 is false.

if-then statement on line 5 contains an assignment, not a comparison.

The variable b is assigned true on line 3, and the assignment operator returns true, so line 5 executes and displays Success.

How many times will the following code print "Hello World"?

```
3: for(int i=0; i<10 ; ) {  
4:   i = i++;  
5:   System.out.println("Hello World");  
6: }
```

- A. 9
- B. 10
- C. 11
- D. The code will not compile because of line 3.
- E. The code will not compile because of line 5.
- F. The code contains an infinite loop and does not terminate.

Answer

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F.

Note

The optional update statement of the for loop is missing.

The expression (`i = i++;`) inside the loop increments i but then assigns i the old value. i stays in value 0 for ever.

The loop will repeat infinitely.

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What is the output of the following code snippet?

```
3: boolean x = true, z = true;
4: int y = 2;
5: x = (y != 1) ^ (z=false);
6: System.out.println(x+", "+y+", "+z);
```

- A. true, 1, true
- B. true, 2, false
- C. false, 2, true
- D. false, 2, false
- E. false, 2, true
- F. The code will not compile because of line 5.

Answer

[Click for the answer](#)

B.

Note

`z=false` assigns the value `false` to `z` and returns `false` for the expression.

Since `y` does not equal 1, the left-hand side returns `true`; therefore, the exclusive or `^` of the entire expression assigned to `x` is `true`.

There is no change to `y`.

What is the output of the following code?

```
1: public class Main {
2:   public static void main(String[] args) {
3:     int x = 5 * 8 % 3;
4:     System.out.println(x);
5:   }
6: }
```

- A. 1
- B. 3
- C. 5
- D. 6
- E. The code will not compile because of line 3.

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Answer

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A.

Note

The * and % have the same operator precedence.

The output is 1 and A is the correct answer.



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

- A. ==
- B. +
- C. --
- D. !
- E. %
- F. <=

A, D.

Note

A is the equality operator and can be used on numeric primitives, boolean values, and object references.

B and C are both arithmetic operators and cannot be applied to a boolean value.

D is the logical complement operator and is used exclusively with boolean values.

E is the modulus operator, which can only be used with numeric primitives.

F is a relational operator that compares the values of two numbers.



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1. What is the output of relational operators?

- a) Integer
- b) Boolean
- c) Characters
- d) Double

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Answer: b

Explanation: None.

2. Which of these is returned by “greater than”, “less than” and “equal to” operators?

- a) Integers
- b) Floating – point numbers
- c) Boolean
- d) None of the mentioned

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Answer: c

Explanation: All relational operators return a boolean value ie. true and false.

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3. Which of the following operators can operate on a boolean variable?

- 1. &&
- 2. ==
- 3. ?:
- 4. +=

- a) 3 & 2
- b) 1 & 4
- c) 1, 2 & 4
- d) 1, 2 & 3

 [View Answer](#)

Answer: d

Explanation: Operator Short circuit AND, &&, equal to, == , ternary if-then-else, ?:, are boolean logical operators. += is an arithmetic operator it can operate only on numeric values.



4. Which of these operators can skip evaluating right hand operand?

- a) !
- b) |
- c) &
- d) &&

 [View Answer](#)

Answer: d

Explanation: Operator short circuit and, &&, and short circuit or, ||, skip evaluating right hand operand when output can be determined by left operand alone.

5. Which of these statements is correct?

- a) true and false are numeric values 1 and 0
- b) true and false are numeric values 0 and 1
- c) true is any non zero value and false is 0
- d) true and false are non numeric values

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Answer: d

Explanation: True and false are keywords, they are non numeric values which do not relate to zero or non zero numbers. true and false are boolean values.

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6. What will be the output of the following Java code?

```
1. class Relational_operator
2. {
3.     public static void main(String args[])
4.     {
5.         int var1 = 5;
6.         int var2 = 6;
7.         System.out.print(var1 > var2);
8.     }
9. }
```

- a) 1
- b) 0
- c) true
- d) false

 [View Answer](#)

Answer: d

Explanation: Operator > returns a boolean value. 5 is not greater than 6 therefore false is returned.

output:

```
$ javac Relational_operator.java
$ java Relational_operator
false
```

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7. What will be the output of the following Java code?

```
1. class bool_operator
2. {
3.     public static void main(String args[])
4.     {
5.         boolean a = true;
6.         boolean b = !true;
7.         boolean c = a | b;
8.         boolean d = a & b;
9.         boolean e = d ? b : c;
10.        System.out.println(d + " " + e);
11.    }
12. }
```

- a) false false
- b) true ture
- c) true false
- d) false true

 [View Answer](#)

Answer: d

Explanation: Operator | returns true if any one operand is true, thus 'c = true | false' is true. Operator & returns a true if both of the operand is true thus d is false. Ternary operator ?: assigns left of ':' if condition is true and right hand of ':' if condition is false. d is false thus e = d ? b : c , assigns c to e , e contains true.

Output:

```
$ javac bool_operator.java
$ java bool_operator
false true
```

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8. What will be the output of the following Java code?

```
1.  class ternary_operator
2.  {
3.      public static void main(String args[])
4.      {
5.          int x = 3;
6.          int y = ~ x;
7.          int z;
8.          z = x > y ? x : y;
9.          System.out.print(z);
10.     }
11. }
```

- a) 0
- b) 1
- c) 3
- d) -4

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Answer: c

Explanation: None.

output:

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```
$ javac ternary_operator.java  
$ java ternary_operator  
3
```

9. What will be the output of the following Java code?

```
1.  class Output  
2.  {  
3.      public static void main(String args[])  
4.      {  
5.          int x , y = 1;  
6.          x = 10;  
7.          if (x != 10 && x / 0 == 0)  
8.              System.out.println(y);  
9.          else  
10.             System.out.println(++y);  
11.     }  
12. }
```

- a) 1
- b) 2
- c) Runtime error owing to division by zero in if condition
- d) Unpredictable behavior of program

 [View Answer](#)

Answer: b

Explanation: Operator short circuit and, &&, skips evaluating right hand operand if left hand operand is false thus division by zero in if condition does not give an error.

output:

```
$ javac Output.java  
$ java Output  
2
```

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10. What will be the output of the following Java code?

```
1.  class Output
2.  {
3.      public static void main(String args[])
4.      {
5.          boolean a = true;
6.          boolean b = false;
7.          boolean c = a ^ b;
8.          System.out.println(!c);
9.      }
10. }
```

- a) 0
- b) 1
- c) false
- d) true

[View Answer](#)

Answer: c

Explanation: None.

output:

```
$ javac Output.java
$ java Output
false
```

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8. What is the output of the following code snippet?

```
3: boolean x = true, z = true;
4: int y = 20;
5: x = (y != 10) ^ (z=false);
6: System.out.println(x+, " +y+", "+z);
```

- A. true, 10, true
 - B. true, 20, false
 - C. false, 20, true
 - D. false, 20, false
 - E. false, 20, true
 - F. The code will not compile because of line 5.
8. B. This example is tricky because of the second assignment operator embedded in line 5. The expression (z=false) assigns the value false to z and returns false for the entire expression. Since y does not equal 10, the left-hand side returns true; therefore, the exclusive or (^) of the entire expression assigned to x is true. The output reflects these assignments, with no change to y, so option B is the only correct answer. The code compiles and runs without issue, so option F is not correct.

10. What is the output of the following code?

```
3: byte a = 40, b = 50;
4: byte sum = (byte) a + b;
5: System.out.println(sum);
```

- A. 40
 - B. 50
 - C. 90
 - D. The code will not compile because of line 4.
 - E. An undefined value.
10. D. Line 4 generates a possible loss of precision compiler error. The cast operator has the highest precedence, so it is evaluated first, casting a to a byte. Then, the addition is evaluated, causing both a and b to be promoted to int values. The value 90 is an int and cannot be assigned to the byte sum without an explicit cast, so the code does not compile. The code could be corrected with parentheses around (a + b), in which case option C would be the correct answer.

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15. What is the output of the following code snippet?

```
3: int x = 1, y = 15;
4: while x < 10
5: y--;
6: x++;
7: System.out.println(x+, "+y);
```

- A. 10, 5
 - B. 10, 6
 - C. 11, 5
 - D. The code will not compile because of line 3.
 - E. The code will not compile because of line 4.
 - F. The code contains an infinite loop and does not terminate.
15. E. This is actually a much simpler problem than it appears to be. The while statement on line 4 is missing parentheses, so the code will not compile, and option E is the correct answer. If the parentheses were added, though, option F would be the correct answer since the loop does not use curly braces to include x++ and the boolean expression never changes. Finally, if curly braces were added around both expressions, the output would be 10, 6 and option B would be correct.

16. What is the output of the following code snippet?

```
3: do {
4: int y = 1;
5: System.out.print(y++ + " ");
6: } while(y <= 10);
```

- A. 1 2 3 4 5 6 7 8 9
 - B. 1 2 3 4 5 6 7 8 9 10
 - C. 1 2 3 4 5 6 7 8 9 10 11
 - D. The code will not compile because of line 6.
 - E. The code contains an infinite loop and does not terminate.
16. D. The variable y is declared within the body of the do-while statement, so it is out of scope on line 6. Line 6 generates a compiler error, so option D is the correct answer.



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17. What is the output of the following code snippet?

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

- A. 7
 - B. 9
 - C. 10
 - D. 11
 - E. 15
 - F. The code will not compile because of line 8.
17. D. The code compiles without issue, so option F is incorrect. After the first execution of the loop, i is decremented to 9 and result to 13. Since i is not 8, keepGoing is false, and the loop continues. On the next iteration, i is decremented to 8 and result to 11. On the second execution, i does equal 8, so keepGoing is set to false. At the conclusion of the loop, the loop terminates since keepGoing is no longer true. The value of result is 11, and the correct answer is option D.

19. What is the result of the following code snippet?

```
3: int m = 9, n = 1, x = 0;
4: while(m > n) {
5: m--;
6: n += 2;
7: x += m + n;
8: }
9: System.out.println(x);
```

- A. 11
 - B. 13
 - C. 23
 - D. 36
 - E. 50
 - F. The code will not compile because of line 7.
19. D. Prior to the first iteration, m = 9, n = 1, and x = 0. After the iteration of the first loop, m is updated to 8, n to 3, and x to the sum of the new values for m + n, 0 + 11 = 11. After the iteration of the second loop, m is updated to 7, n to 5, and x to the sum of the new values for m + n, 11 + 12 = 23. After the iteration of the third loop, m is updated to 6, n to 7, and x to the sum of the new values for m + n, 23 + 13 = 36. On the fourth iteration of the loop, m > n evaluates to false, as 6 < 7 is not true. The loop ends and the most recent value of x, 36, is output, so the correct answer is option D.

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1. Which of the following can be operands of arithmetic operators?

- a) Numeric
- b) Boolean
- c) Characters
- d) Both Numeric & Characters

[View Answer](#)

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

[View Answer](#)

Answer: c

Explanation: Modulus operator can be applied to both integers and floating point numbers.

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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

 [View Answer](#)

Answer: c

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 the value of variable by what number?

- a) 1
- b) 2
- c) 3
- d) 4

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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 of the mentioned

 [View Answer](#)

Answer: d

Explanation: None.



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6. What will be the output of the following Java program?

```
1. class increment
2. {
3.     public static void main(String args[])
4.     {
5.         double var1 = 1 + 5;
6.         double var2 = var1 / 4;
7.         int var3 = 1 + 5;
8.         int var4 = var3 / 4;
9.         System.out.print(var2 + " " + var4);
10.
11.    }
12. }
```

- a) 1 1
- b) 0 1
- c) 1.5 1
- d) 1.5 1.0

 [View Answer](#)

Answer: c

Explanation: None

output:

```
$ javac increment.java
$ java increment
1.5 1
```

7. What will be the output of the following Java program?

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```
1. class Modulus
2. {
3.     public static void main(String args[])
4.     {
5.         double a = 25.64;
6.         int b = 25;
7.         a = a % 10;
8.         b = b % 10;
9.         System.out.println(a + " " + b);
10.    }
11. }
```

-) 5.640000000000001 5
-) 5.640000000000001 5.0
-) 5 5
- !) 5 5.640000000000001

[View Answer](#)

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
```

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8. What will be the output of the following Java program?

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

- a) 25
- b) 24
- c) 32
- d) 33

 [View Answer](#)

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. Can 8 byte long data type be automatically type cast to 4 byte float data type?

- a) True
- b) False

 [View Answer](#)

Answer: a

Explanation: Both data types have different memory representation that's why 8-byte integral data type can be stored to 4-byte floating point data type.



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10. What will be the output of the following Java program?

```
1.  class Output
2.  {
3.      public static void main(String args[])
4.      {
5.          int a = 1;
6.          int b = 2;
7.          int c;
8.          int d;
9.          c = ++b;
10.         d = a++;
11.         c++;
12.         b++;
13.         ++a;
14.         System.out.println(a + " " + b + " " + c);
15.     }
16. }
```

- a) 3 2 4
- b) 3 2 3
- c) 2 3 4
- d) 3 4 4

 [View Answer](#)

Answer: d

Explanation: None.

output:

```
$ javac Output.java
$ java Output
3 4 4
```

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1. What is the range of short data type in Java?

- a) -128 to 127
- b) -32768 to 32767
- c) -2147483648 to 2147483647
- d) None of the mentioned

 [View Answer](#)

Answer: b

Explanation: Short occupies 16 bits in memory. Its range is from -32768 to 32767.

2. What is the range of byte data type in Java?

- a) -128 to 127
- b) -32768 to 32767
- c) -2147483648 to 2147483647
- d) None of the mentioned

 [View Answer](#)

Answer: a

Explanation: Byte occupies 8 bits in memory. Its range is from -128 to 127.

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3. Which of the following are legal lines of Java code?

```
1. int w = (int)888.8;
2. byte x = (byte)100L;
3. long y = (byte)100;
4. byte z = (byte)100L;
```

- a) 1 and 2
- b) 2 and 3
- c) 3 and 4
- d) All statements are correct

 [View Answer](#)

Answer: d

Explanation: Statements (1), (2), (3), and (4) are correct. (1) is correct because when a floating-point number (a double in this case) is cast to an int, it simply loses the digits after the decimal. (2) and (4) are correct because a long can be cast into a byte. If the long is over 127, it loses its most significant (leftmost) bits. (3) actually works, even though a cast is not necessary, because a long can store a byte.



4. An expression involving byte, int, and literal numbers is promoted to which of these?

- a) int
- b) long
- c) byte
- d) float

 [View Answer](#)

Answer: a

Explanation: An expression involving bytes, ints, shorts, literal numbers, the entire expression is promoted to int before any calculation is done.

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5. Which of these literals can be contained in float data type variable?

- a) -1.7e+308
- b) -3.4e+038
- c) +1.7e+308
- d) -3.4e+050

[View Answer](#)

Answer: b

Explanation: Range of float data type is -(3.4e38) To +(3.4e38)

6. Which data type value is returned by all transcendental math functions?

- a) int
- b) float
- c) double
- d) long

[View Answer](#)

Answer: c

Explanation: None.

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7. What will be the output of the following Java code?

```
1.  class average {
2.      public static void main(String args[])
3.      {
4.          double num[] = {5.5, 10.1, 11, 12.8, 56.9, 2.5};
5.          double result;
6.          result = 0;
7.          for (int i = 0; i < 6; ++i)
8.              result = result + num[i];
9.          System.out.print(result/6);
10.
11.     }
12. }
```

- a) 16.34
- b) 16.566666644
- c) 16.466666666666667
- d) 16.466666666666666

 [View Answer](#)

Answer: c

Explanation: None.

output:

```
$ javac average.java
$ java average
16.46666666666667
```

8. What will be the output of the following Java statement?

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```
1. class output {
2.     public static void main(String args[])
3.     {
4.         double a, b,c;
5.         a = 3.0/0;
6.         b = 0/4.0;
7.         c=0/0.0;
8.
9.         System.out.println(a);
10.        System.out.println(b);
11.        System.out.println(c);
12.    }
13.}
```

- a) Infinity
- b) 0.0
- c) NaN
- d) all of the mentioned

[View Answer](#)

Answer: d

Explanation: For floating point literals, we have constant value to represent (10/0.0) infinity either positive or negative and also have NaN (not a number for undefined like 0/0.0), but for the integral type, we don't have any constant that's why we get an arithmetic exception.

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9. What will be the output of the following Java code?

```
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

 [View Answer](#)

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
```

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10. What will be the output of the following Java code?

```
1. class area {
2.     public static void main(String args[])
3.     {
4.         double r, pi, a;
5.         r = 9.8;
6.         pi = 3.14;
7.         a = pi * r * r;
8.         System.out.println(a);
9.     }
10. }
```

- a) 301.5656
- b) 301
- c) 301.56
- d) 301.56560000

 [View Answer](#)

Answer: a

Explanation: None.

Output:

```
$ javac area.java
$ java area
301.5656
```

1. What is the numerical range of a char data type in Java?

- a) -128 to 127
- b) 0 to 256
- c) 0 to 32767
- d) 0 to 65535

 [View Answer](#)

Answer: d

Explanation: Char occupies 16-bit in memory, so it supports 2^{16} i.e from 0 to 65535.

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5. Which one is a valid declaration of a boolean?

- a) boolean b1 = 1;
- b) boolean b2 = 'false';
- c) boolean b3 = false;
- d) boolean b4 = 'true'

 [View Answer](#)

Answer: c

Explanation: Boolean can only be assigned true or false literals.



3. Which of these values can a boolean variable contain?

- a) True & False
- b) 0 & 1
- c) Any integer value
- d) true

 [View Answer](#)

Answer: a

Explanation: Boolean variable can contain only one of two possible values, true and false.

```
1. class mainclass {  
2.     public static void main(String args[])  
3.     {  
4.         boolean var1 = true;  
5.         boolean var2 = false;  
6.         if (var1)  
7.             System.out.println(var1);  
8.         else  
9.             System.out.println(var2);  
10.    }  
11. }
```

-) 0
-) 1
-) true
-) false

 [View Answer](#)

Answer: c

Explanation: None.

Output:

```
$ javac mainclass.java  
$ java mainclass  
true
```

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9. What will be the output of the following Java code?

```
1.     class boolooperators {
2.         public static void main(String args[])
3.         {
4.             boolean var1 = true;
5.             boolean var2 = false;
6.             System.out.println((var1 & var2));
7.         }
8.     }
```

- a) 0
- b) 1
- c) true
- d) false

 [View Answer](#)

Answer: d

Explanation: boolean '&' operator always returns true or false. var1 is defined true and var2 is defined false hence their '&' operator result is false.

output:

```
$ javac boolooperators.java
$ java boolooperators
false
```

2. Which of these can be returned by the operator &?

- a) Integer
- b) Boolean
- c) Character
- d) Integer or Boolean

 [View Answer](#)

Answer: d

Explanation: We can use binary ampersand operator on integers/chars (and it returns an integer) or on booleans (and it returns a boolean).



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4. Literal can be of which of these data types?

- a) integer
- b) float
- c) boolean
- d) all of the mentioned

 [View Answer](#)

Answer: d

Explanation: None

5. Which of these can not be used for a variable name in Java?

- a) identifier
- b) keyword
- c) identifier & keyword
- d) none of the mentioned

 [View Answer](#)

Answer: b

Explanation: Keywords are specially reserved words which can not be used for naming a user defined variable, example: class, int, for etc.

8. What will be the output of the following Java program?

```
1.  class variable_scope
2.  {
3.      public static void main(String args[])
4.      {
5.          int x;
6.          x = 5;
7.          {
8.              int y = 6;
9.              System.out.print(x + " " + y);
10.         }
11.         System.out.println(x + " " + y);
12.     }
13. }
```

- a) 5 6 5 6
- b) 5 6 5
- c) Runtime error
- d) Compilation error

 [View Answer](#)

Answer: d

Explanation: Second print statement doesn't have access to y , scope y was limited to the block defined after initialization of x.

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9. Which of these is an incorrect string literal?

- a) "Hello World"
- b) "Hello\nWorld"
- c) "\"Hello World\""
- d)

```
"Hello  
world"
```

 [View Answer](#)

Answer: d

Explanation: All string literals must begin and end in the same line.

10. What will be the output of the following Java program?

```
1.  class dynamic_initialization
2.  {
3.      public static void main(String args[])
4.      {
5.          double a, b;
6.          a = 3.0;
7.          b = 4.0;
8.          double c = Math.sqrt(a * a + b * b);
9.          System.out.println(c);
10.     }
11. }
```

- a) 5.0
- b) 25.0
- c) 7.0
- d) Compilation Error

 [View Answer](#)

Answer: a

Explanation: Variable c has been dynamically initialized to square root of $a * a + b * b$, during run time.

Output:

```
$ javac dynamic_initialization.java
$ java dynamic_initialization
5.0
```

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3. What will be the error in the following Java code?

```
byte b = 50;  
b = b * 50;
```

- a) b cannot contain value 100, limited by its range
- b) * operator has converted b * 50 into int, which can not be converted to byte without casting
- c) b cannot contain value 50
- d) No error in this code

 [View Answer](#)

Answer: b

Explanation: While evaluating an expression containing int, bytes or shorts, the whole expression is converted to int then evaluated and the result is also of type int.

1. String in Java is a?

- a) class
- b) object
- c) variable
- d) character array

 [View Answer](#)

Answer: a

Explanation: None.

2. Which of these method of String class is used to obtain character at specified index?

- a) char()
- b) Charat()
- c) charat()
- d) charAt()

 [View Answer](#)

Answer: d

Explanation: None.

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3. Which of these keywords is used to refer to member of base class from a subclass?

- a) upper
- b) super
- c) this
- d) none of the mentioned

 [View Answer](#)

Answer: b

Explanation: Whenever a subclass needs to refer to its immediate superclass, it can do so by use of the keyword super.



4. Which of these method of String class can be used to test two strings for equality?

- a) isequal()
- b) isequals()
- c) equal()
- d) equals()

 [View Answer](#)

Answer: d

Explanation: None.



6. What will be the output of the following Java program?

```
1.  class string_demo
2.  {
3.      public static void main(String args[])
4.      {
5.          String obj = "I" + "like" + "Java";
6.          System.out.println(obj);
7.      }
8.  }
```

- a) I
- b) like
- c) Java
- d) IlikeJava

 [View Answer](#)

Answer: d

Explanation: Java defines an operator +, it is used to concatenate strings.
output:

```
$ javac string_demo.java
$ java string_demo
IlikeJava
```

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7. What will be the output of the following Java program?

```
1. class string_class
2. {
3.     public static void main(String args[])
4.     {
5.         String obj = "I LIKE JAVA";
6.         System.out.println(obj.charAt(3));
7.     }
8. }
```

- a) I
- b) L
- c) K
- d) E

 [View Answer](#)

Answer: a

Explanation: charAt() is a method of class String which gives the character specified by the index. obj.charAt(3) gives 4th character i.e I.

Output:

```
$ javac string_class.java
$ java string_class
I
```

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8. What will be the output of the following Java program?

```
1.  class string_class
2.  {
3.      public static void main(String args[])
4.      {
5.          String obj = "I LIKE JAVA";
6.          System.out.println(obj.length());
7.      }
8.  }
```

- a) 9
- b) 10
- c) 11
- d) 12

 [View Answer](#)

Answer: c

Explanation: None.

Output:

```
$ javac string_class.java
$ java string_class
11
```

9. What will be the output of the following Java program?



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```
1.  class string_class
2.  {
3.      public static void main(String args[])
4.      {
5.          String obj = "hello";
6.          String obj1 = "world";
7.          String obj2 = obj;
8.          obj2 = " world";
9.          System.out.println(obj + " " + obj2);
10.     }
11. }
```

- a) hello hello
- b) world world
- c) hello world
- d) world hello

 [View Answer](#)

Answer: c

Explanation: None.

output:

```
$ javac string_class.java
$ java string_class
hello world
```

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10. What will be the output of the following Java program?

```
1. class string_class
2. {
3.     public static void main(String args[])
4.     {
5.         String obj = "hello";
6.         String obj1 = "world";
7.         String obj2 = "hello";
8.         System.out.println(obj.equals(obj1) + " " + obj.equals(obj2));
9.     }
10. }
```

- a) false false
- b) true true
- c) true false
- d) false true

 [View Answer](#)

Answer: d

Explanation: equals() is method of class String, it is used to check equality of two String objects, if they are equal, true is returned else false.

output:

```
$ javac string_class.java
$ java string_class
false true
```

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1. What is the output of relational operators?

- a) Integer
- b) Boolean
- c) Characters
- d) Double

 [View Answer](#)

Answer: b

Explanation: None.

2. Which of these is returned by “greater than”, “less than” and “equal to” operators?

- a) Integers
- b) Floating – point numbers
- c) Boolean
- d) None of the mentioned

 [View Answer](#)

Answer: c

Explanation: All relational operators return a boolean value ie. true and false.

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3. Which of the following operators can operate on a boolean variable?

- 1. &&
- 2. ==
- 3. ?:
- 4. +=

- a) 3 & 2
- b) 1 & 4
- c) 1, 2 & 4
- d) 1, 2 & 3

 [View Answer](#)

Answer: d

Explanation: Operator Short circuit AND, &&, equal to, == , ternary if-then-else, ?:, are boolean logical operators. += is an arithmetic operator it can operate only on numeric values.



4. Which of these operators can skip evaluating right hand operand?

- a) !
- b) |
- c) &
- d) &&

 [View Answer](#)

Answer: d

Explanation: Operator short circuit and, &&, and short circuit or, ||, skip evaluating right hand operand when output can be determined by left operand alone.

5. Which of these statements is correct?

- a) true and false are numeric values 1 and 0
- b) true and false are numeric values 0 and 1
- c) true is any non zero value and false is 0
- d) true and false are non numeric values

 [View Answer](#)

Answer: d

Explanation: True and false are keywords, they are non numeric values which do not relate to zero or non zero numbers. true and false are boolean values.

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6. What will be the output of the following Java code?

```
1. class Relational_operator
2. {
3.     public static void main(String args[])
4.     {
5.         int var1 = 5;
6.         int var2 = 6;
7.         System.out.print(var1 > var2);
8.     }
9. }
```

- a) 1
- b) 0
- c) true
- d) false

 [View Answer](#)

Answer: d

Explanation: Operator > returns a boolean value. 5 is not greater than 6 therefore false is returned.

output:

```
$ javac Relational_operator.java
$ java Relational_operator
false
```

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7. What will be the output of the following Java code?

```
1. class bool_operator
2. {
3.     public static void main(String args[])
4.     {
5.         boolean a = true;
6.         boolean b = !true;
7.         boolean c = a | b;
8.         boolean d = a & b;
9.         boolean e = d ? b : c;
10.        System.out.println(d + " " + e);
11.    }
12. }
```

- a) false false
- b) true ture
- c) true false
- d) false true

 [View Answer](#)

Answer: d

Explanation: Operator | returns true if any one operand is true, thus 'c = true | false' is true. Operator & returns a true if both of the operand is true thus d is false. Ternary operator ?: assigns left of ':' if condition is true and right hand of ':' if condition is false. d is false thus e = d ? b : c , assigns c to e , e contains true.

output:

```
$ javac bool_operator.java
$ java bool_operator
false true
```

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8. What will be the output of the following Java code?

```
1.  class ternary_operator
2.  {
3.      public static void main(String args[])
4.      {
5.          int x = 3;
6.          int y = ~x;
7.          int z;
8.          z = x > y ? x : y;
9.          System.out.print(z);
10.     }
11. }
```

- a) 0
- b) 1
- c) 3
- d) -4

 [View Answer](#)

Answer: c

Explanation: None.

Output:

```
$ javac ternary_operator.java
$ java ternary_operator
3
```

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9. What will be the output of the following Java code?

```
1. class Output
2. {
3.     public static void main(String args[])
4.     {
5.         int x , y = 1;
6.         x = 10;
7.         if (x != 10 && x / 0 == 0)
8.             System.out.println(y);
9.         else
10.            System.out.println(++y);
11.    }
12. }
```

- a) 1
- b) 2
- c) Runtime error owing to division by zero in if condition
- d) Unpredictable behavior of program

 [View Answer](#)

Answer: b

Explanation: Operator short circuit and, &&, skips evaluating right hand operand if left hand operand is false thus division by zero in if condition does not give an error.

output:

```
$ javac Output.java
$ java Output
2
```

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10. What will be the output of the following Java code?

```
1. class Output
2. {
3.     public static void main(String args[])
4.     {
5.         boolean a = true;
6.         boolean b = false;
7.         boolean c = a ^ b;
8.         System.out.println(!c);
9.     }
10. }
```

- a) 0
- b) 1
- c) false
- d) true

[View Answer](#)

Answer: c

Explanation: None.

output:

```
$ javac Output.java
$ java Output
false
```

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1. What is the output of relational operators?

- a) Integer
- b) Boolean
- c) Characters
- d) Double

 [View Answer](#)

Answer: b

Explanation: None.

2. Which of these is returned by “greater than”, “less than” and “equal to” operators?

- a) Integers
- b) Floating – point numbers
- c) Boolean
- d) None of the mentioned

 [View Answer](#)

Answer: c

Explanation: All relational operators return a boolean value ie. true and false.

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3. Which of the following operators can operate on a boolean variable?

- 1. &&
- 2. ==
- 3. ?:
- 4. +=

- a) 3 & 2
- b) 1 & 4
- c) 1, 2 & 4
- d) 1, 2 & 3

 [View Answer](#)

Answer: d

Explanation: Operator Short circuit AND, &&, equal to, == , ternary if-then-else, ?:, are boolean logical operators. += is an arithmetic operator it can operate only on numeric values.



4. Which of these operators can skip evaluating right hand operand?

- a) !
- b) |
- c) &
- d) &&

 [View Answer](#)

Answer: d

Explanation: Operator short circuit and, &&, and short circuit or, ||, skip evaluating right hand operand when output can be determined by left operand alone.

5. Which of these statements is correct?

- a) true and false are numeric values 1 and 0
- b) true and false are numeric values 0 and 1
- c) true is any non zero value and false is 0
- d) true and false are non numeric values

 [View Answer](#)

Answer: d

Explanation: True and false are keywords, they are non numeric values which do not relate to zero or non zero numbers. true and false are boolean values.

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6. What will be the output of the following Java code?

```
1. class Relational_operator
2. {
3.     public static void main(String args[])
4.     {
5.         int var1 = 5;
6.         int var2 = 6;
7.         System.out.print(var1 > var2);
8.     }
9. }
```

- a) 1
- b) 0
- c) true
- d) false

 [View Answer](#)

Answer: d

Explanation: Operator > returns a boolean value. 5 is not greater than 6 therefore false is returned.

output:

```
$ javac Relational_operator.java
$ java Relational_operator
false
```

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7. What will be the output of the following Java code?

```
1. class bool_operator
2. {
3.     public static void main(String args[])
4.     {
5.         boolean a = true;
6.         boolean b = !true;
7.         boolean c = a | b;
8.         boolean d = a & b;
9.         boolean e = d ? b : c;
10.        System.out.println(d + " " + e);
11.    }
12. }
```

- a) false false
- b) true ture
- c) true false
- d) false true

 [View Answer](#)

Answer: d

Explanation: Operator | returns true if any one operand is true, thus 'c = true | false' is true. Operator & returns a true if both of the operand is true thus d is false. Ternary operator ?: assigns left of ':' if condition is true and right hand of ':' if condition is false. d is false thus e = d ? b : c , assigns c to e , e contains true.

output:

```
$ javac bool_operator.java
$ java bool_operator
false true
```

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8. What will be the output of the following Java code?

```
1.  class ternary_operator
2.  {
3.      public static void main(String args[])
4.      {
5.          int x = 3;
6.          int y = ~x;
7.          int z;
8.          z = x > y ? x : y;
9.          System.out.print(z);
10.     }
11. }
```

- a) 0
- b) 1
- c) 3
- d) -4

 [View Answer](#)

Answer: c

Explanation: None.

Output:

```
$ javac ternary_operator.java
$ java ternary_operator
3
```

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9. What will be the output of the following Java code?

```
1. class Output
2. {
3.     public static void main(String args[])
4.     {
5.         int x , y = 1;
6.         x = 10;
7.         if (x != 10 && x / 0 == 0)
8.             System.out.println(y);
9.         else
10.            System.out.println(++y);
11.    }
12. }
```

- a) 1
- b) 2
- c) Runtime error owing to division by zero in if condition
- d) Unpredictable behavior of program

 [View Answer](#)

Answer: b

Explanation: Operator short circuit and, &&, skips evaluating right hand operand if left hand operand is false thus division by zero in if condition does not give an error.

output:

```
$ javac Output.java
$ java Output
2
```

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10. What will be the output of the following Java code?

```
1.  class Output
2.  {
3.      public static void main(String args[])
4.      {
5.          boolean a = true;
6.          boolean b = false;
7.          boolean c = a ^ b;
8.          System.out.println(!c);
9.      }
10. }
```

- a) 0
- b) 1
- c) false
- d) true

[View Answer](#)

Answer: c

Explanation: None.

output:

```
$ javac Output.java
$ java Output
false
```

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1. Which of these have highest precedence?

- a) ()
- b) ++
- c) *
- d) >>

[View Answer](#)

Answer: a

Explanation: Order of precedence is (highest to lowest) a -> b -> c -> d.

2. What should expression1 evaluate to in using ternary operator as in this line?

```
expression1 ? expression2 : expression3
```



- a) Integer
- b) Floating – point numbers
- c) Boolean
- d) None of the mentioned

[View Answer](#)

Answer: c

Explanation: The controlling condition of ternary operator must evaluate to boolean.

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3. What is the value stored in x in the following lines of Java code?

```
int x, y, z;  
x = 0;  
y = 1;  
x = y = z = 8;
```

- a) 0
- b) 1
- c) 9
- d) 8

 [View Answer](#)

Answer: d

Explanation: None.



4. What is the order of precedence (highest to lowest) of following operators?

```
1. &  
2. ^  
3. ?:
```

- a) 1 -> 2 -> 3
- b) 2 -> 1 -> 3
- c) 3 -> 2 -> 1
- d) 2 -> 3 -> 1

 [View Answer](#)

Answer: a

Explanation: None.

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6. What will be the output of the following Java code?

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

- a) 10
- b) 11
- c) 12
- d) 56

 [View Answer](#)

Answer: c

Explanation: Operator `++` has the highest precedence than `/`, `*` and `+`. `var2` is incremented to 7 and then used in expression, `var3 = 7 * 5 / 7 + 7`, gives 12.

output:

```
$ javac operators.java
$ java operators
12
```

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7. What will be the output of the following Java code?

```
1. class operators
2. {
3.     public static void main(String args[])
4.     {
5.         int x = 8;
6.         System.out.println(++x * 3 + " " + x);
7.     }
8. }
```

- a) 24 8
- b) 24 9
- c) 27 8
- d) 27 9

[View Answer](#)

Answer: d

Explanation: Operator `++` has higher precedence than multiplication operator, `*`, `x` is incremented to 9 than multiplied with 3 giving 27.

output:

```
$ javac operators.java
$ java operators
27 9
```

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8. What will be the output of the following Java code?

```
1. class Output
2. {
3.     public static void main(String args[])
4.     {
5.         int x=y=z=20;
6.
7.     }
8. }
```

- a) compile and runs fine
- b) 20
- c) run time error
- d) compile time error

 [View Answer](#)

Answer: d

Explanation: None.

10. What will be the output of the following Java program?

```
1. class Output
2. {
3.     public static void main(String args[])
4.     {
5.         int a,b,c,d;
6.         a=b=c=d=20
7.         a+=b-=c*=d/=20
8.         System.out.println(a+" "+b+" "+c+" "+d);
9.
10.    }
11. }
```

- a) compile time error
- b) runtime error
- c) a=20 b=0 c=20 d=1
- d) none of the mentioned

 [View Answer](#)

Answer: c

Explanation: Expression will evaluate from right to left.

Output:

```
$ javac Output.java
$ java Output
20 0 20 1
```

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2. Which of these are selection statements in Java?

- a) if()
- b) for()
- c) continue
- d) break

 [View Answer](#)

Answer: a

Explanation: Continue and break are jump statements, and for is a looping statement.

3. Which of the following loops will execute the body of loop even when condition controlling the loop is initially false?

- a) do-while
- b) while
- c) for
- d) none of the mentioned

 [View Answer](#)

Answer: a

Explanation: None.

4. Which of these jump statements can skip processing the remainder of the code in its body for a particular iteration?

- a) break
- b) return
- c) exit
- d) continue

 [View Answer](#)

Answer: d

Explanation: None.

5. Which of this statement is incorrect?

- a) switch statement is more efficient than a set of nested ifs
- b) two case constants in the same switch can have identical values
- c) switch statement can only test for equality, whereas if statement can evaluate any type of boolean expression
- d) it is possible to create a nested switch statements

 [View Answer](#)

Answer: b

Explanation: No two case constants in the same switch can have identical values.

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6. What will be the output of the following Java program?

```
1.  class selection_statements
2.  {
3.      public static void main(String args[])
4.      {
5.          int var1 = 5;
6.          int var2 = 6;
7.          if ((var2 = 1) == var1)
8.              System.out.print(var2);
9.          else
10.             System.out.print(++var2);
11.     }
12. }
```

- a) 1
- b) 2
- c) 3
- d) 4

 [View Answer](#)

Answer: b

Explanation: var2 is initialised to 1. The conditional statement returns false and the else part gets executed.

output:

```
$ javac selection_statements.java
$ java selection_statements
2
```

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7. What will be the output of the following Java program?

```
1.  class comma_operator
2.  {
3.      public static void main(String args[])
4.      {
5.          int sum = 0;
6.          for (int i = 0, j = 0; i < 5 & j < 5; ++i, j = i + 1)
7.              sum += i;
8.          System.out.println(sum);
9.      }
10. }
```

- a) 5
- b) 6
- c) 14
- d) compilation error

 [View Answer](#)

Answer: b

Explanation: Using comma operator, we can include more than one statement in the initialization and iteration portion of the for loop. Therefore both `++i` and `j = i + 1` is executed

i gets the value – 0,1,2,3,4 & j gets the values -0,1,2,3,4,5.

output:

```
$ javac comma_operator.java
$ java comma_operator
6
```

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8. What will be the output of the following Java program?

```
1. class jump_statements
2. {
3.     public static void main(String args[])
4.     {
5.         int x = 2;
6.         int y = 0;
7.         for ( ; y < 10; ++y)
8.         {
9.             if (y % x == 0)
10.                 continue;
11.             else if (y == 8)
12.                 break;
13.             else
14.                 System.out.print(y + " ");
15.         }
16.     }
17. }
```

- a) 1 3 5 7
- b) 2 4 6 8
- c) 1 3 5 7 9
- d) 1 2 3 4 5 6 7 8 9

 [View Answer](#)

Answer: c

Explanation: Whenever y is divisible by x remainder body of loop is skipped by continue statement, therefore if condition y == 8 is never true as when y is 8, remainder body of loop is skipped by continue statements of first if. Control comes to print statement only in cases when y is odd.

output:

```
$ javac jump_statements.java
$ java jump_statements
1 3 5 7 9
```



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9. What will be the output of the following Java program?

```
1. class Output
2. {
3.     public static void main(String args[])
4.     {
5.         final int a=10,b=20;
6.         while(a<b)
7.         {
8.
9.             System.out.println("Hello");
10.        }
11.        System.out.println("World");
12.
13.    }
14. }
```

- a) Hello
- b) run time error
- c) Hello world
- d) compile time error

 [View Answer](#)

Answer: d

Explanation: Every final variable is compile time constant.

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10. What will be the output of the following Java program?

```
1.  class Output
2.  {
3.      public static void main(String args[])
4.      {
5.          int a = 5;
6.          int b = 10;
7.          first:
8.          {
9.              second:
10.             {
11.                 third:
12.                 {
13.                     if (a == b >> 1)
14.                         break second;
15.                 }
16.                 System.out.println(a);
17.             }
18.             System.out.println(b);
19.         }
20.     }
21. }
```

- a) 5 10
- b) 10 5
- c) 5
- d) 10

 [View Answer](#)

Answer: d

Explanation: `b >> 1` in if returns 5 which is equal to a i.e 5, therefore body of if is executed and block second is exited. Control goes to end of the block second executing the last print statement, printing 10.

output:

```
$ javac Output.java
$ java Output
10
```

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1. What would be the output of the following code snippet if variable a=10?

```
1. if(a<=0)
2. {
3.     if(a==0)
4.     {
5.         System.out.println("1 ");
6.     }
7.     else
8.     {
9.         System.out.println("2 ");
10.    }
11. }
12. System.out.println("3 ");
```

- a) 1 2
- b) 2 3
- c) 1 3
- d) 3

 [View Answer](#)

Answer: d

Explanation: Since the first if condition is not met, control would not go inside if statement and hence only statement after the entire if block will be executed.

2. The while loop repeats a set of code while the condition is not met?

- a) True
- b) False

 [View Answer](#)

Answer: b

Explanation: While loop repeats a set of code only until the condition is met.

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3. What is true about a break?

- a) Break stops the execution of entire program
- b) Break halts the execution and forces the control out of the loop
- c) Break forces the control out of the loop and starts the execution of next iteration
- d) Break halts the execution of the loop for certain time frame

 [View Answer](#)

Answer: b

Explanation: Break halts the execution and forces the control out of the loop.



4. What is true about do statement?

- a) do statement executes the code of a loop at least once
- b) do statement does not get execute if condition is not matched in the first iteration
- c) do statement checks the condition at the beginning of the loop
- d) do statement executes the code more than once always

 [View Answer](#)

Answer: a

Explanation: Do statement checks the condition at the end of the loop. Hence, code gets executed at least once.

5. Which of the following is used with the switch statement?

- a) Continue
- b) Exit
- c) break
- d) do

 [View Answer](#)

Answer: c

Explanation: Break is used with a switch statement to shift control out of switch.

6. What is the valid data type for variable "a" to print "Hello World"?

```
1. switch(a)
2. {
3.     System.out.println("Hello World");
4. }
```

- a) int and float
- b) byte and short
- c) char and long
- d) byte and char

 [View Answer](#)

Answer: d

Explanation: The switch condition would only meet if variable "a" is of type byte or char.

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7. Which of the following is not a decision making statement?

- a) if
- b) if-else
- c) switch
- d) do-while

[View Answer](#)

Answer: d

Explanation: do-while is an iteration statement. Others are decision making statements.



8. Which of the following is not a valid jump statement?

- a) break
- b) goto
- c) continue
- d) return

[View Answer](#)

Answer: b

Explanation: break, continue and return transfer control to another part of the program and returns back to caller after execution. However, goto is marked as not used in Java.

9. From where break statement causes an exit?

- a) Only from innermost loop
- b) Terminates a program
- c) Only from innermost switch
- d) From innermost loops or switches

[View Answer](#)

Answer: d

Explanation: The break statement causes an exit from innermost loop or switch.

