

## Review Questions

1. Which of the following Java operators can be used with boolean variables? (Choose all that apply)
  - A. `==`
  - B. `+`
  - C. `--`
  - D. `!`
  - E. `%`
  - F. `<=`
2. What data type (or types) will allow the following code snippet to compile? (Choose all that apply)

```
byte x = 5;
byte y = 10;
----- z = x + y;
```

  - A. `int`
  - B. `long`
  - C. `boolean`
  - D. `double`
  - E. `short`
  - F. `byte`
3. What is the output of the following application?

```
1: public class CompareValues {
2:     public static void main(String[] args) {
3:         int x = 0;
4:         while(x++ < 10) {}
5:         String message = x > 10 ? "Greater than" : false;
6:         System.out.println(message+" "+x);
7:     }
8: }
```

  - A. Greater than,10
  - B. false,10
  - C. Greater than,11
  - D. false,11
  - E. The code will not compile because of line 4.
  - F. The code will not compile because of line 5.

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

```
3: long x = 10;  
4: int y = 2 * x;
```

- A. No change; it compiles as is.
- B. Cast x on line 4 to int.
- C. Change the data type of x on line 3 to short.
- 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.

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

```
3: java.util.List<Integer> list = new java.util.ArrayList<Integer>();  
4: list.add(10);  
5: list.add(14);  
6: for(int x : list) {  
7:     System.out.print(x + ", ");  
8:     break;  
9: }
```

- A. 10, 14,
- B. 10, 14
- C. 10,
- D. The code will not compile because of line 7.
- E. The code will not compile because of line 8.
- F. The code contains an infinite loop and does not terminate.

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

```
3: int x = 4;  
4: long y = x * 4 - x++;  
5: if(y<10) System.out.println("Too Low");  
6: else System.out.println("Just right");  
7: else System.out.println("Too High");
```

- A. Too Low
- B. Just Right
- C. Too High
- D. Compiles but throws a NullPointerException.
- E. The code will not compile because of line 6.
- F. The code will not compile because of line 7.

7. What is the output of the following code?
- ```
1: public class TernaryTester {  
2:   public static void main(String[] args) {  
3:     int x = 5;  
4:     System.out.println(x > 2 ? x < 4 ? 10 : 8 : 7);  
5:   }}
```
- A. 5  
B. 4  
C. 10  
D. 8  
E. 7  
F. The code will not compile because of line 4.
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.
9. 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.
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.
11. What is the output of the following code?
- ```
1: public class ArithmeticSample {  
2:     public static void main(String[] args) {  
3:         int x = 5 * 4 % 3;  
4:         System.out.println(x);  
5:     }}
```
- A. 2
  - B. 3
  - C. 5
  - D. 6
  - E. The code will not compile because of line 3.
12. What is the output of the following code snippet?
- ```
3: int x = 0;  
4: String s = null;  
5: if(x == s) 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.
13. What is the output of the following code snippet?
- ```
3: int x1 = 50, x2 = 75;  
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.
14. What is the output of the following code snippet?
- ```
3: int c = 7;  
4: int result = 4;
```

```
5: result += ++c;
6: System.out.println(result);
```

- A. 8
  - B. 11
  - C. 12
  - D. 15
  - E. 16
  - F. The code will not compile because of line 5.
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.
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.
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.

18. 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.

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.

20. 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("great");  
8:     case 'C': System.out.print("good"); break;  
9:     case d:  
10:    case 'F': System.out.print("not good");  
11: }
```

- A.** great
- B.** greatgood
- 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.