

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.