

1. Write the boolean value each expression evaluates to:

1. \_\_\_\_\_ true || false

2. \_\_\_\_\_ -1 > -8

3. \_\_\_\_\_ false && !true

4. \_\_\_\_\_ "happy" === "joyful"

5. \_\_\_\_\_ (4 \* 5) === (40 / 2)

6. \_\_\_\_\_ false || false

7. \_\_\_\_\_ 12 <= (2 \* 8 - 4)

8. \_\_\_\_\_ 1 === -1

9. \_\_\_\_\_ false || (4 > 2 \* 1 / 3)

10. \_\_\_\_\_ (true && true) && false

11. \_\_\_\_\_ !false || true !== true

12. \_\_\_\_\_ !(22 + 2 / 6 === 50)

13. \_\_\_\_\_ (!true && false) === false

14. \_\_\_\_\_ !(5 > 2 || false) !== false

15. \_\_\_\_\_ false === false || false

2. Based on the code snippets, write the printed outputs in the box to the right.

```

1 let x = 0;
2 let y = 3;
3 let z = "1";
4
5 while (x < y) {
6     z = z + y + x;
7     x = x + 1;
8 }
9 print(x);
10 print(y);
11 print(z);
    
```

3. Based on the code snippets, write the printed outputs in the box to the right.

```

1 let x = 10;
2 let result = "";
3
4 while (x >= 0) {
5     if (x % 3 > 0) {
6         result = result + x;
7     } else {
8         result = x + result;
9     }
10    x = x - 1;
11 }
12
13 print(result);
    
```

4. With the following code snippet, what output will appear on the screen when the following values are used for x and y?

```
1
2 let x: number;
3 let y: number;
4 //see question for actual values of x and y
5
6 let z: number = 0;
7 x = x + 1;
8 if (x < y) {
9     z = x ** y / 2;
10 } else {
11     z = y % x;
12 }
13 z = z + 1;
14 print(z);
```

4.1 When x = 3, y = 4?

4.2 When x = 3, y = 6?

4.3 When x = 7, y = 2?

4.4 When x = -5, y = 1?

5. With the following code snippet, what output will appear on the screen when each of the following values is used for x?

```
1
2 let x: number; //see question for actual value of x
3
4 if (x < 50) {
5     if (x > 0) {
6         x = x * 2;
7         if (x < 0) {
8             x = x + 6;
9         } else {
10            x = x - 4;
11        }
12    } else {
13        x = x + 10;
14    }
15 } else {
16     if (x < 10) {
17         x = x - 5;
18     } else {
19         x = x / 3;
20         if (x < 50) {
21             x = x + 5;
22         }
23     }
24 }
25 if (x < 30) {
26     x = x + 2;
27 } else {
28     x = x - 5;
29 }
30 print(x);
```

5.1 When x = 15?

5.2 When x = 60?

5.3 When x = 30?

5.4 When x = -5?

5.5 Unreachable code is code that will never be executed (or reached) regardless of the value of x. In this code snippet, look for and circle any unreachable code.

6. In the space below, write code that meets the specifications. Declare two variables, named `foo` and `bar`, both of type `number`. If `foo` is an even number and is greater than `bar`, print the string `"fizzbang"`. If `foo` is not even, but is greater than `bar`, print `"boom"`. If `bar` is bigger than `foo`, print `"pow"`.