
On and Off the Bus

Conditional vs. Counter Loops

The following statement is:

num++



A diagram illustrating the components of the postfix notation 'num++'. It consists of two rectangular boxes connected by a horizontal line. The left box is labeled 'posttest' and has a large left-pointing arrow attached to its left side. The right box is labeled 'postfix' and has a large right-pointing arrow attached to its right side.

posttest

postfix

postfix

What word do we use to say a loop is being stepped through?



A diagram illustrating a loop cycle. It consists of two rectangular boxes connected by a horizontal line. The left box is labeled 'iterating' and has a large arrow pointing to the left on its left side. The right box is labeled 'evaluating' and has a large arrow pointing to the right on its right side. The boxes are white with black outlines, and the text is in a bold, sans-serif font.

iterating

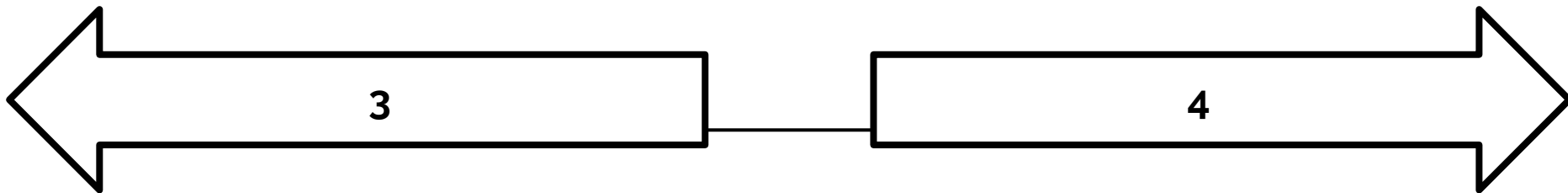
evaluating

Iterating

What will the following snippet output?

```
int num = 3;
```

```
cout << num++;
```



3

Is a do-while loop a counting loop?



Yeeeeuuuh

Naaaaaa

**Nope! Which loops are
conditional?**

What will be the output of the following snippet?

```
int count = 10;  
do  
{  
    cout << "Hello World\n";  
    count++;  
} while (count < 1);
```



Nothing

Hello World will display once

**Hello World will display
once**

Name the first expression that appears inside the parentheses in the for-loop's header.



The diagram illustrates the components of a for-loop header. It consists of two rectangular boxes connected by a horizontal line. The left box is labeled 'Initialization' and has a large arrow pointing to the left on its left side. The right box is labeled 'Test' and has a large arrow pointing to the right on its right side.

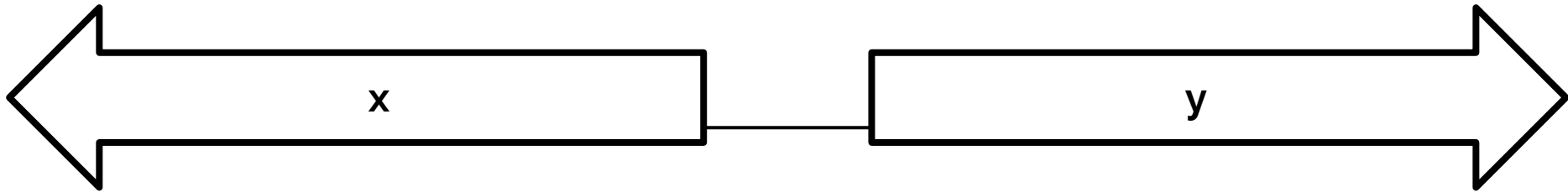
Initialization

Test

Initialization

In the following snippet, which is the counter variable?

```
int a, x, y = 0;
for (x = 0; x < 10; x++)
{
    cout << "Enter a number: ";
    cin >> a;
    y += a;
}
cout << "The sum of those numbers is " << y << endl;
```



X

**Are you ready for a
challenge?**

Modify the snippet to the right so that it accepts any negative value as a sentinel.

```
while (points != -1)
{
    total += points;
    game++;

    cout << "Enter the
        << "points for game "
        << game << ": ";

    cin >> points;
}
```

```
while (points >= 0)
{
    total += points;
    game++;

    cout << "Enter the
        << "points for game "
        << game << ": ";

    cin >> points;
}
```

**Write a for loop that displays
every fifth number zero through
100**

```
for (int count = 0; count <= 100; count += 5)
    cout << count << endl;
```
