

Why 0647 = 423?

In C++, when an integer literal starts with a leading zero, it is interpreted as an octal (base 8) value. In the case of `int a = 0647`, the value `0647` is an octal value that represents the decimal value `423` (since $6 * 8^2 + 4 * 8^1 + 7 * 8^0 = 384 + 32 + 7 = 423$).

So when you print the value of `a` using `std::cout`, it will display the decimal value of `423`.

Here's an example code snippet that demonstrates this behavior:

```
#include <iostream>

int main() {

    int a = 0647;

    std::cout << a << std::endl; // Output: 423

    return 0;

}
```