### Big O has several ways in which we simplify the notation, and it makes things easier.

### 

### The first that we're going to look at is called drop constants.

### 

### So you'll see it referred to as remove constants.

### 

### You'll see it both ways.

### 

### So to explain this I'm going to start by bringing up the code that we had in the last video on O of N.

### 

### But I'm going to add a second for loop that's identical to the one above, except that we're going to

### 

### use J instead of I.

### 

### And both of these for loops are going to run n times.

### 

### So let's take a look at this in DevTools.

### 

### There's our code and we're going to call this.

### 

### Within number three.

### 

### Okay, so let's run this.

### 

### And our output is zero, one, two from the first for loop and then once again zero, one two from the

### 

### second for loop.

### 

### So let's go back over here.

### 

### So our code ran in plus n times.

### 

### Or two in.

### 

### So it makes sense to say that this is an O of two N operation, but this is where that simplification comes in.

### 

### It doesn't matter if it's two n, three n, or 100 n if there's a constant.

### We drop the constant.

### 

### And we say that this code is o of n.

### 

### So our first rule for simplifying our big O notation.

### Drop constants.

### 