Question 51 states the following:

What is the time complexity of this function? Assume the initial value of i is one and j is zero.

```java
function f(i,j,n)
{
    if (i < n)
    {
        if (j < n)
            f(i,j+1,n);
        else
            f(i*2,0,n);
    }
    println(i,j);
}
```

I've boiled the question down to be either n*log(n) or n*sqrt(n). I am unsure how i*2 would result in, but I feel it would result in a sqrt(n) amount of runtime.

What would make code result in log(n) and what would make it result in sqrt(n)?