

## Good question

### Number parsing

You need to write a regular expression that can match any number.

A number can be positive or negative. If it is negative, then it must start with a '-'. If it is positive, it may start with a '+'. If it doesn't start with either '+' or '-' it is considered positive.

A number representation can't be padded with leading zeroes. For example, 001 is not a valid number (but 0 is).

A number can have a fractional part. A delimiter between an integer part and a fractional part can be either a dot . or a comma ,. A fractional part can't be padded with trailing zeros: for example, 1.01 and 1.0 are valid numbers, but 1.00 and 1.10 are not.

Output "YES" if a given string is a valid number, otherwise output "NO".

```
import java.util.Scanner;
```

```
public class Main {
```

```
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);
```

```
        String regex = "[+-]?0([.,]0+[1-9]*(0+[1-9])*)|([.,][1-9]*(0+[1-9])*)?[+-]?[1-9]+[0-9]*([.,]0+[1-9]*(0+[1-9])*)|([.,][1-9]*(0+[1-9])*)?";
```

```
        String number = scanner.nextLine();  
        System.out.println(number.matches(regex) ? "YES" : "NO");  
    }  
}
```