400. Nth Digit

$10^{i-1}, ..., 99...9 : 9i * 10^{i-1}$

$dif = dx + c, c = n(modd)$

$pt + x = \overline{a_1...a_c...a_d}$

$output = a_c$

```
public class Solution {
    public int findNthDigit(int n) {
        if(n <= 0){
            return 0;
        }
        if(n < 10){
            return n;
        }
        long pt = 1;
        long d = 1;
        long sum = 9;
        while(n > sum){
            pt *= 10;
            d++;
            sum += 9 * pt * d;
        }
        long dif = n - sum + 9 * pt * d;
        long r = dif % d;
        long x = dif / d;
        long out = pt - 1 + x;
        if(r == 0){
            return (int)(out%10);
        }
        out++;
        for(int k=1;k<=d-r;k++){
            out /= 10;
        }
        return (int)(out%10);
    }
}
```