

Problema

dada una entrada entera x ver si ese monto se puede obtener a partir de billetes de 7\$ y 20\$

Modelo

ecuación general

$$x = 3c + 20d$$
$$y = -c - 7x$$

$(c \div 7) + 1$ (si 0 NO)

Hallar el valor que
hace positivo y

ver si x sigue positivo

UNIVERSIDAD NACIONAL

Codigo solución

```
#include <bits/stdc++.h>
#include <iostream>

using namespace std;

int main() {
    long long num;
    cin >> num;
    Reading input from STDIN

    long long factor_lambda;

    if(num % 7ll == 0ll){
        factor_lambda = (-1ll) * (num/7ll);
    }else{
        factor_lambda = (-1ll) * (((long long) (num / 7ll)) + 1ll);
    }

    if (( (3ll*num + 20ll*factor_lambda) >=0ll) && (num>=7ll)){
        cout<<"Yes";
    }else{
        cout<<"No";
    }
}

//Esta solucion es O(1)! :)
//AX + BY = N

//BEZOUT COMO ERAN 7 20 GCD = 1 N e FUNCION
```

Pantallazo de que fue aceptado por el juez virtual

The screenshot shows a web browser window with multiple tabs open. The active tab is titled "UNAL Programming Contest" and displays a submission result for a problem. The submission ID is 47222850. The result is "Accepted" with a score of 10, a time of 1.200000 seconds, and a memory usage of 64 KIB. The language used is C++.

Submission ID: 47222850

RESULT: Accepted

Score	Time (sec)	Memory (KIB)	Language
10	1.200000	64	C++

Below the summary table, there is a detailed table showing the results for each input case:

Input	Result	Time (sec)	Memory (KIB)	Score
Input #1	✓	0.100000	64	0.5
Input #2	✓	0.100000	64	0.5
Input #3	✓	0.100000	64	0.5
Input #4	✓	0.100000	64	0.5
Input #5	✓	0.100000	64	1
Input #6	✓	0.100000	64	1
Input #7	✓	0.100000	64	1
Input #8	✓	0.100000	64	1
Input #9	✓	0.100000	64	1
Input #10	✓	0.100000	64	1
Input #11	✓	0.100000	64	1
Input #12	✓	0.100000	64	1

The interface also shows a list of 5 programming questions on the left, with the first question "Mr. robot h4ck" selected. The total score is 50. The user's email is jortizs@unal.edu.co, and there is an "End test" button. The bottom of the screen shows a Windows taskbar with various application icons and a system clock indicating 3:18 p.m. on 11/09/2020.