

Variables

a

Obj a

edad

numeroDocumento

edad = 1098

numeroDocumento = "1098"

mes = "Enero"

$$\text{edad} = 20$$

$$\text{edad} = \text{edad} + 1$$

$$\text{edad} = (\text{edad} + 3) / (\text{edad} \div 3)$$

1 = Reemplazar

Resolver

- 1 → multi
- 2 → divis
- 3 → sumas
- 4 → Restas

$$\text{edad} = (\text{edad} + 3) / (\text{edad} \div 3)$$

$$\text{edad} = (21 + 3) / (21 \div 3)$$

$$\text{edad} = 3,42$$

24 / 7 = 7

Tabla de variables

edad

~~20~~

~~21~~

3,42

$$1 + 3 \times 4 + 3 =$$

$$4 \times 4$$

$$16 - 3 = 13$$

$$1 + 12$$

$$13 - 3 = 10$$

$a = 1$
 $b = 1$
 $\rightarrow a = a + b$
 $\rightarrow b = a$
 $\rightarrow a = a + b$
 $\rightarrow b = a$
 $\rightarrow a = a + b$

$a = 4 + 4$
 $a = 8$

Tabla Variables

a	b
1	1
2	2
4	4
8	

$a = 1$
 $a = a + 1 \rightarrow 2$
 $a = a + 1 \rightarrow 3$
 $a = a + 2 \rightarrow 5$
 $a = a + 3 \rightarrow 8$
 $a = a + 5 \rightarrow 13$
 $a = a + 8 \rightarrow 21$

a
1
~~2~~
~~3~~
~~5~~
~~8~~
~~13~~
21

fibonacci

1 2 3 5 8 13 21 34

$$\begin{aligned} x &= 0 \\ y &= 1 \end{aligned}$$

$$a = x + y$$

$$x = y$$

$$y = a$$

$$\begin{aligned} q &= x + y \\ x &= y \\ y &= a \end{aligned}$$

$$a = x + y \rightarrow$$

$$x = y$$

$$y = a$$

$$a = x + y$$

$$x = y$$

$$y = a$$

$$a = x + y$$

$$x = y$$

$$y = a$$

$$a = 1 + 2$$

$$a = 3$$

$$x = 2$$

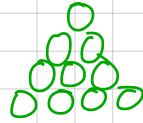
$$y = 3$$

a	x	y
1	0	1
2	1	2
3	1	2
5		
8		
13		
21		
34		
55		
89		

$$\begin{aligned}
 a &= 3 \\
 a &= a + 2 \\
 a &= a + 1
 \end{aligned}$$

$$\begin{aligned}
 2 \\
 2 \\
 2
 \end{aligned}$$

$$\begin{aligned}
 a &= 4 \\
 a &= a + 3 \\
 a &= a + 2 \\
 a &= a + 1
 \end{aligned}$$



$$\frac{3 \times (3+1)}{2}$$

$$\frac{3 \times 4}{2} = \frac{12}{2} = 6$$

$$5 \Rightarrow 5 + 4 + 3 + 2 + 1$$

$$6 \Rightarrow 6 + 5 + 4 + 3 + 2 + 1$$

$$\boxed{10 \Rightarrow 10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1}$$

$$b = 4 \Rightarrow a \text{ las canchales en la base}$$

$$a = \frac{b \times (b+1)}{2}$$

a	a
$\frac{4}{2}$	$\frac{4}{2}$
$\frac{8}{2}$	$\frac{8}{2}$
6	10

$$a = \frac{10 \times 11}{2}$$

n primeros numeros naturales

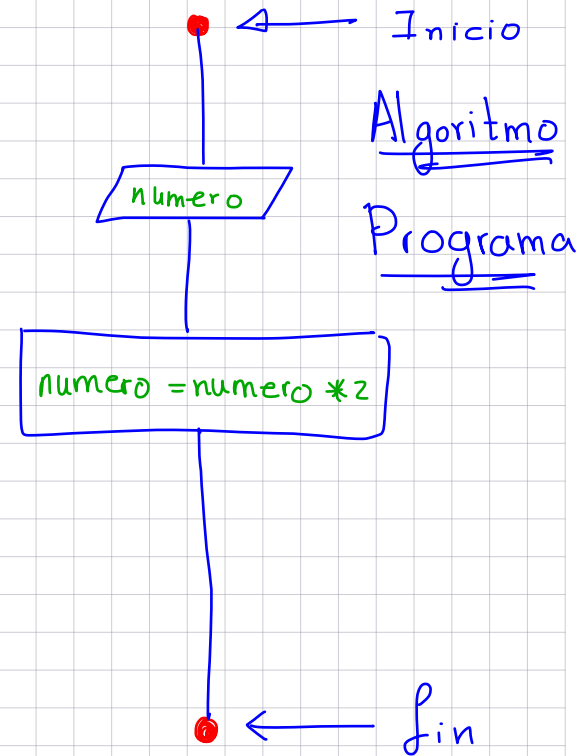
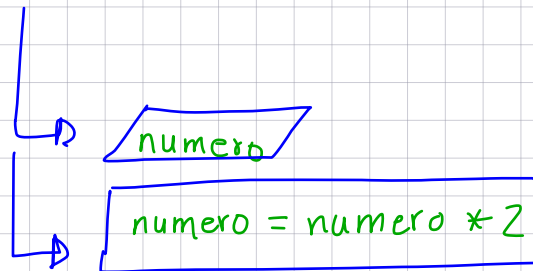
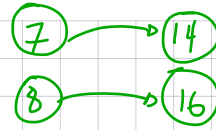
$$\text{suma} = \frac{n * (n+1)}{2}$$

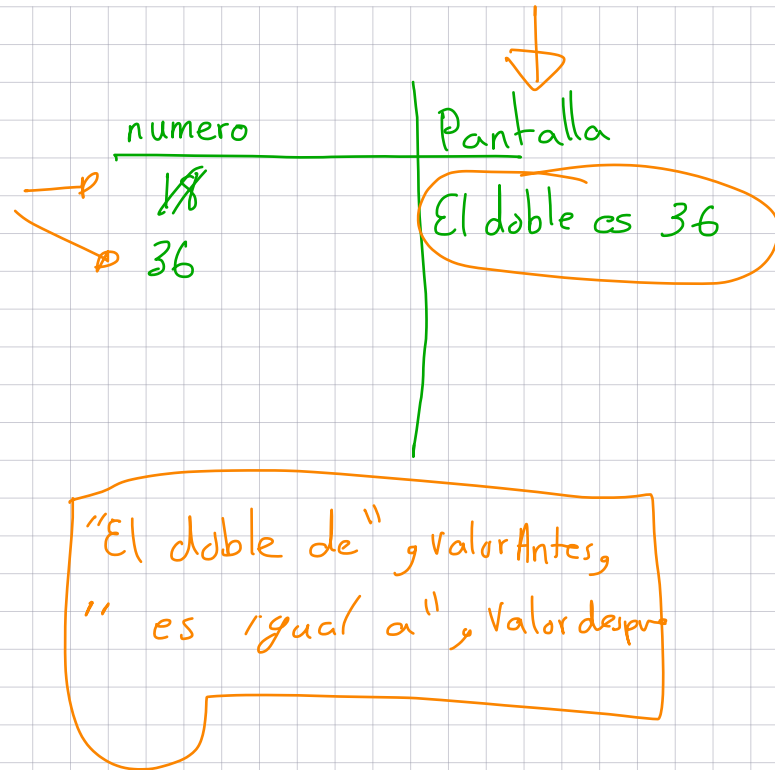
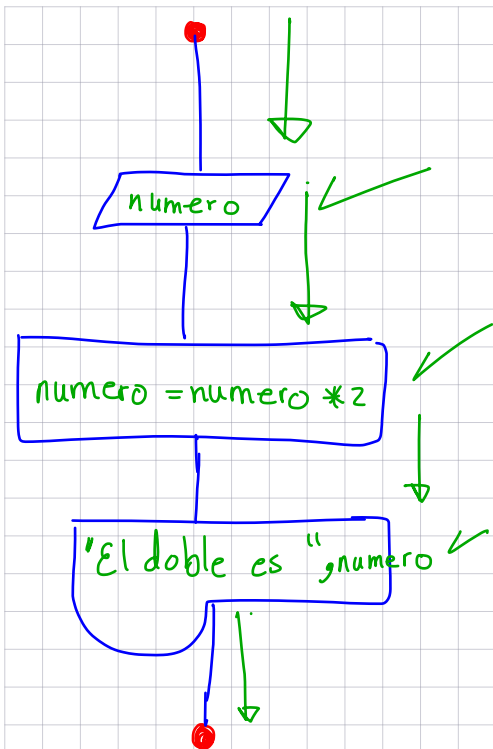
$$\text{base} = 100$$

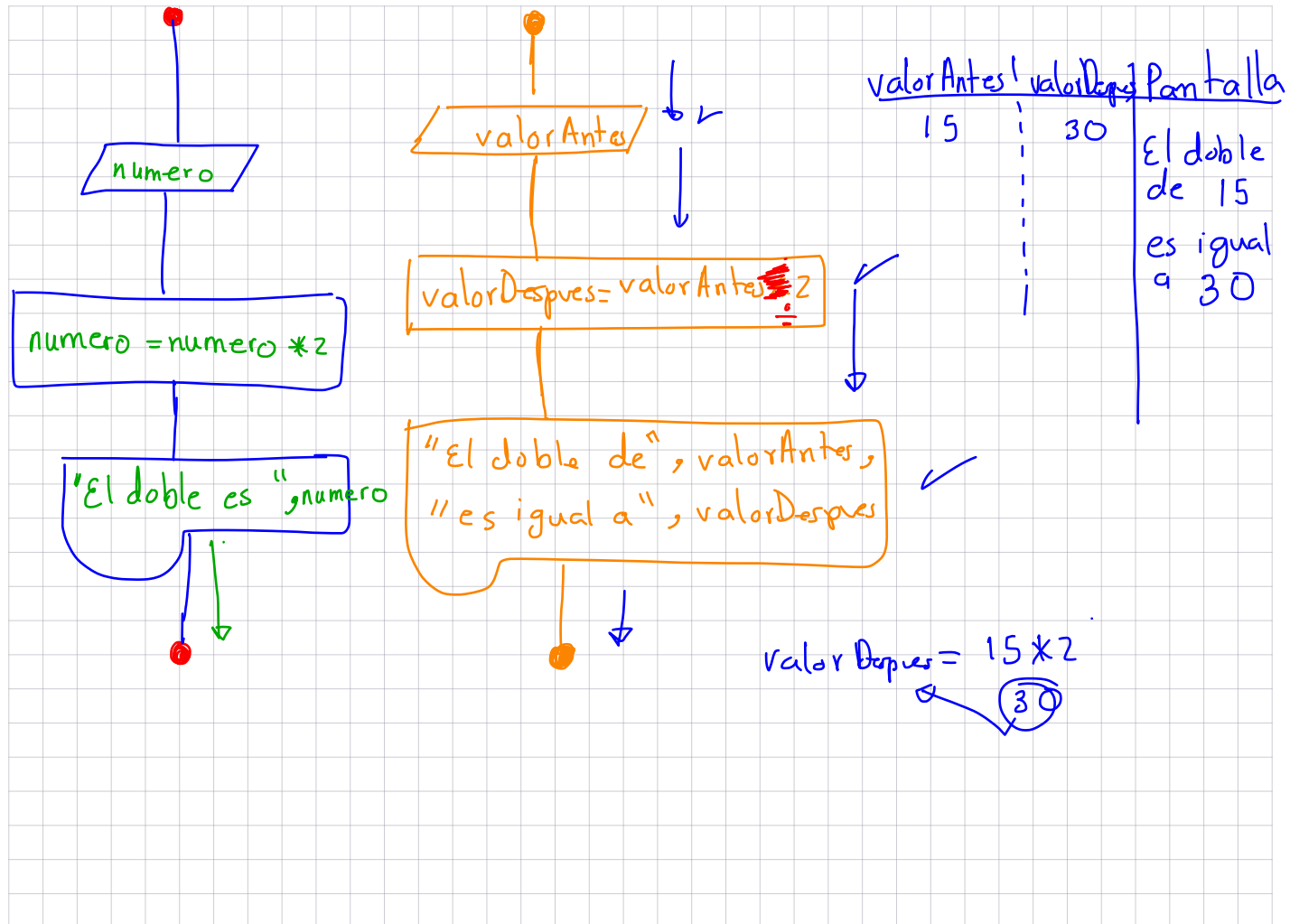
$$\text{Cantidad Canicas} = \frac{(\text{base}) * (\text{base} + 1)}{2}$$

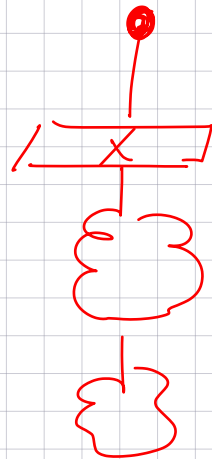
$$\frac{100 \times 101}{2} = 5050$$

- Programa que calcule el doble de un número

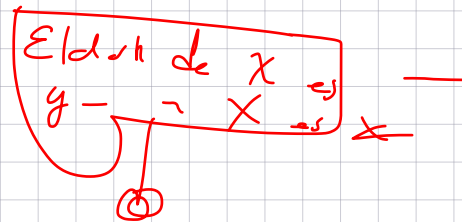


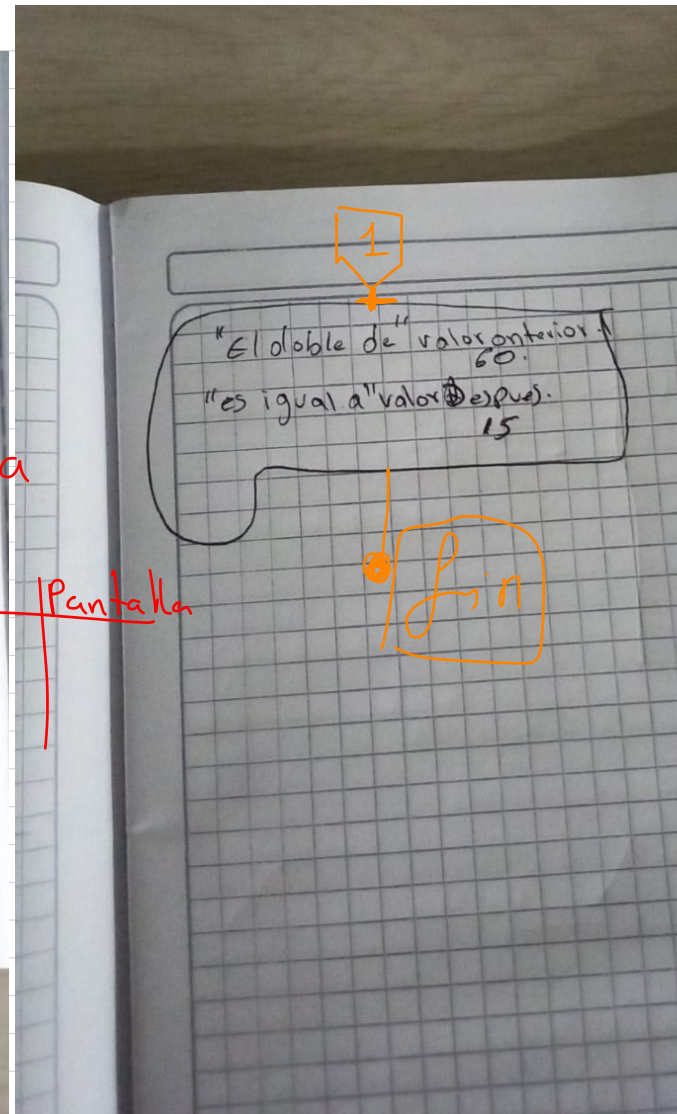
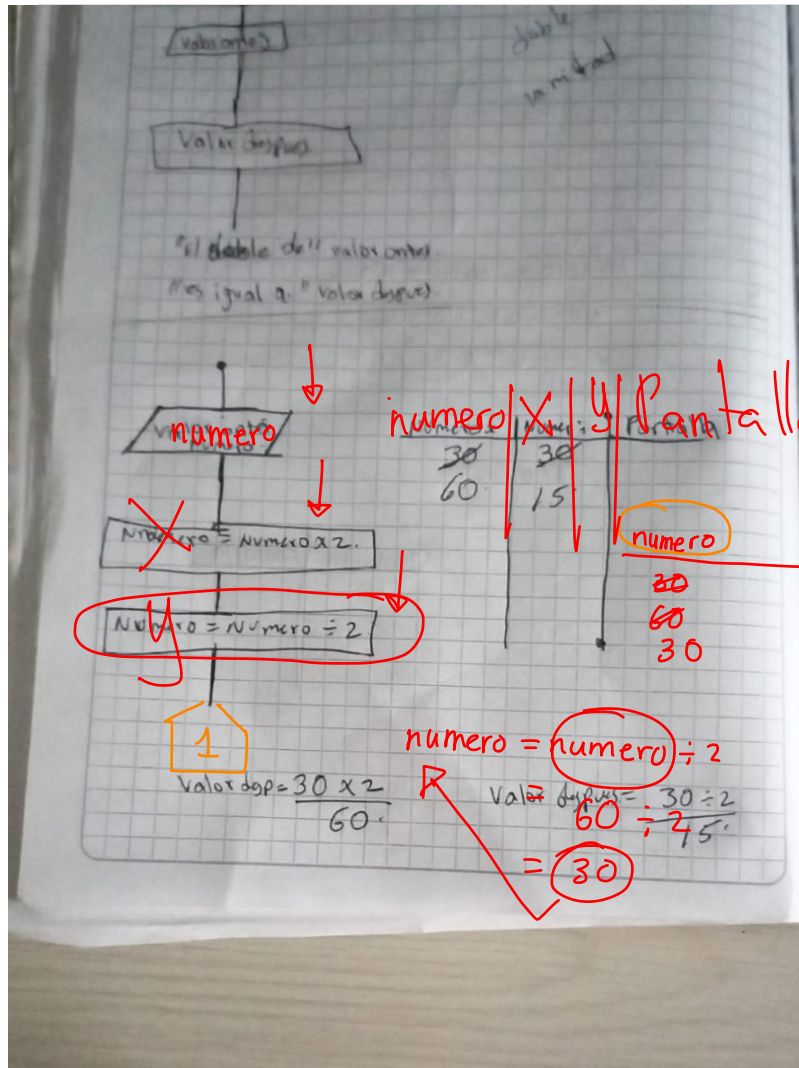


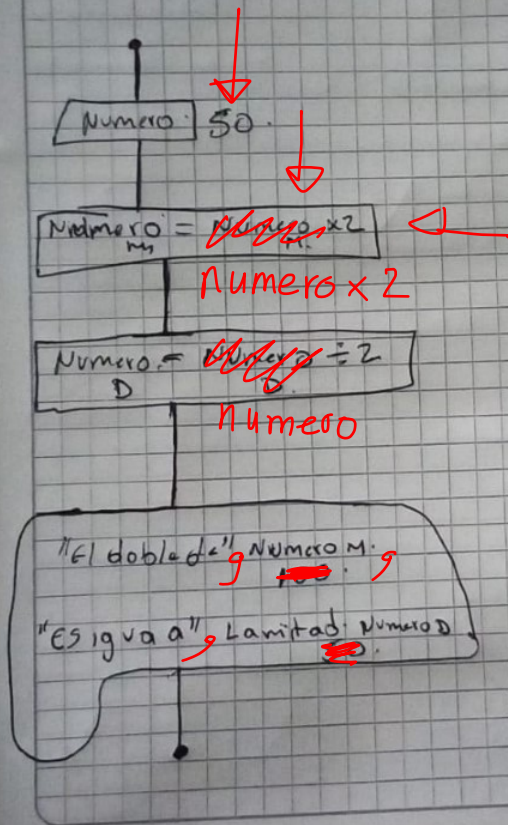




haga un programa que pida un
numero y diga el doble del
numero y la mitad del numero







numero m		numero	Pantalla
Numero M	Numero D		
50	100	100	El doble
100	50	100	Límite
			50

$$\text{numero m} = \text{numero} \times 2$$

$$\text{Numero M} = \frac{50 \times 2}{100}$$

$$\text{Numero D} = \frac{100 \div 2}{50}$$

$$\text{numero D} = 50 \div 2$$

$$50 \times 2$$

$$100$$

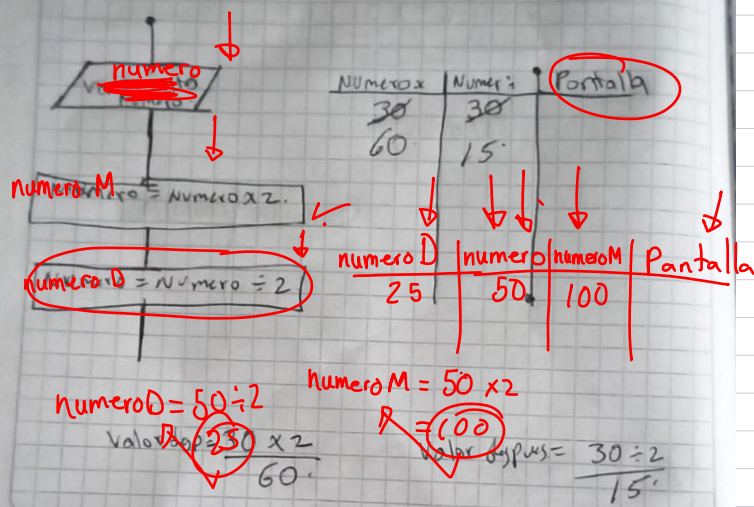
50 →

El doble de 50 es 100
y la mitad de 50 es 25

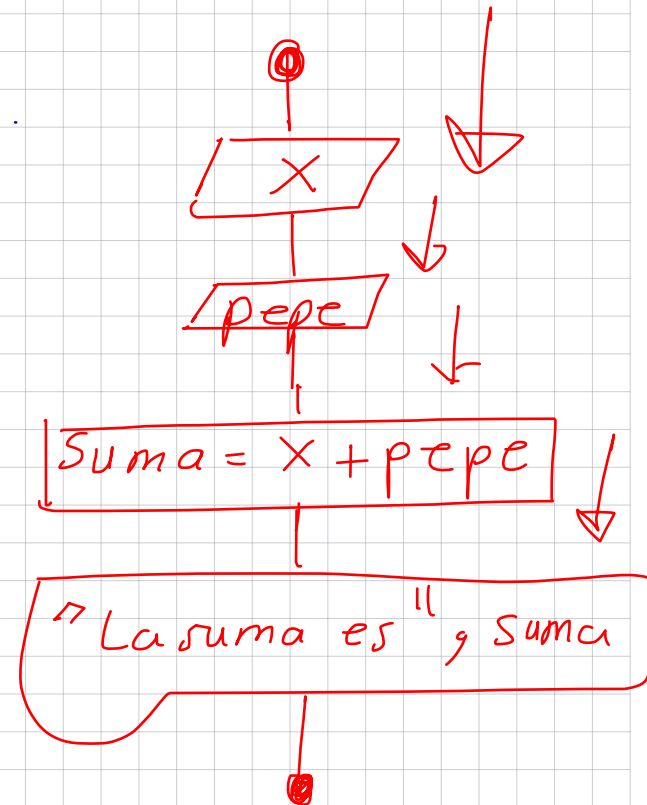
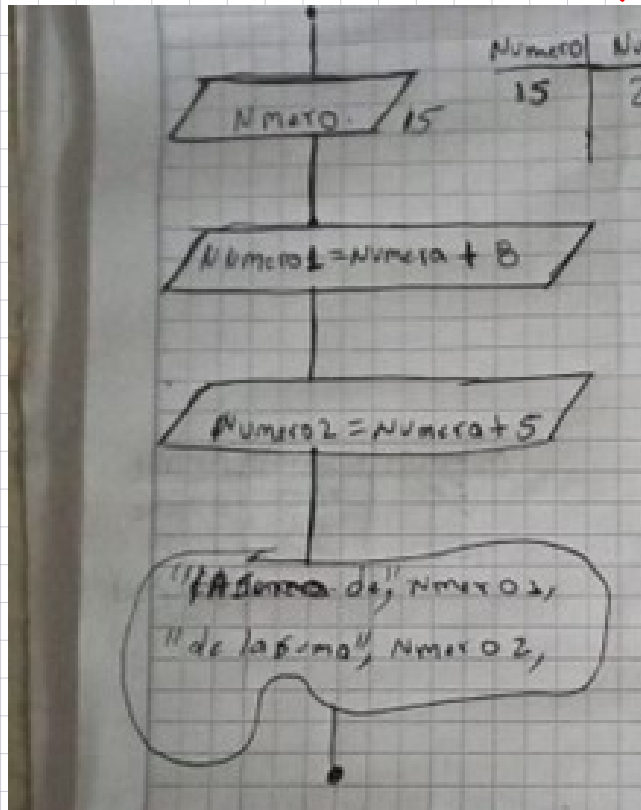
valor enter

valor display

"el doble de" valor enter
"es igual a" valor display



⇒ hacer un programa que sume 2 números.
* los 2 números hay que pedirlos



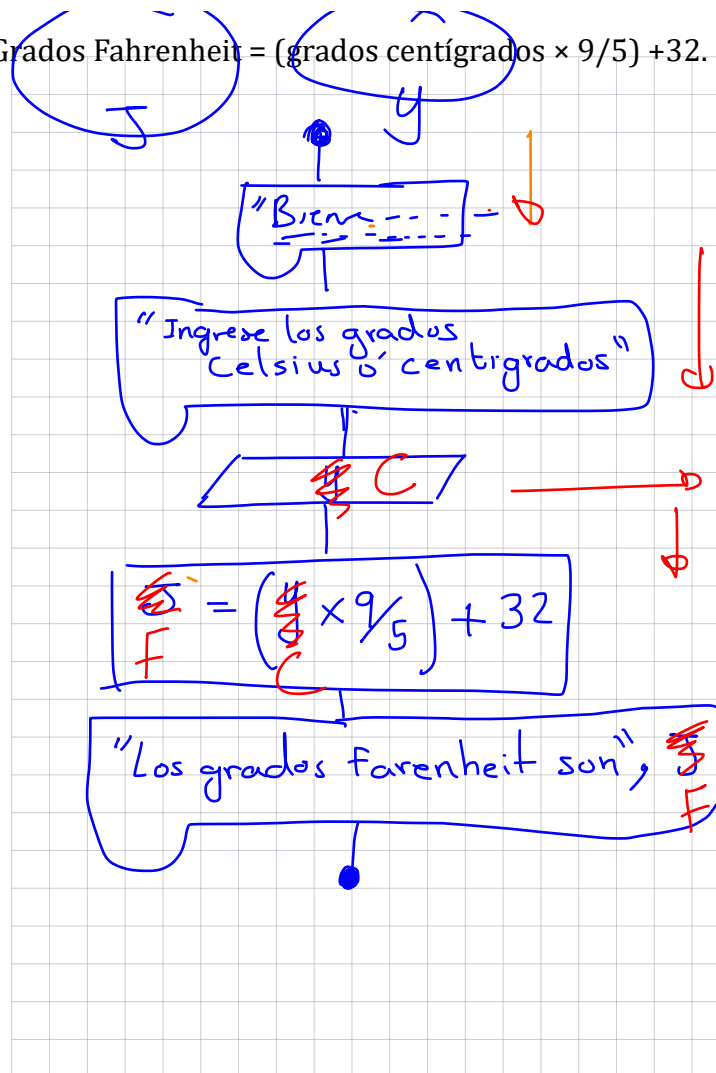
→ hacer un programa que convierta grados Celsius a
grados Fahrenheit

- 1 → Ingresar los celsius
- 2 → pedir cuantos grados

③ - APLICAR FORMULA \Rightarrow GOOGLE

4 mostrar lo convertido

$$\text{Grados Fahrenheit} = (\text{grados centígrados} \times 9/5) + 32.$$



Pruebas de Escritorio

Y	J	Pantalla
45	113	<div>Bienvenidos...</div> <div>Ingrese los grados Celsius o centígrados</div> <div>Los grados Fahrenheit son 113</div>

Handwritten calculations and results for the test case:

$$J = (45 \times 9/5) + 32$$

$$J = 113$$

Grados centígrados = (grados Fahrenheit - 32) \times 5/9.

Fahrenheit a Celsius
Centígrados

F
5

$$\boxed{C = (F - 32) \times \frac{5}{9}} \Rightarrow C = (F - 32) \times \frac{5}{9}$$

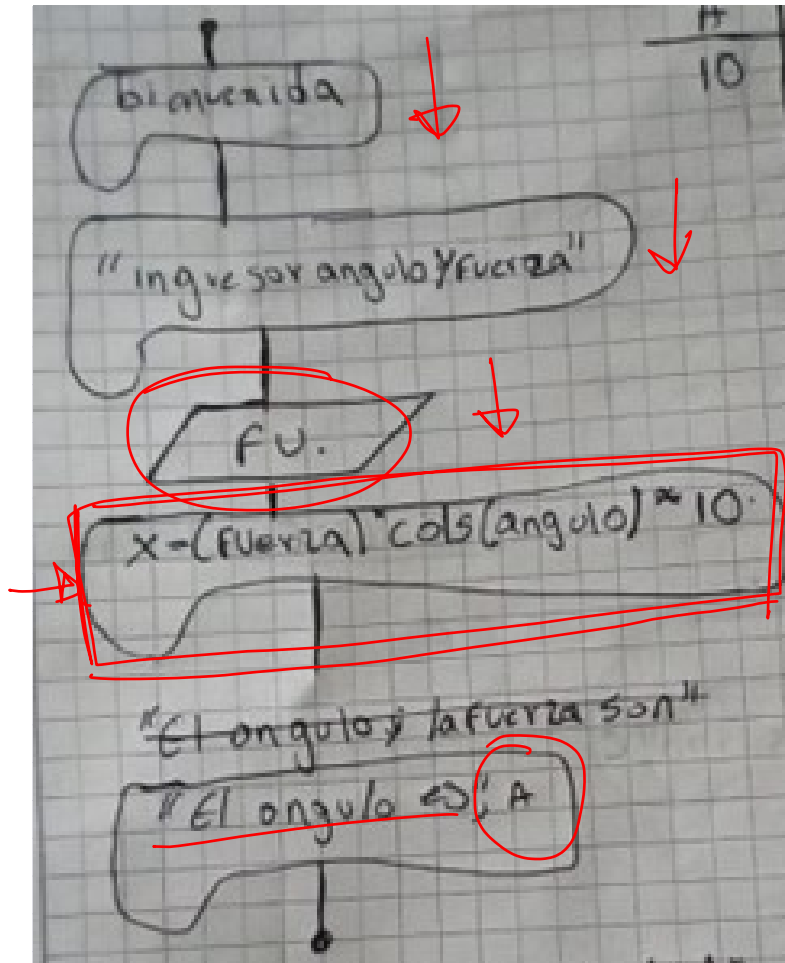
$$C = (5 - 32) \times \frac{5}{9} \Rightarrow$$
$$(-27) \times \frac{5}{9}$$

Angulo
Fuerza



...

$$x = (\text{Fuerza}) \cdot \cos(\text{angulo}) \cdot 10$$



FU
50

Pantalla

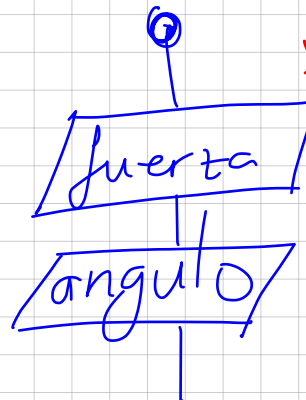
Ingresar.

$X = \text{FU} * \cos(\text{angulo}) * 10$

FU

$x = (\text{Fuerza}) * \cos(\text{angulo}) * 10$

$(\text{Fuerza}) * \cos(\text{angulo}) * 10$



Click Qw	Fuerza	angulo	Panta
212,3	30	45	la pos. es 212,13

$\text{clienteQuiere} = (\text{Fuerza}) * \cos(\text{angulo}) * 10$

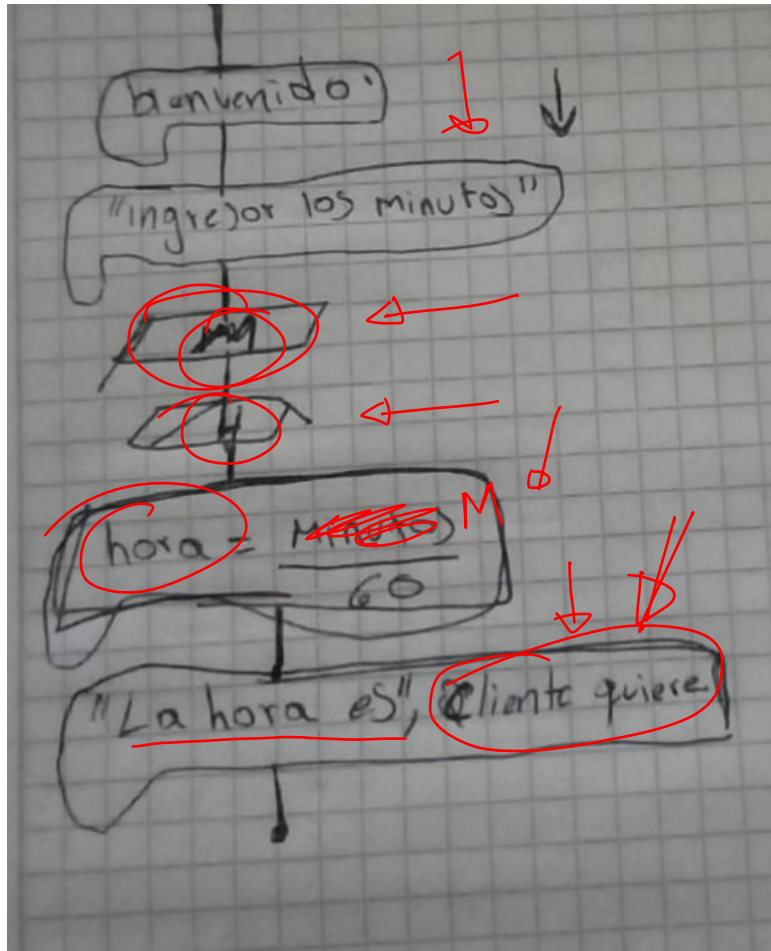
"la poscion es" y clienteQuiere

* Convertidor de minutos a horas

60 \rightarrow 1 . formula =

120 \rightarrow 2

$$\text{horas} = \frac{\text{minutos}}{60}$$



M	H	hora	Pantalla
60	60	1	Ingrese...
			La hora es

$$\text{hora} = \frac{M}{60}$$

$$\text{hora} = \frac{60}{60}$$

$$\text{hora} = 1$$