



- 
- 
- 
- 

---



---

$:: \rightarrow res :$

$\vee$

$\leftarrow$

$\leftarrow$

$\leftarrow$

$\leftarrow$

---



---

---

$\vdots \vdash \rightarrow res:$

---

$\vee$

$\vee$

$\leftarrow$

$\leftarrow$

$\leftarrow$

$\wedge \vee$

$\leftarrow$

$\wedge \vee$

$\leftarrow$

---

$\rightarrow res:$

---

$\neq \wedge \leq$

$\leq$

---

---



---

$par:\rightarrow res:$

$*$

$\neq \vee \wedge \vee$

$\leftarrow \wedge$   
 $\leftarrow \wedge$   
 $\leftarrow \wedge$   
 $\leftarrow \wedge$

$\geq \wedge \geq$

---



---

$$\binom{n}{2}$$

$$\binom{n-1}{2}$$

$$\binom{n-i-1}{2}$$

$$\binom{n}{2}\binom{n}{2}\binom{n-1}{2}.3$$

$$\prod_{i=0}^{n-1}\binom{n-i}{2}*(i+1)=\prod_{i=0}^{n-1}\binom{n-i-1}{2}*\prod_{i=0}^{n-1}(i+1)$$

$$n!*\prod_{i=0}^{n-1}\binom{n-i-1}{2}=n!\prod_{i=0}^{n-1}\frac{(n-i-1)*(n-i-2)}{2}\leq \frac{n!^3}{2^n}$$

$$_{ij}\forall \leftarrow$$

*Cantidaddearqueologos* :4  
*Cantidaddecanibales* :2  
*Velocidaddearqueologos* :10101010  
*Velocidaddecanibales* :1010

*Velocidaddecruetotal* :90

*Cantidaddearqueologos* :5  
*Cantidaddecanibales* :0  
*Velocidaddearqueologos* :15105220  
*Velocidaddecanibales* :

*Velocidaddecruetotal* :56

$$_{i\neq j}\forall \leftarrow$$

*Cantidaddearqueologos* : 3  
*Cantidaddecanibales* : 2  
*Velocidaddearqueologos* :246  
*Velocidaddecanibales* :135

*Velocidaddecruetotal* :18

\*

*Cantidaddearqueologos* :4  
*Cantidaddecanibales* :2  
*Velocidaddearqueologos* :36912  
*Velocidaddecanibales* :12

*Velocidaddecruetotal* :33

*Cantidaddearqueologos* :2  
*Cantidaddecanibales* :3  
*Velocidaddearqueologos* :36  
*Velocidaddecanibales* :125

*Velocidaddecruetotal* :

$$1 \leq N + M \leq 6$$

[illegible]



[illegible]

$10^{15}$ 
$$sumaParcial3^03^iP$$
$$sumaParcialsumasParcialesi + 1sumaParcial3^{i-1}$$

*PequilibriumActual*

equilibrioActualsumasParcialessumaParcialequilibrioActualarrayDarrayI

*equilibrioActualsumasParciales*

$$arrayDarrayI$$

---

---

$LongLong:\rightarrow S:T:arrayI:arrayD:$

$\leftarrow 3^i$

$\sqrt{P}$

$\geq$   
 $\leftarrow$   
 $\leftarrow 3^{i-1}$

$\sqrt{P}$   
 $\sqrt{P}$

$\frac{size}{2}$

$lg(\sqrt{P})$

$\geq$   
 $\wedge$

$\leftarrow$   
 $\cup$

$\leftarrow$   
 $\cup$

$\leftarrow$   
 $\leftarrow \frac{middle}{2}$

$\leftarrow \frac{size}{2}$

$\geq$   
 $\leftarrow$   
 $\leftarrow \frac{size}{2}$

$\sqrt{P}$

---

---

$\sqrt{P}$

$\rightarrow S:T:arrayI:arrayD:$	
	$\sqrt{P}$
	$\sqrt{P}$
	$\sqrt{P}$
	$\sqrt{P}$
$\sqrt{P}$	

$$3^03^iP\sqrt{P}$$

$$\begin{array}{l} i=0\Rightarrow\\ 3^i\geq P\geq 3^{i-1}i>0i\leq\sqrt{P}\\ P\geq 3^{i-1}\Rightarrow\sqrt{P}\geq\sqrt{3^{i-1}}\\ \sqrt{3^{i-1}}\geq i\Rightarrow 3^{i-1}\geq i^2i=13^{1-1}\geq 1i>13^{i-1}i^2 \end{array}$$

$$\sum_{x=0}^i3^i\geq P$$

$$\sqrt{P}$$

$$\sqrt{P}$$

$$sumasParciales\sqrt{P^{i-1}i-1}\sqrt{P}$$

$$\sqrt{P}sumasParcialesequilibrioActualequilibrioActualsumasParcialesequilibrioActualarrayDarrayI$$

$$\begin{array}{l} equilibrioActualsumasParciales\\ equilibrioActual\sqrt{P} \end{array}$$

$$arrayDarrayI\#\#\#\leq\sqrt{P}$$

$$\sqrt{P}\sqrt{P}\sqrt{P}$$

$$\begin{array}{l} \sqrt{P}\sqrt{P}\sqrt{P}\sqrt{P}\sqrt{P}\\ equilibrioActual\\ \sum_{i=0}^n(3^i) \end{array}$$

$$[0,1]$$

$$[0,\sum_{i=0}^1(3^i)]=[0,4]$$

$$\bullet$$

$$\bullet$$

$$i=n\in \mathbb{N}n+1$$

$$[0,\sum_{i=0}^n(3^i)]$$

$$[0,\sum_{i=0}^{n+1}(3^i)]$$

$$[0,\sum_{i=0}^{n+1}(3^i)]=[0,\sum_{i=0}^n(3^i)]+3^{n+1}$$

$$\sum_{i=0}^n(3^i)$$

$$3^{n+1}=3\ast 3^n.$$

$$3^n<\sum_{i=0}^n(3^i)3^n3^n$$

$$x\in \mathbb{N}x\leq \sum_{i=0}^{n+1}(3^i)$$

$$\forall n\in \mathbb{N}$$

$$xmaximapotenciade3en[0,\sum_{i=0}^{n+1}(3^i)]3^{n+1}\\ x\sum_{i=0}^n(3^i)<3^{n+1}\sum_{i=0}^n(3^i)<x$$

$$x3^{n+1}\sum_{i=0}^n(3^i)$$

$$x<\sum_{i=0}^{n+1}(3^i)=x<\sum_{i=0}^n(3^i)+3^{n+1}=x-3^{n+1}<\sum_{i=0}^n(3^i)$$

$$P3^i\leftarrow$$

$$P$$

$$\sum_{i=1}^n 3_i = P$$

$$P3^i + R \leftarrow$$

$$P$$

$$P \bmod 2 = 1$$

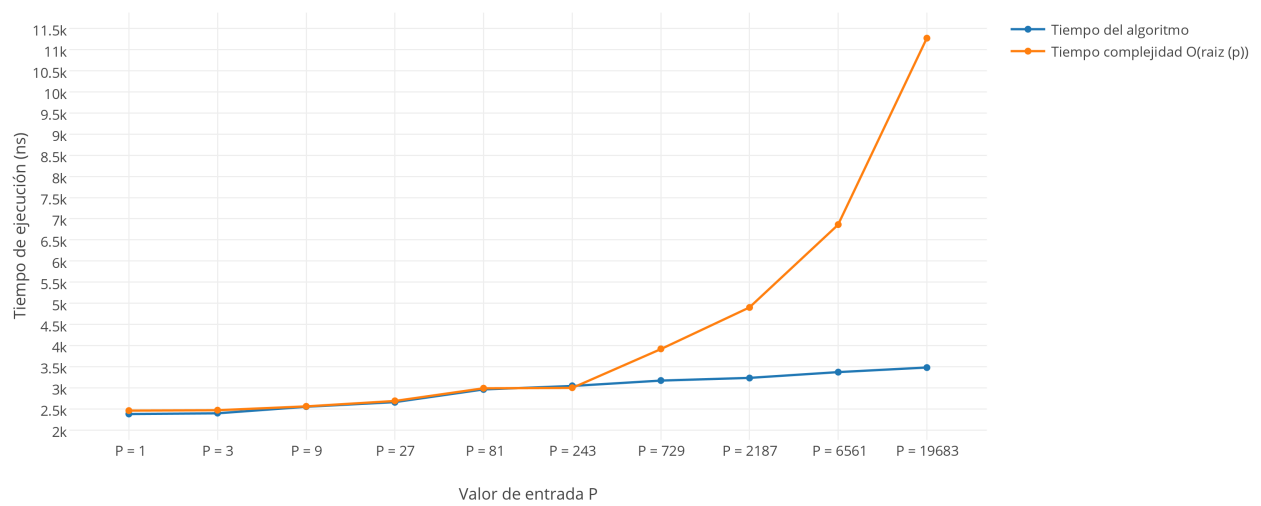
$$P$$

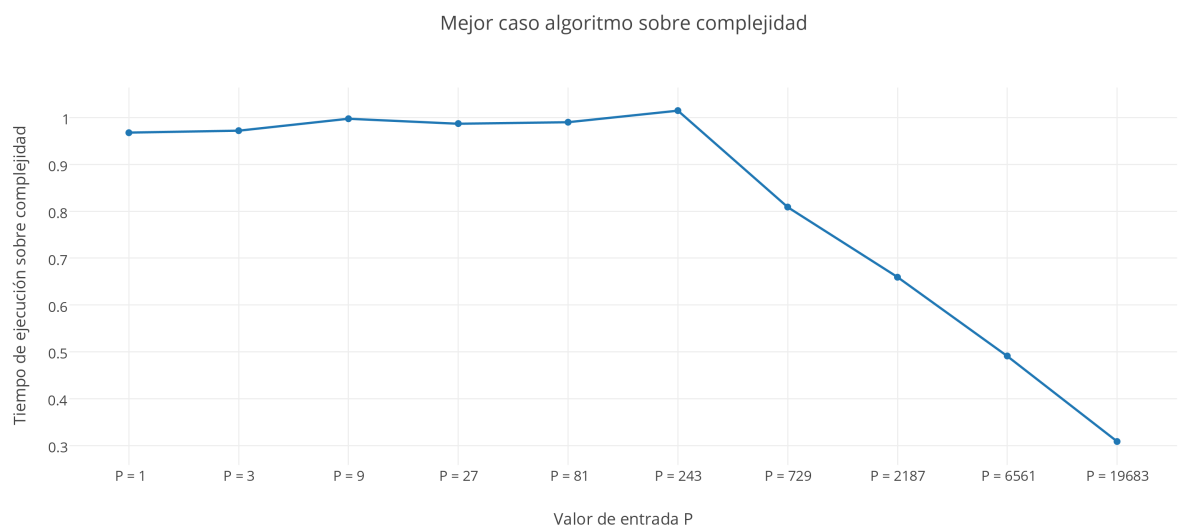
$$P \bmod 2 = 0$$

$$P3^i \leq \leq$$

$$3^{30}P$$

Mejor caso Algoritmo 2





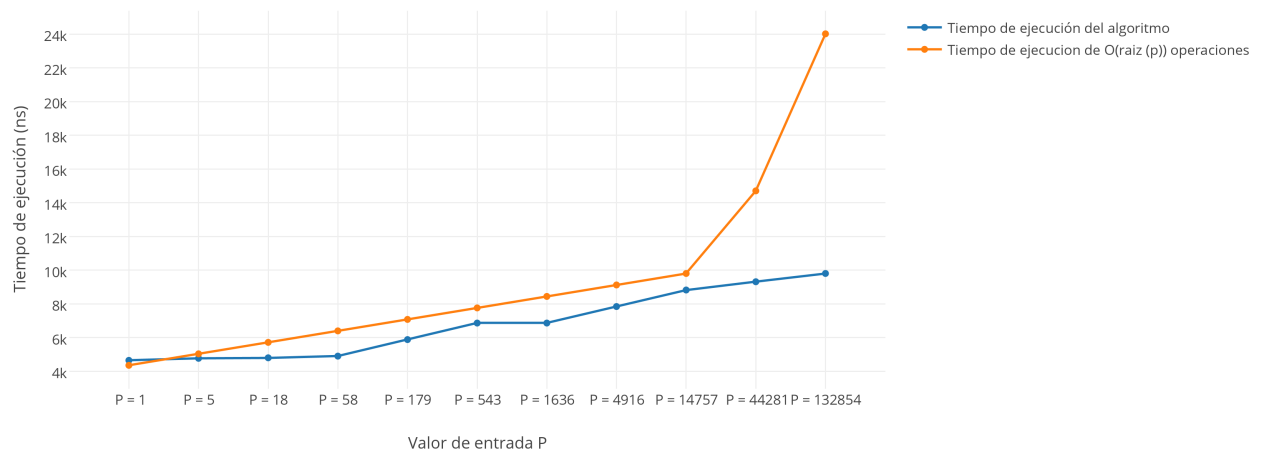
<i>n</i>	<i>t</i>	$\sqrt{P}$	$t/\sqrt{P}$
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

$P$

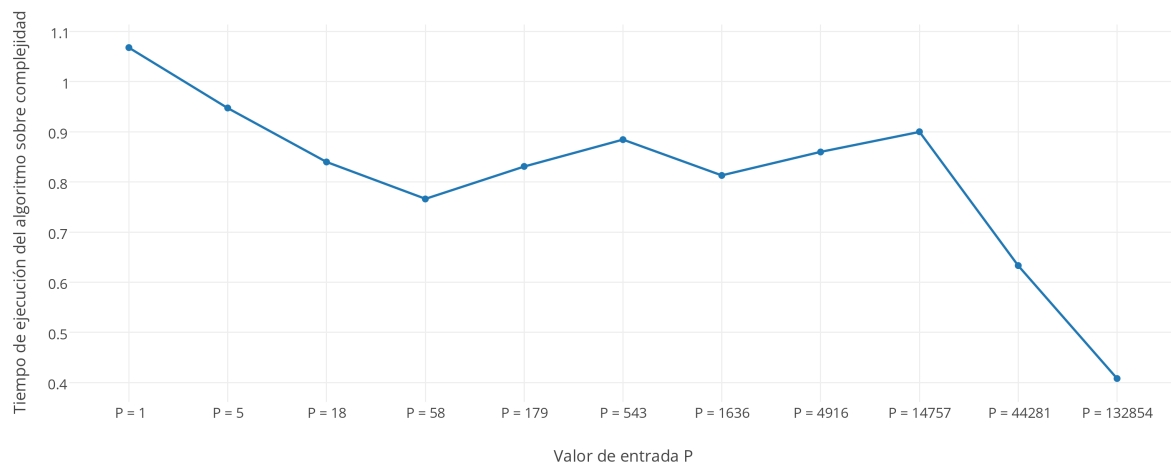
$$\sum_{i=1}^n 3_i = P$$

$$\sum_{i=1}^{20} 3_i = 5230176601$$

Peor Caso Algoritmo 2



Peor caso ejercicio 2 sobre complejidad





[illegible]

---

---

*Integer: Integer:→ S: elementos:*

*gets* <sup>\*</sup>  
*\*M<sup>3</sup>*

*gets*

*gets*

*cantidadElementos*  
*cantidadElementos*

---

---

*√P*

