

绪论

复杂度分析：封底估算

$\Theta(1-D3)$

He calculated just as men breathe, as eagles  
sustain themselves in the air.

我仿佛是横越三世来见你的，而你却不在

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# Back-Of-The-Envelope Calculation

❖ 地球 (赤道) 周长  $\approx 787 \times 360/7.2$

$$= 787 \times 50 = 39,350 \text{ km}$$

❖ 1天 = 24hr x 60min x 60sec

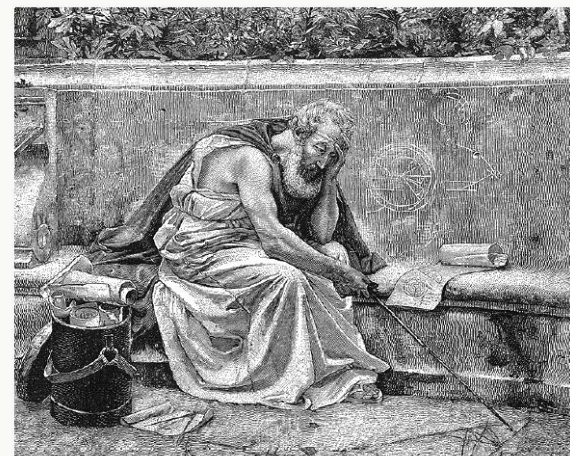
$$\approx 25 \times 4000 = 10^5 \text{ sec}$$

❖ 1生  $\approx$  1世纪 = 100yr x 365 =  $3 \times 10^4 \text{ day} = 3 \times 10^9 \text{ sec}$

❖ “为祖国健康工作五十年”  $\approx 1.6 \times 10^9 \text{ sec}$

❖ “三生三世”  $\approx 300 \text{ yr} = 10^{10} = (1 \text{ googol})^{(1/10)} \text{ sec}$

❖ 宇宙大爆炸至今 =  $4 \times 10^{17} > 10^8 \times \text{一生}$



Eratosthenes  
(276 ~ 194 B.C.)



Enrico Fermi  
(1901 - 1954)

# 实例：全国人口普查数据的排序

