

# Dal calcolo ai calcolatori storie di informatica

Lezioni al Museo

calcolo

simbolo

cifra

digitale

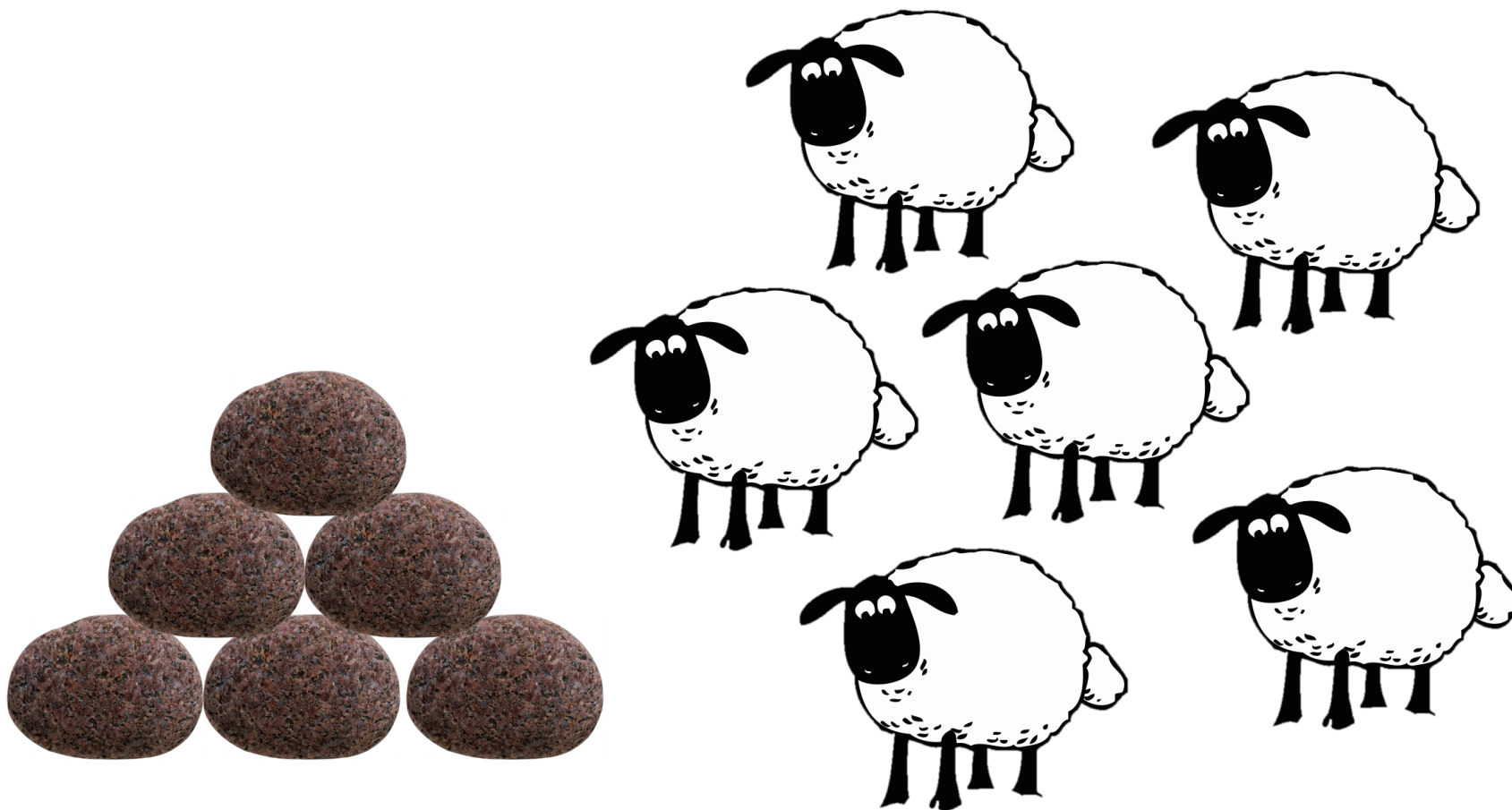
calcolatrice

calcolatore

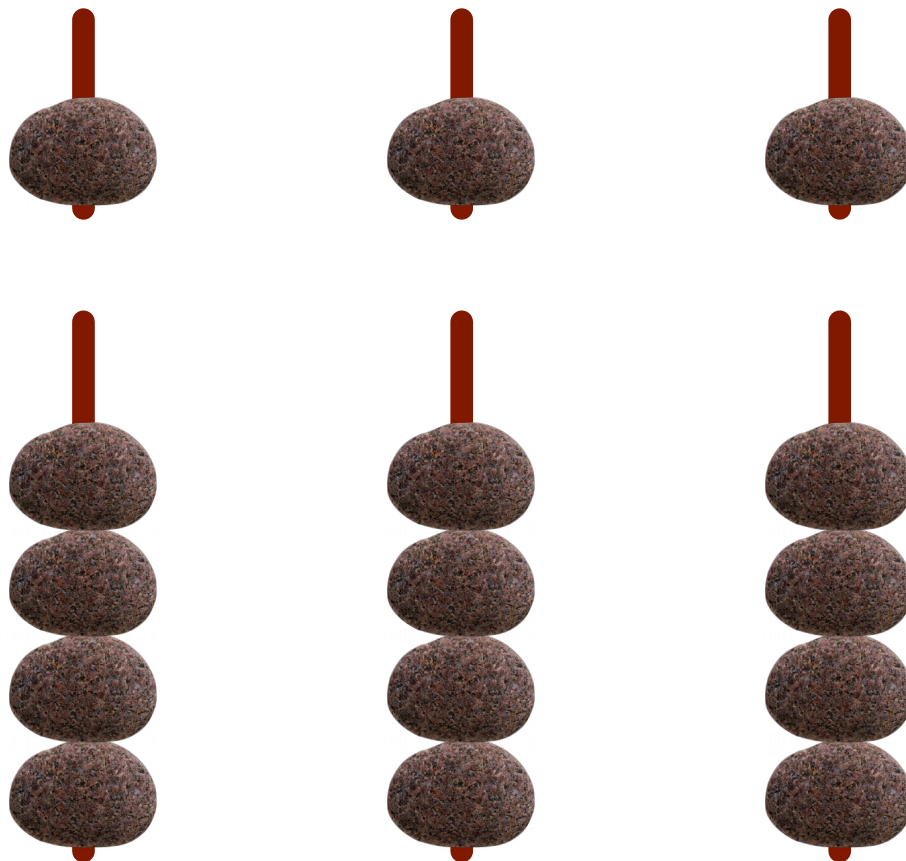
elettronica

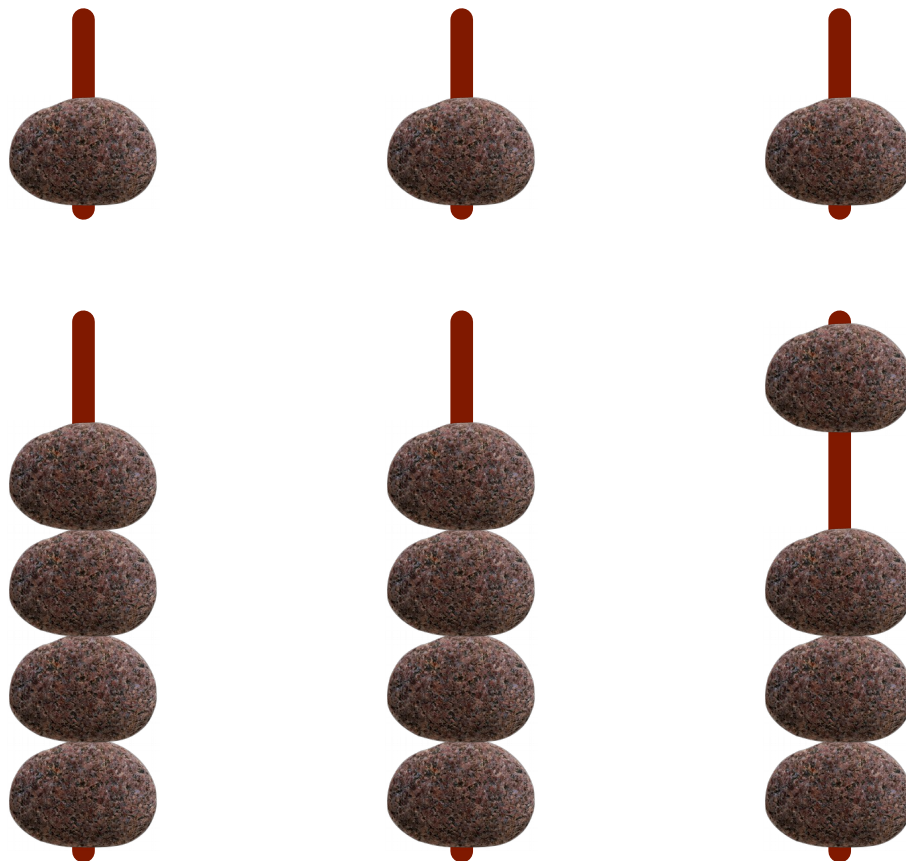
informatica

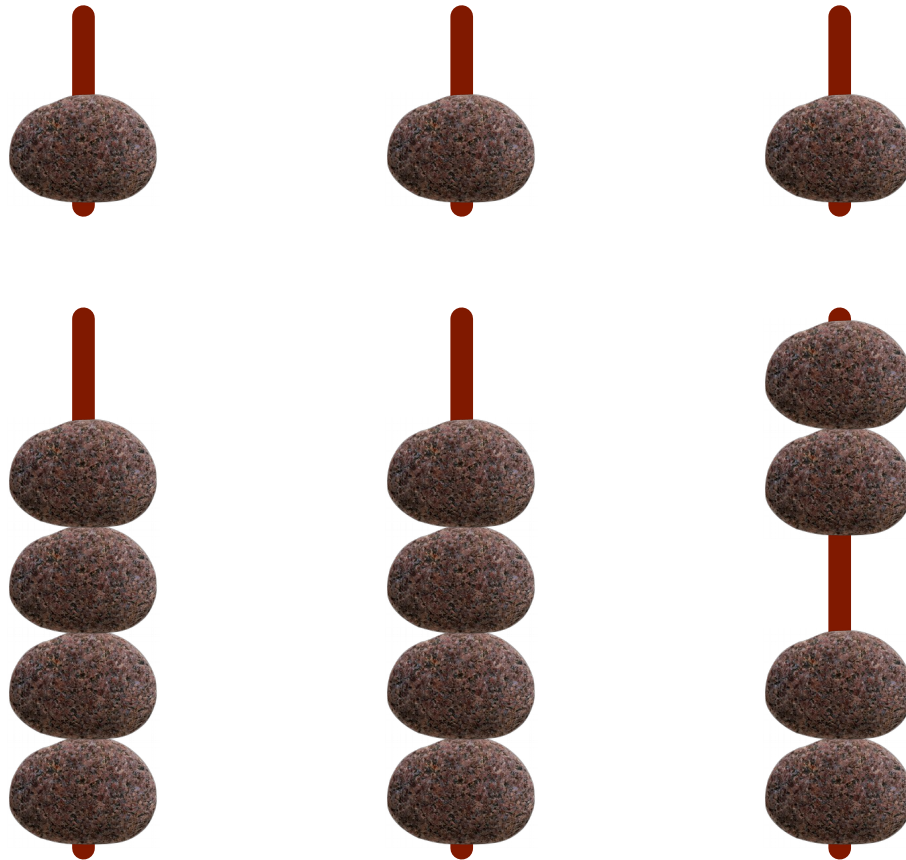


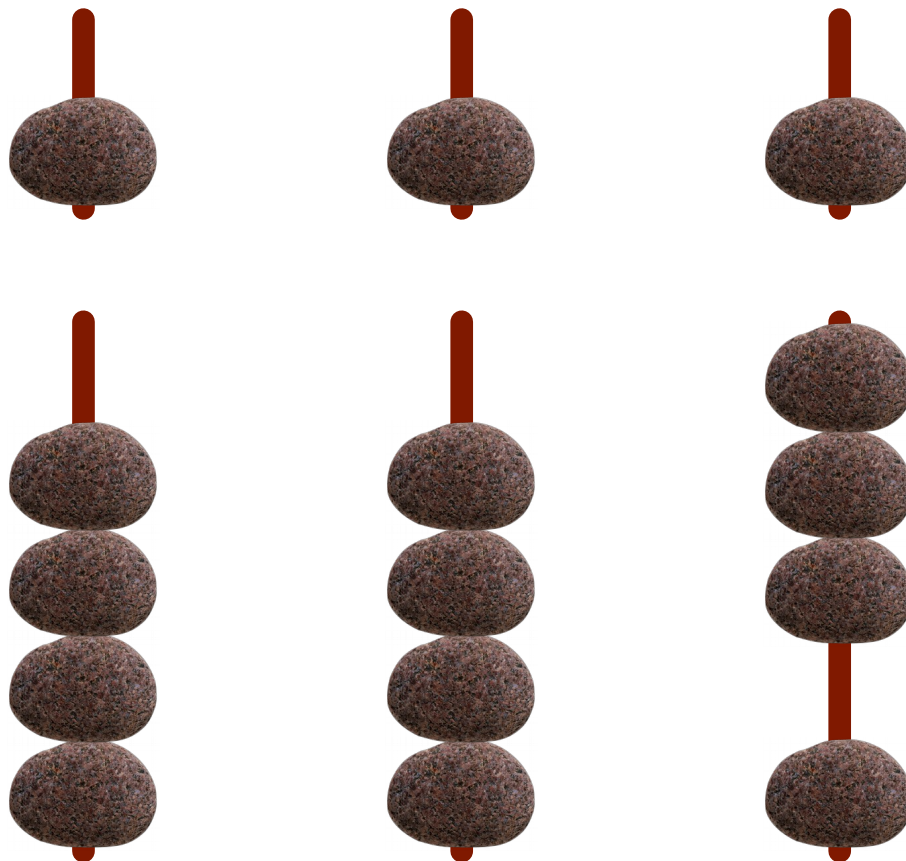


# dita, mano, due mani...

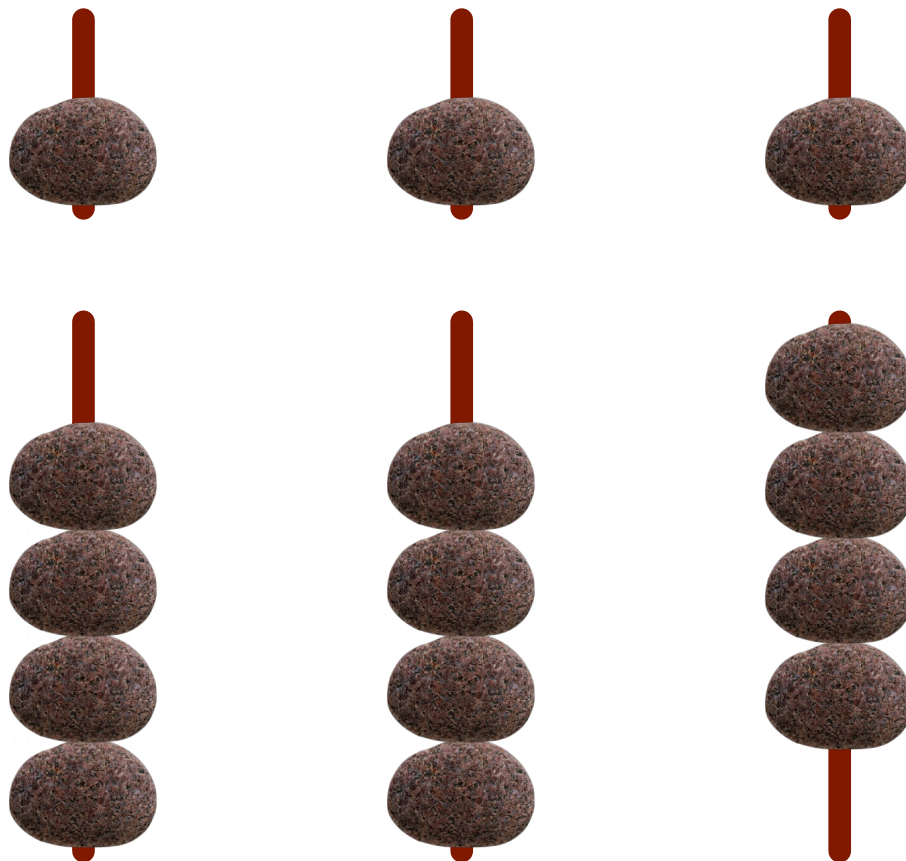


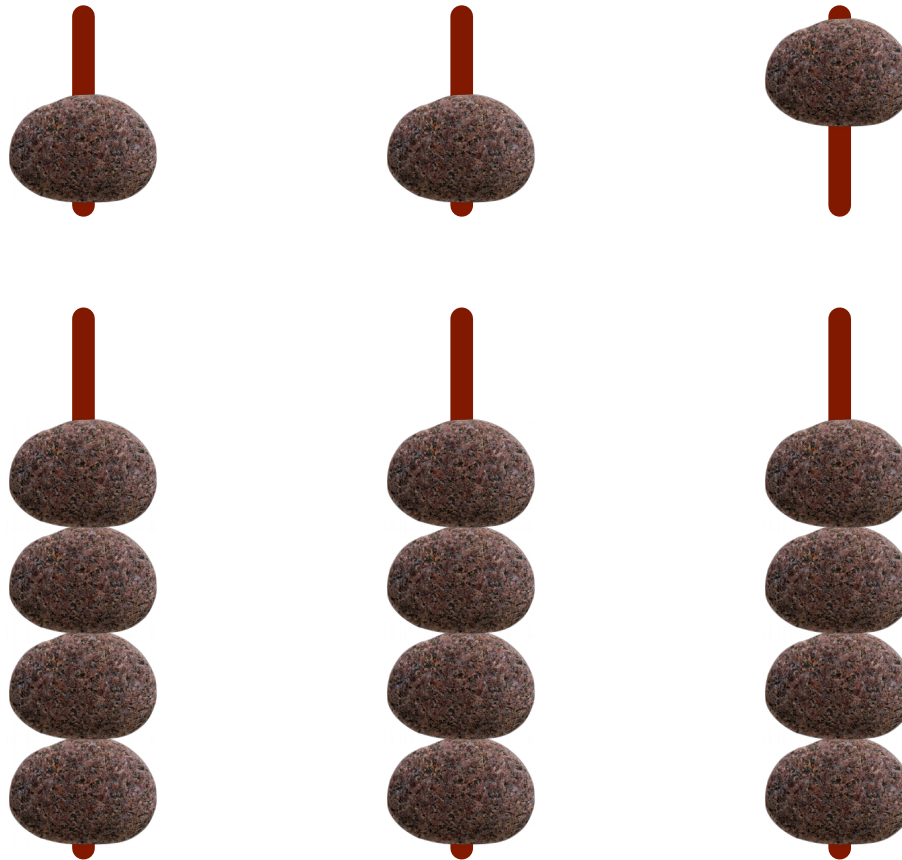


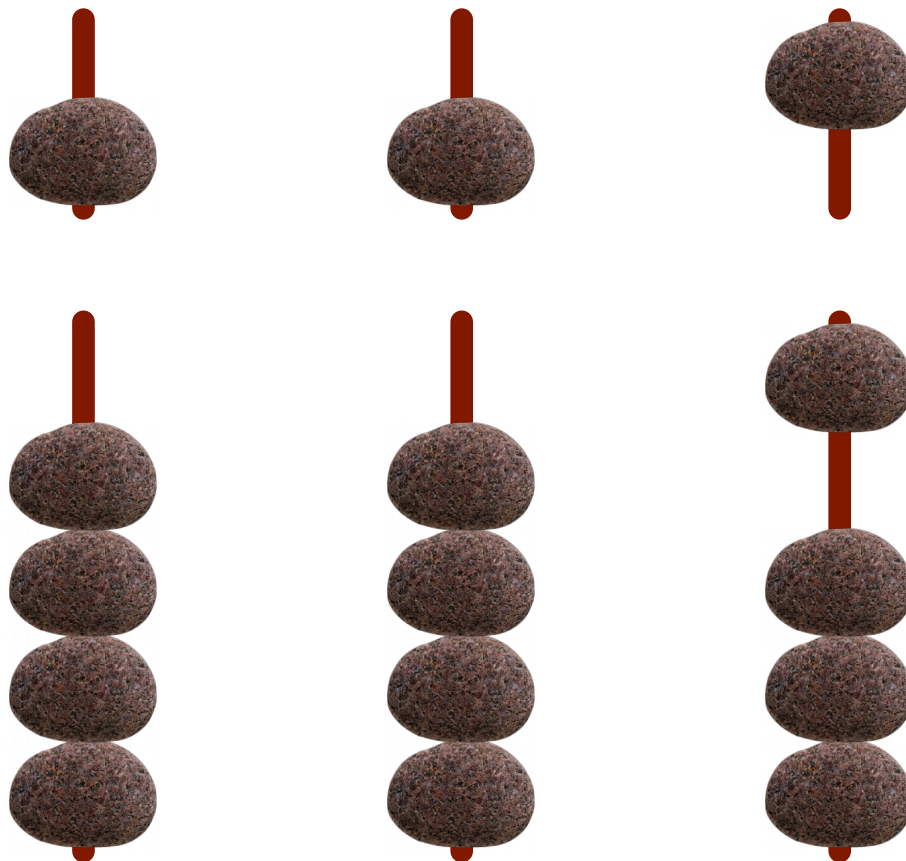


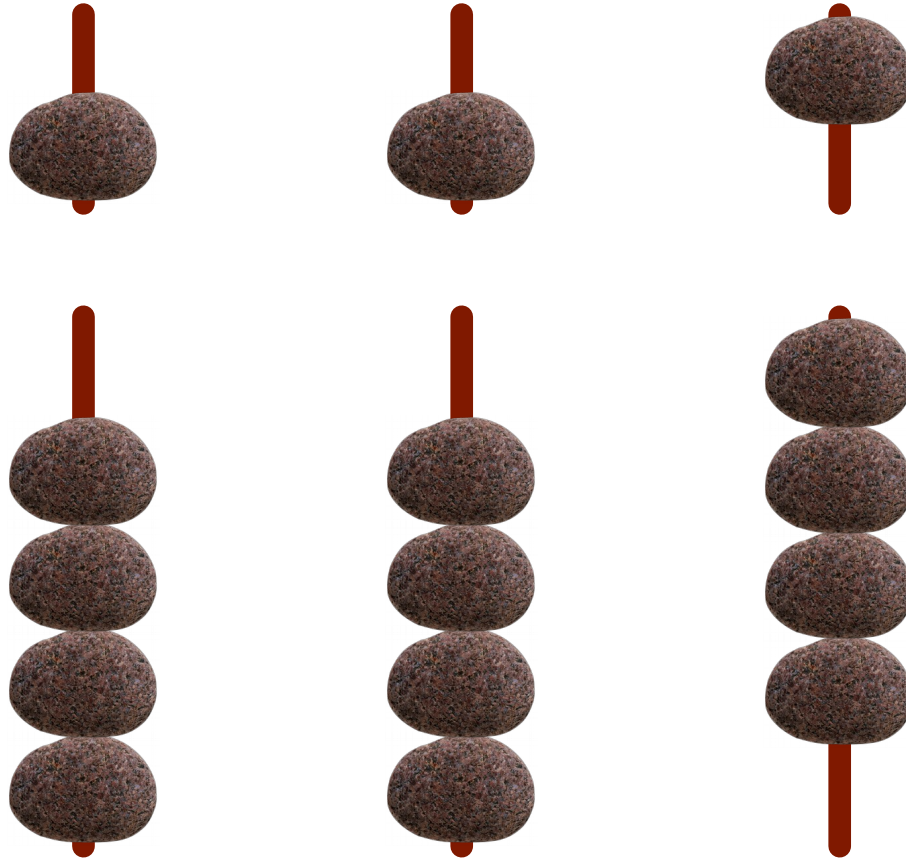


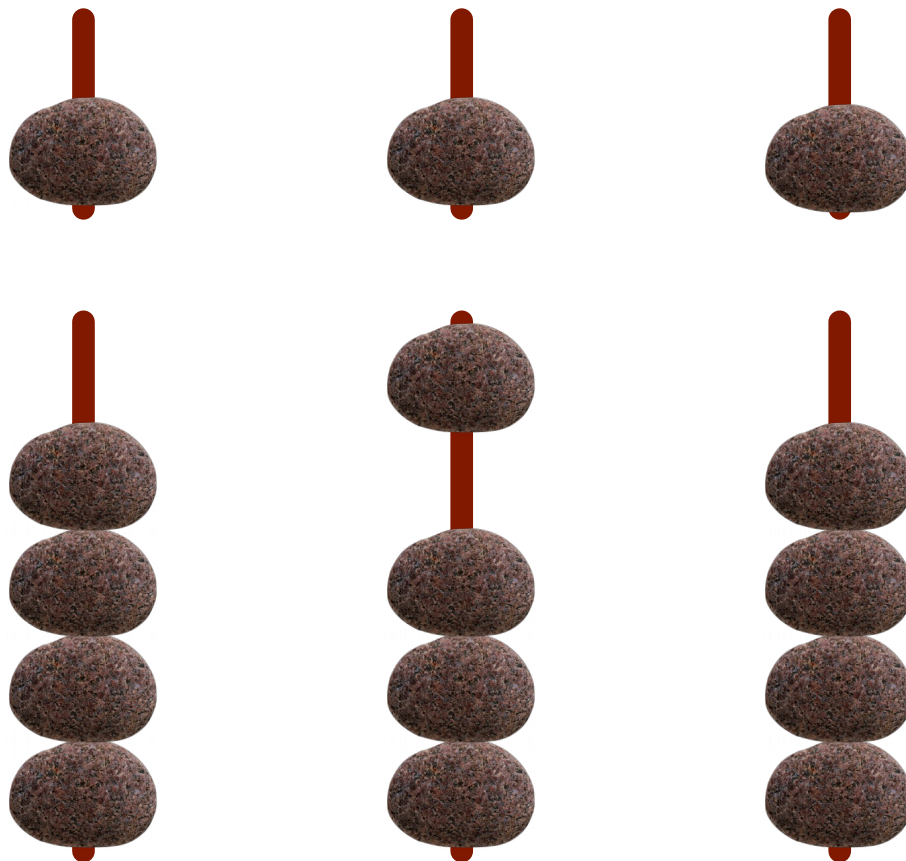


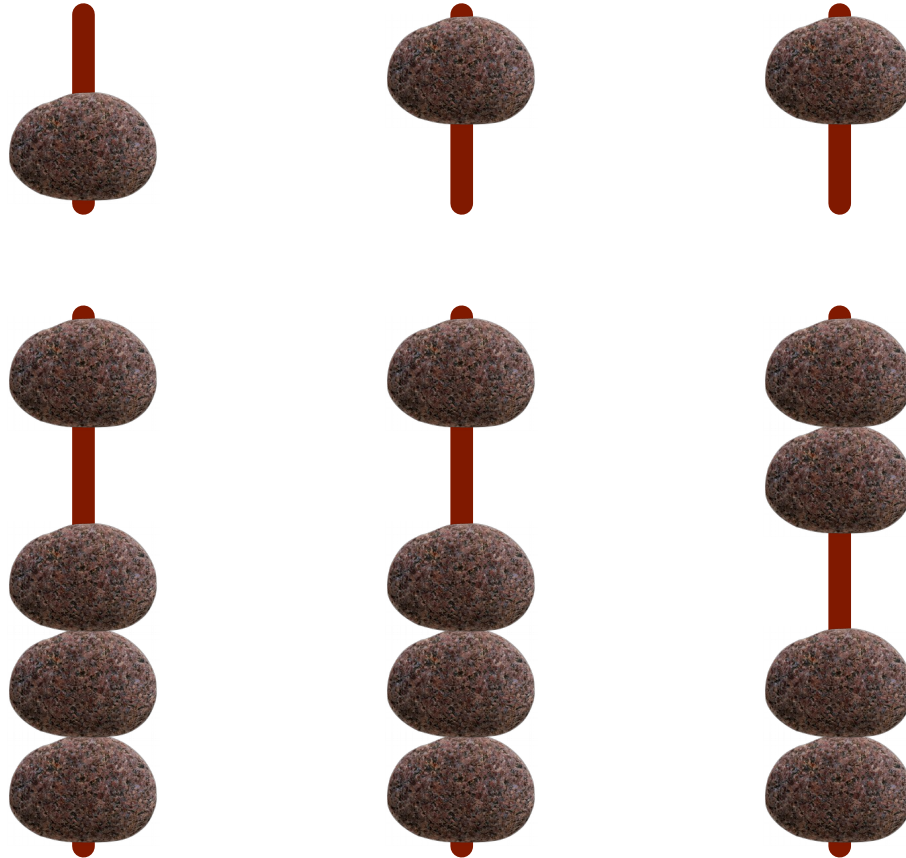




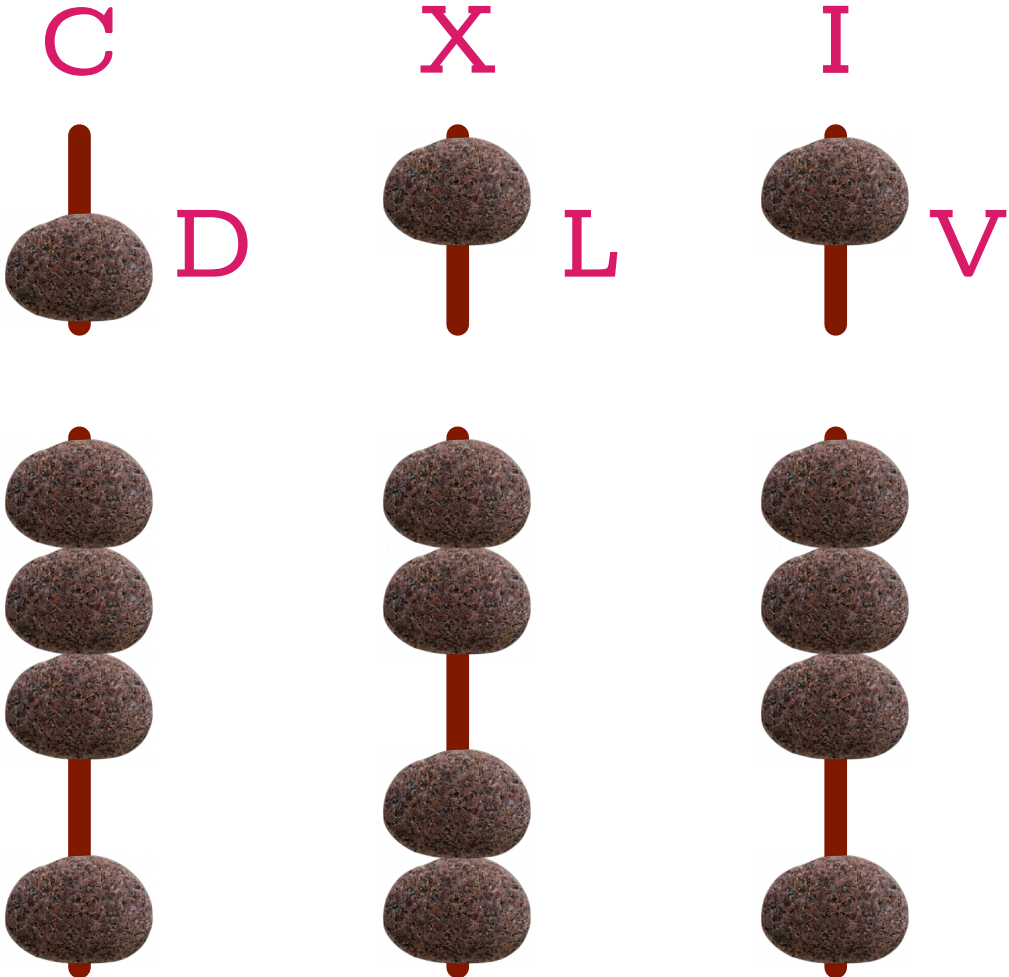




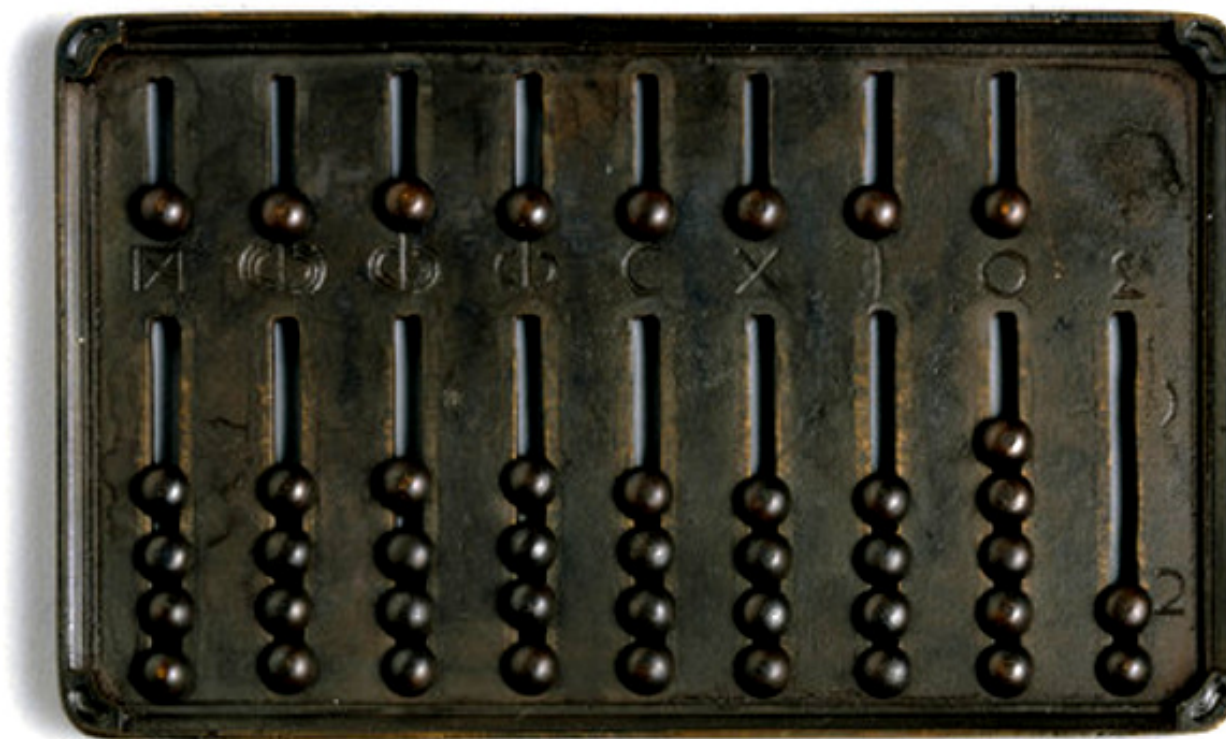




# simboli: CCCLXXVIII



# abaco (circa 300 a.C.)







1 2 3 4 5 6 7 8 9 0

X → 10

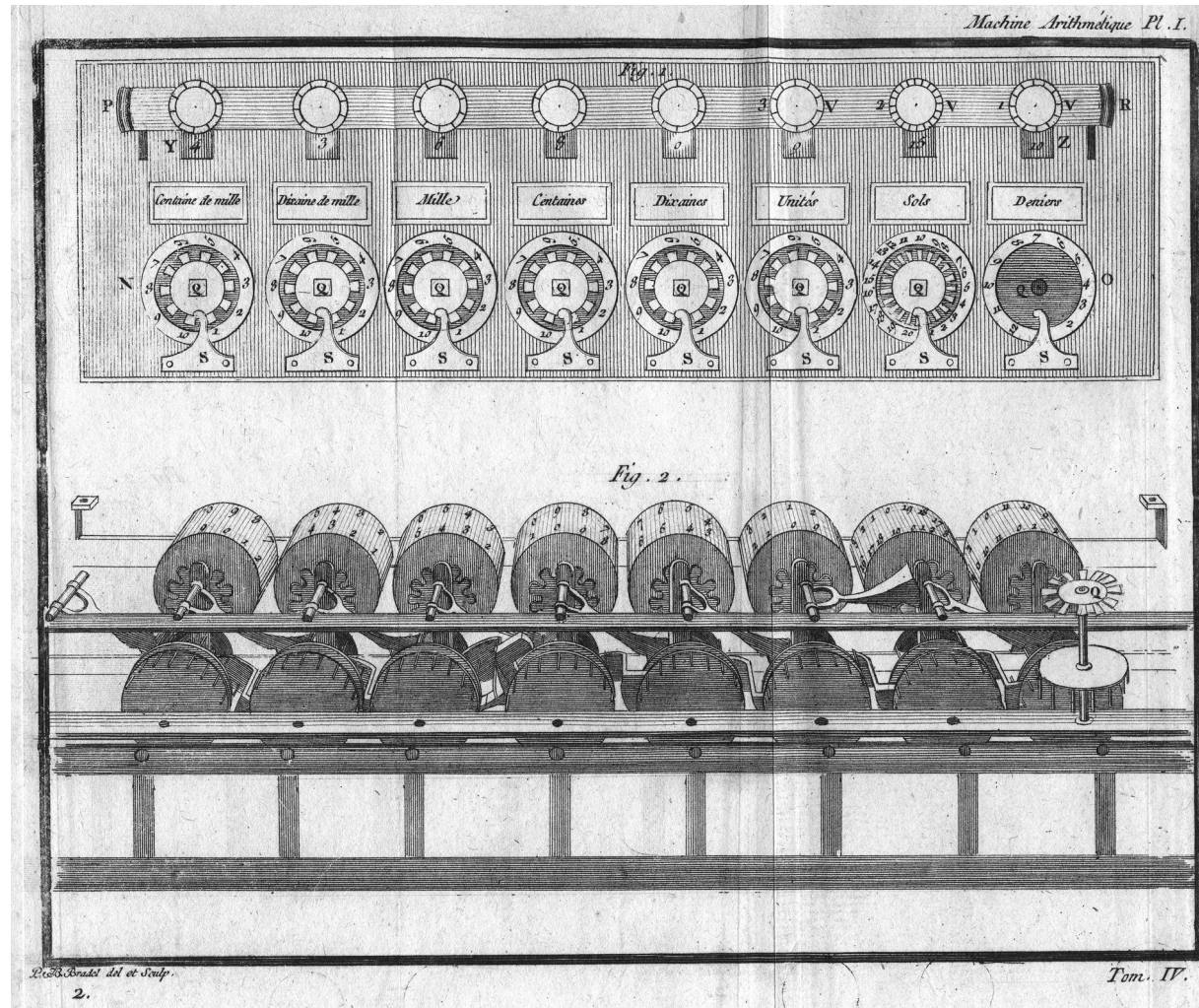
C → 100

M → 1000

aş-şifr, sifr, zefiro, zero

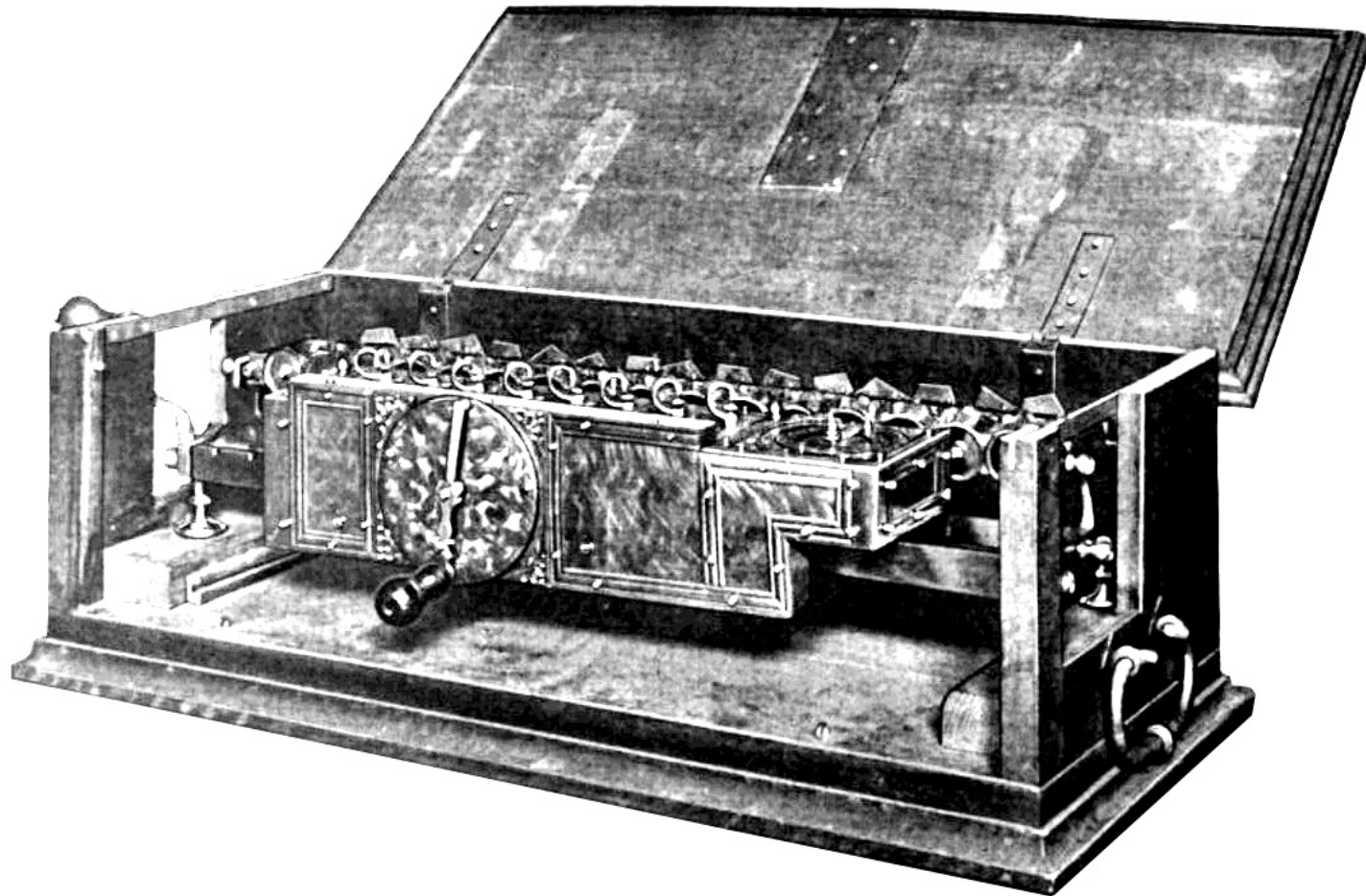
$$\begin{array}{r} 643+ \\ \underline{358=} \\ 1001 \end{array}$$

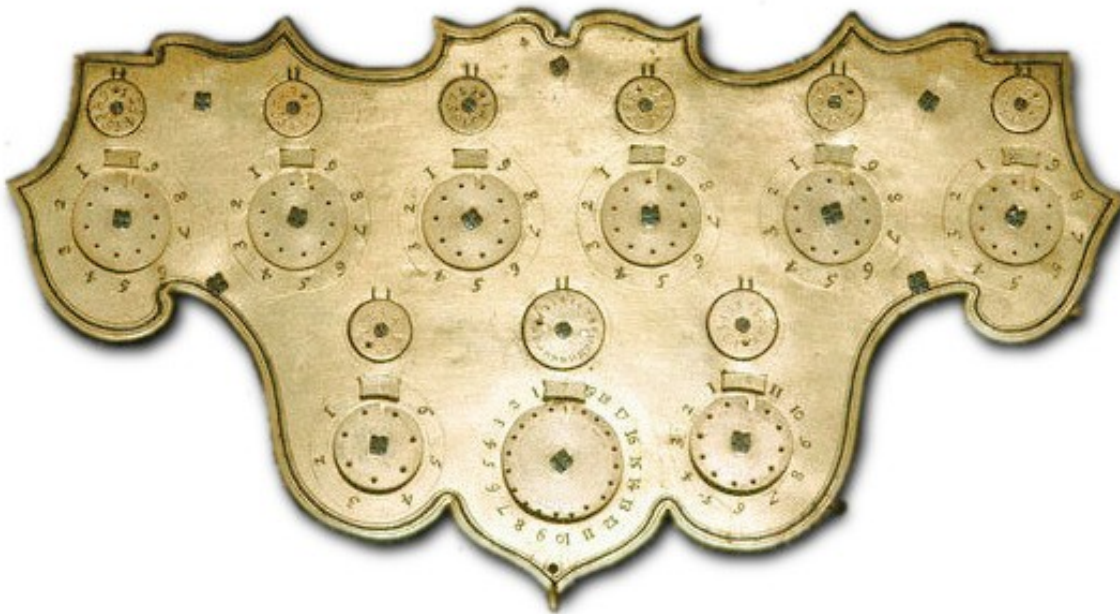
$$\begin{array}{r} 643\times \\ \underline{23=} \\ 1929 \\ \underline{1286} \\ 14789 \end{array}$$





# Gottfried Leibniz (1694)





# calcolatrici in vendita (1851)









“cifra” si dice “digit”

“a cifre” si dice “digital”

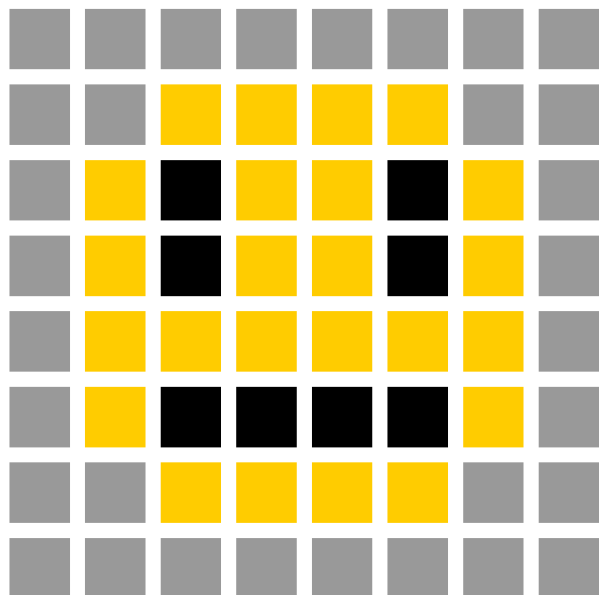
“digital” si trasforma in “digitale”

## CIAO MONDO

067, 073, 065, 079, 032, 077, 079, 078, 068, 079

## Ciao Mondo!

067, 105, 097, 111, 032, 077, 111, 110, 100, 111, 033



153, 153, 153; 153, 153, 153;  
 153, 153, 153; 153, 153, 153;  
 153, 153, 153; 153, 153, 153;  
 153, 153, 153; 153, 153, 153;  
 153, 153, 153; 153, 153, 153;  
 255, 204, 000; 255, 204, 000;  
 255, 204, 000; 255, 204, 000;  
 153, 153, 153; 153, 153, 153;  
 153, 153, 153; 255, 204, 000;  
 000, 000, 000; 255, 204, 000;

...



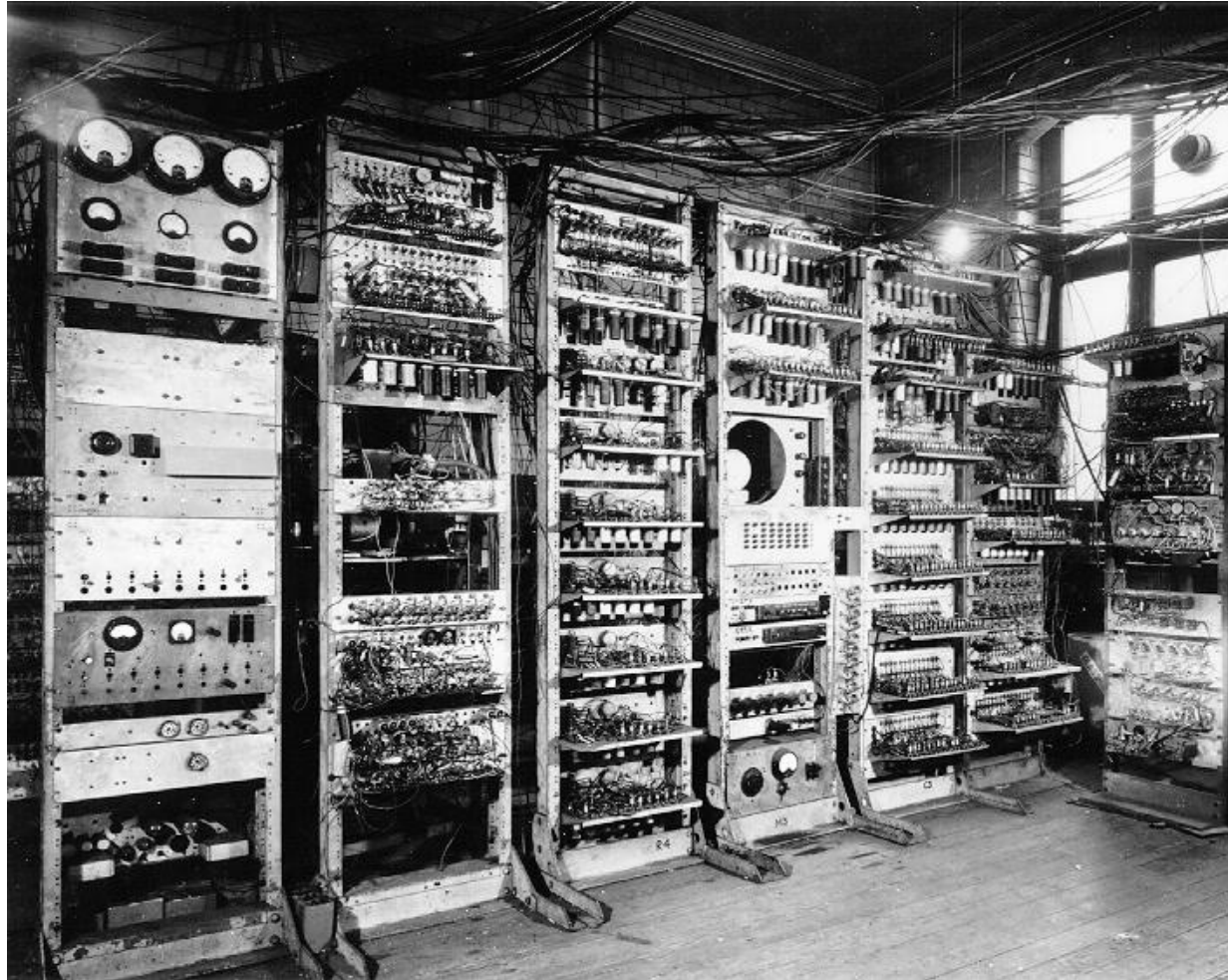
compro 3 penne a 0,45 €  
pago con una banconota da 5 €  
quanto è il resto?

compro 3 penne a 0,45 €  
pago con una banconota da 5 €  
quanto è il resto?

$$3 \times 0,45 = 1,35$$
$$5,00 - 1,35 = 3,65$$







sempre a cifre,  
ma solo due,  
per praticità

unità  
duine  
quattrai  
ottaia



tutte le pagine di internet con un dato testo

la mia posizione dal segnale di 4 satelliti

le orbite dei satelliti e come raggiungerli

le schermate che fanno un videogioco