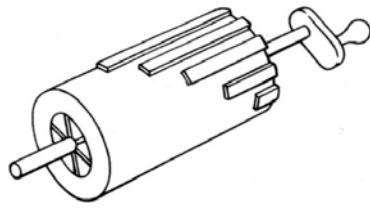
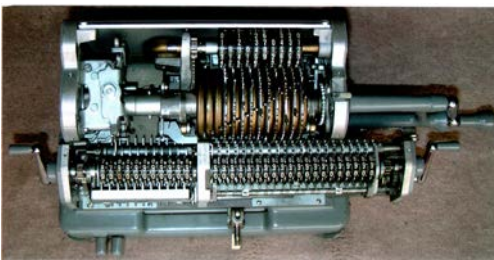


# Computer (1) (Digital)



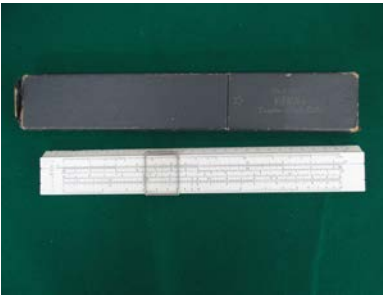
Computer using gears with steps by Leibniz (around 1700)

(S.Ohkoma, A history of computer development, Kyoritsu Pub. (2005))



Mechanical digital computer (around 1960)

Model to show the principle



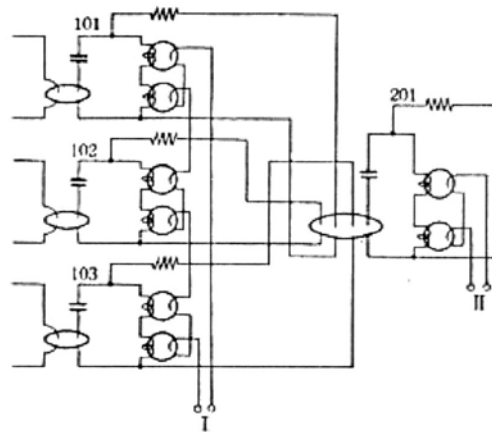
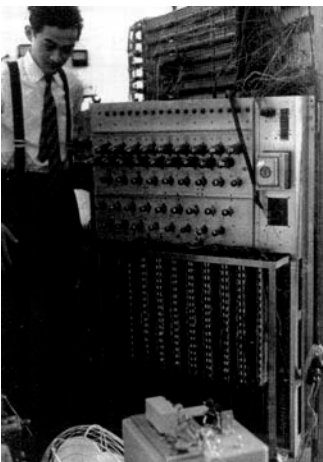
Slide rule [1]

Transistor calculator (1963)

IC calculator (1966)

$\text{Log AB} = \text{Log A} + \text{Log B}$

Hayakawa electric (now Sharp)



101	102	103	Drive to 201	Oscillation phase of 201	
-1	-1	-1	-3k	-1	AND
-1	+1	-1	-1k	-1	
+1	-1	-1	-1k	-1	
+1	+1	-1	+1k	+1	OR
-1	-1	+1	-1k	-1	
-1	+1	+1	+1k	+1	
+1	-1	+1	+1k	+1	
+1	+1	+1	+3k	+1	

E.Goto

Parametron computer (1971)

[1] Donation by Emeritus Prof. Yakichi Higo of Tokyo Institute of Technology