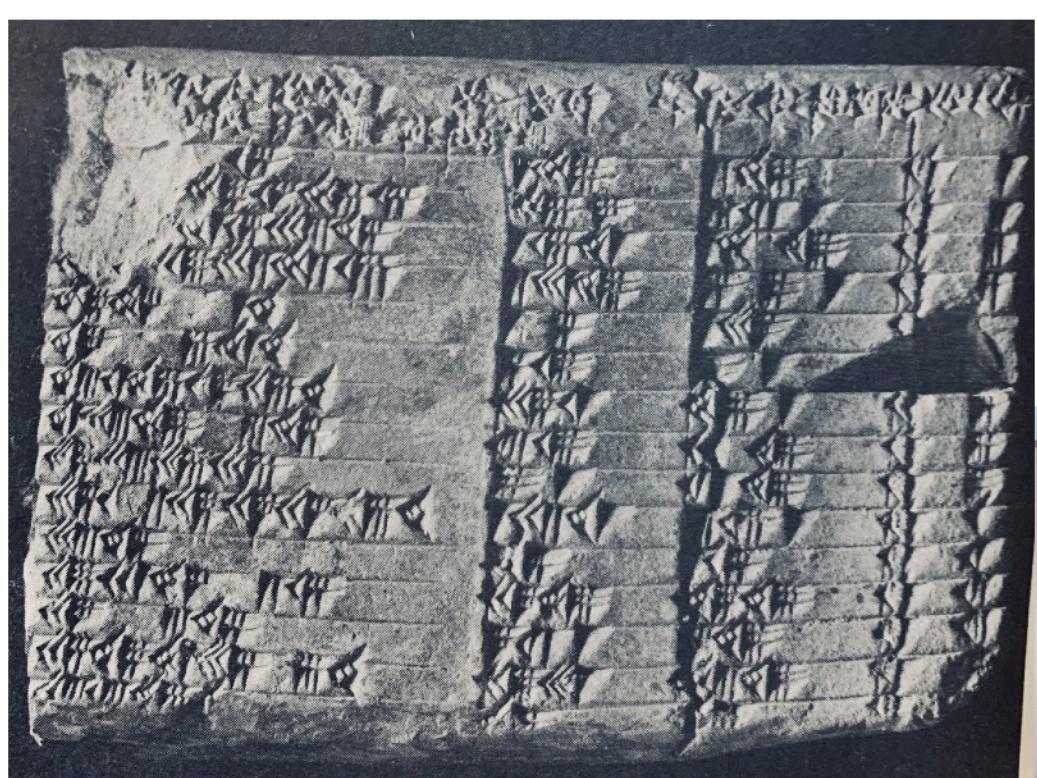




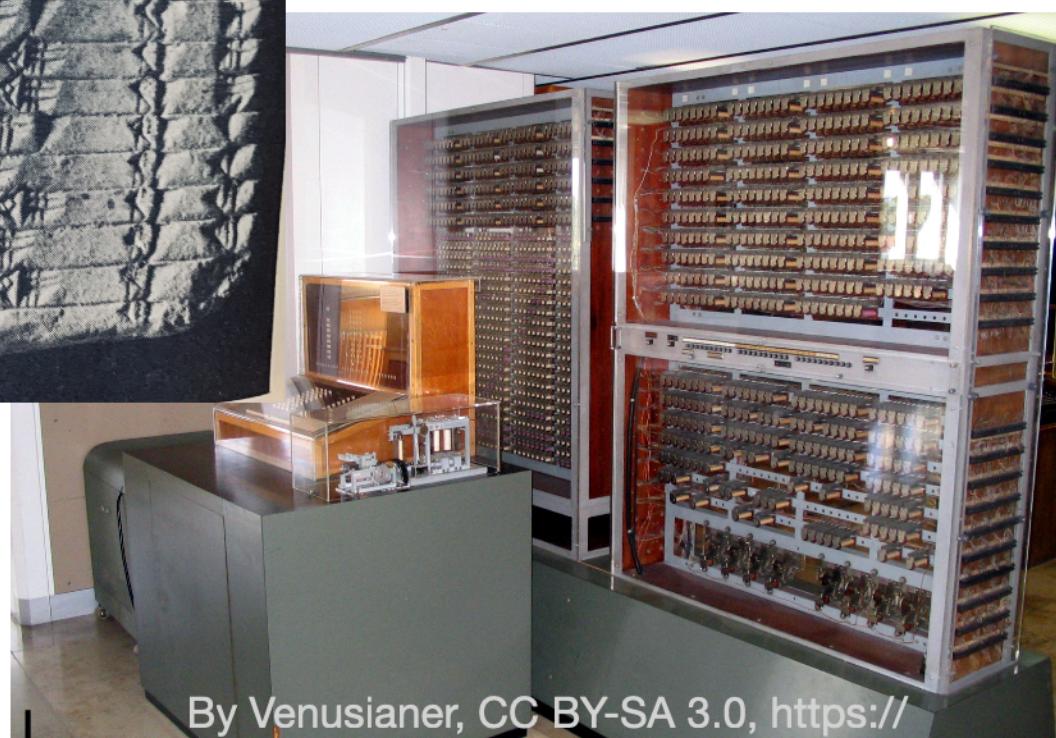
PRINCETON
UNIVERSITY

Floating-point Arithmetic

“...the next generation of applications will pose new requirements for floating-point arithmetic.”
<https://grouper.ieee.org>



Babylonians worked with floating-point sexagesimal numbers



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1750 B.C.

Zeus Z3

1960's
era
a mainframe

DEC PDP-11

1970's
boom of
minicomputers

IEEE p745

1976
1977

1985
IEEE 754-1985

IEEE

- each hardware manufacturer had its own type of floating point
- different machines from the same manufacturer might have different types of floating point
- when floating point was not supported in the hardware, the different compilers emulated different floating point types

Intel began to develop co-processor for microprocessors