

# Random BS



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\*Some\* ARM cpus (several old ones) really didn't have an integer divide instruction. The reason for this is simple: the hardware needed to implement division (and modulo) operations is expensive, compared to other instructions (such as multiplication). In simple cores (such as the ARM7TDMI), the implementation of division would span about half the chip area. Statistically, the integer divide instruction is not used a lot, so they took it out. Of course, the cpu can perform divide operations, but divisions are emulated in software (which is a slow operation).

If the divide operation is not used very often (which is the case in a lot of embedded applications), why would they spend half the chip area (and consequently a lot of energy consumption and chip cost) in such case?

Some cpu benchmarks don't evaluate the performance of the integer divide instruction. One example is the Coremark benchmark, which focuses on the evaluation of memory (first cache level) and integer cpu performance.

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bruh

## RISC

reduced instruction set

does not think division is a needed instruction

WHY!