<https://developer.arm.com/documentation/ddi0439/b/Floating-Point-Unit/FPU-Functional-Description/FPU-instruction-set?lang=en>

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| Table 7.1. FPU instruction set | | |  |
| Operation | Description | Assembler | Cycles |
| Absolute value | of float | VABS.F32 | 1 |
| Addition | floating point | VADD.F32 | 1 |
| Compare | float with register or zero | VCMP.F32 | 1 |
|  | float with register or zero | VCMPE.F32 | 1 |
| Convert | between integer, fixed-point, half-precision and float | VCVT.F32 | 1 |
| Divide | Floating-point | VDIV.F32 | 14 |
| Load | multiple doubles | VLDM.64 | 1+2\*N, where N is the number of doubles. |
|  | multiple floats | VLDM.32 | 1+N, where N is the number of floats. |
|  | single double | VLDR.64 | 3 |
|  | single float | VLDR.32 | 2 |
| Move | top/bottom half of double to/from core register | VMOV | 1 |
|  | immediate/float to float-register | VMOV | 1 |
|  | two floats/one double to/from two core registers or one float to/from one core register | VMOV | 2 |
|  | floating-point control/status to core register | VMRS | 1 |
|  | core register to floating-point control/status | VMSR | 1 |
| Multiply | float | VMUL.F32 | 1 |
|  | then accumulate float | VMLA.F32 | 3 |
|  | then subtract float | VMLS.F32 | 3 |
|  | then accumulate then negate float | VNMLA.F32 | 3 |
|  | then subtract then negate float | VNMLS.F32 | 3 |
| Multiply (fused) | then accumulate float | VFMA.F32 | 3 |
|  | then subtract float | VFMS.F32 | 3 |
|  | then accumulate then negate float | VFNMA.F32 | 3 |
|  | then subtract then negate float | VFNMS.F32 | 3 |
| Negate | float | VNEG.F32 | 1 |
|  | and multiply float | VNMUL.F32 | 1 |
| Pop | double registers from stack | VPOP.64 | 1+2\*N, where N is the number of double registers. |
|  | float registers from stack | VPOP.32 | 1+N where N is the number of registers |
| Push | double registers to stack | VPUSH.64 | 1+2\*N, where N is the number of double registers. |
|  | float registers to stack | VPUSH.32 | 1+N, where N is the number of registers |
| Square-root | of float | VSQRT.F32 | 14 |
| Store | multiple double registers | VSTM.64 | 1+2\*N, where N is the number of doubles. |
|  | multiple float registers | VSTM.32 | 1+N, where N is the number of floats. |
|  | single double register | VSTR.64 | 3 |
|  | single float registers | VSTR.32 | 2 |
| Subtract | float | VSUB.F32 | 1 |