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| **.data** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | **Clock  cycles** |
| V1, V2, V3, V4, V5, V6, V7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| **.text** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **MAIN:** daddi R2,R0,64 6 | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5 |
| daddi R4,R0,1 |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| **LOOP:** l.d F1,v1(R3) 5\*32+6\*32 |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| l.d F2,v2(R3) |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| l.d F3,v3(R3) |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| l.d F4,v4(R3) |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| bnez R5,ODD |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 + 1 se taken |
| **EVEN:** dsllv R4,R4,R1 16\*32 |  |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| mtc1 R4,F10 |  |  |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| cvt.d.l F10,F10 |  |  |  |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| mul.d F8,F1,F10 |  |  |  |  |  |  |  |  |  |  | F | D | x | x | x | x | x | x | x | x | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 8 |
| cvt.l.d F8,F8 |  |  |  |  |  |  |  |  |  |  |  | F | D | s | s | s | s | s | s | s | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| mfc1 R4,F8 |  |  |  |  |  |  |  |  |  |  |  |  | F | s | s | s | s | s | s | s | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| daddi R5,R0,1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| J RES |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 (taken) |
| **ODD:** dmul R10,R4,R1 29\*32 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | D | x | x | x | x | x | x | x | x | M | W |  |  |  |  |  | 8 |
| mtc1 R10,F10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | D | s | s | s | s | s | s | s | E | M | W |  |  |  |  | 1 |
| cvt.d.l F10,F10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | s | s | s | s | s | s | s | D | E | M | W |  |  |  |  |

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| cvt.d.l F10,F10 | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| div.d F8,F1,F10 | F | D | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 20 |
| l.d F4,v4(R3) |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| cvt.l.d F4,F4 |  |  | F | D | s | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| mfc1 R10,F4 |  |  |  | F | s | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| dsrav R10,R10,R1 |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| mtc1 R10,F9 |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| cvt.d.l F9,F9 |  |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| daddi R5,R0,0 |  |  |  |  |  |  |  |  | F | D | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |
| **RES:** mul.d F5,F8,F2 51\*64 |  |  |  |  |  |  |  |  |  | F | D | s | s | s | s | s | s | s | s | s | s | s | x | x | x | x | x | x | x | x | M | W |  |  |  |  |  |  |  | 8 |
| add.d F5,F5,F3 |  |  |  |  |  |  |  |  |  |  | F | s | s | s | s | s | s | s | s | s | s | s | D | s | s | s | s | s | s | s | a | a | a | M | W |  |  |  |  | 3 |
| add.d F5,F5,F4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | s | s | s | s | s | s | s | D | s | s | a | a | a | M | W |  | 3 |

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| add.d F5,F5,F4 | D | s | s | a | a | a | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| s.d F5,v5(R3) | F | s | s | D | s | s | E | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
| add.d F10,F9,F1 |  |  |  | F | s | s | D | a | a | a | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 |
| div.d F6,F5,F10 |  |  |  |  |  |  | F | D | s | s | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | d | M | W |  |  |  |  |  |  |  | 20 |
| s.d F6,v6(R3) |  |  |  |  |  |  |  | F | s | s | D | E | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | M | W |  |  |  |  |  |  | 1 |
| add.d F7,F2,F3 |  |  |  |  |  |  |  |  |  |  | F | D | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | a | a | a | M | W |  |  |  | 3 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| add.d F7,F2,F3 | F | D | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | a | a | a | M | W |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| mul.d F7,F7,F6 |  | F | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | s | D | s | s | x | x | x | x | x | x | x | x | M | W |  |  |  |  |  | 8 |
| s.d F7,v7(R3) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | s | s | D | s | s | s | s | s | s | s | E | M | W |  |  |  |  | 1 |
| **UPD:** daddi R1,R1,1 4\*64 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | s | s | s | s | s | s | s | D | E | M | W |  |  |  | 1 |
| daddi R3,R3,8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | D | E | M | W |  |  | 1 |
| bne R1,R2,LOOP |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | D | E | M | W |  | 1 |
| HALT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | F | - | - | - | - | 1 |
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| **Total 5318** |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | **5318** |