

```

int main(int argc, char *argv[])
{
    if (argc != 4) {
        fprintf(stderr, "usage: arith n n n\n");
        exit(1);
    }
    x = atoi(argv[1]);
    y = atoi(argv[2]);
    z = atoi(argv[3]);
    t1 = x + y; →
    8048527: mov 0x8049810,%ebx      # x
    804852d: mov 0x804981c,%edx      # y
    8048533: lea (%edx,%ebx,1),%ecx  # x+y -> ecx

    t2 = z + t1; →
    8048536: mov %ecx,0x8049828      #           -> t1 (9828)
    804853c: add %ecx,%eax          # x+y+z -> eax
    804853e: mov %eax,0x804980c      #           -> t2 (980c)

    t3 = x + 4; →
    8048543: add $0x4,%ebx          # x+4 -> ebx
    8048546: mov %ebx,0x8049814      #           -> t3 (9814)

    t4 = y * 48; →
    804854c: lea (%edx,%edx,2),%edx  # 3y -> edx
    804854f: shl $0x4,%edx          # 48y -> edx
    8048552: mov %edx,0x8049820      #           -> t4

    t5 = t3 + t4; →
    8048558: add %ebx,%edx          # t3+t4 -> edx
    804855a: mov %edx,0x804982c      #           -> t5

    rval = t2 * t5; →
    8048560: imul %edx,%eax         # t2*t5 -> eax
    8048563: mov %eax,0x8049818      #           -> rval (9818)

    printf("%d\n", rval);
    return 0;
}

```

Memory: Which variable goes where?

0x8048980C
0x80489810
0x80489814
0x80489818
0x8048981C
0x80489820
0x80489824
0x80489828

