```
ocelot@ubuntu: ~/Downloads/vm-beyondphys/vm-beyond...
                                                                    Q
                                                                                          ×
  number of integers in array: 262144000
^C
ocelot@ubuntu:~/Downloads/vm-beyondphys/vm-beyondphys$ ./mem 1
allocating 1048576 bytes (1.00 MB)
number of integers in array: 262144
loop 0 in 2.83 ms (bandwidth: 353.23 MB/s)
loop 350 in 0.52 ms (bandwidth: 1926.64 MB/s)
loop 710 in 0.49 ms (bandwidth: 2054.02 MB/s)
loop 1075 in 0.85 ms (bandwidth: 1170.94 MB/s)
loop 1449 in 0.86 ms (bandwidth: 1161.54 MB/s)
loop 1809 in 0.98 ms (bandwidth: 1025.50 MB/s)
loop 2147 in 0.41 ms (bandwidth: 2416.07 MB/s)
            in 0.41 ms
                        (bandwidth: 2100.30 MB/s)
loop 2510 in 0.48 ms
loop 2863 in 0.46 ms
                        (bandwidth: 2169.84 MB/s)
                         (bandwidth: 1126.29 MB/s)
loop 3236
           in 0.89 ms
                         (bandwidth: 1136.36 MB/s)
loop 3631 in 0.88 ms
loop 3980 in 0.41 ms
                         (bandwidth: 2445.66 MB/s)
loop 4386 in 0.28 ms
                         (bandwidth: 3560.53 MB/s)
                         (bandwidth: 146.20 MB/s)
           in 6.84 ms
loop 4765
loop 5120
           in 0.40 ms
                         (bandwidth: 2474.52 MB/s)
                         (bandwidth: 3953.16 MB/s)
loop 5485 in 0.25 ms
loop 5878 in 0.64 ms (bandwidth: 1565.04 MB/s)
^C
```

```
ocelot@ubuntu: ~/Downloads/vm-beyondphys/vm-beyond...
                                                                                          Q
^C
ocelot@ubuntu:~/Downloads/vm-beyondphys/vm-beyondphys$ ./mem 20
allocating 20971520 bytes (20.00 MB)
number of integers in array: 5242880
loop 0 in 43.64 ms (bandwidth: 458.26 MB/s)
loop 18 in 9.80 ms (bandwidth: 2039.78 MB/s)
loop 38 in 9.80 ms (bandwidth: 2040.58 MB/s)
loop 55 in 11.14 ms`(bandwidth: 1795.66 MB/s)
loop 75 in 11.79 ms (bandwidth: 1697.07 MB/s)
loop 95 in 10.35 ms (bandwidth: 1932.55 MB/s)
loop 113 in 12.01 ms (bandwidth: 1664.84 MB/s)
loop 132 in 9.41 ms (bandwidth: 2125.85 MB/s)
loop 152 in 8.40 ms (bandwidth: 2380.08 MB/s)
loop 169 in 9.58 ms (bandwidth: 2088.33 MB/s)
loop 187 in 9.54 ms (bandwidth: 2095.53 MB/s)
loop 204 in 10.78 ms (bandwidth: 1855.27 MB/s)
loop 221 in 11.01 ms (bandwidth: 1817.01 MB/s)
loop 241 in 9.79 ms (bandwidth: 2043.76 MB/s)
loop 260 in 9.77 ms (bandwidth: 2048.10 MB/s)
loop 278 in 10.70 ms (bandwidth: 1869.87 MB/s)
loop 297 in 12.91 ms (bandwidth: 1549.69 MB/s)
ocelot@ubuntu:~/Downloads/vm-beyondphys/vm-beyondphys$
```

运行程序的截图如上。由图中可见,内存带宽在 2MB/s 左右。