

```
1: procedure GLOBALKERNEL(stage)
2:   tid  $\leftarrow$  GLOBALTHREADID
3:   i1  $\leftarrow$  FIRSTINDEX(tid)
4:   i2  $\leftarrow$  SECONDINDEX(tid)
5:   GLOBALMEM(i1, i2)  $\leftarrow$  BUTTERFLY(stage, i1, i2)
6: end procedure
```

```
1: procedure LOCALKERNEL
2:   tid  $\leftarrow$  GLOBALTHREADID
3:   g  $\leftarrow$  GLOBALINDEX(tid)
4:   in  $\leftarrow$  LOCALINDEX(tid)
5:   SharedMem[in1]  $\leftarrow$  GlobalMem[g1]
6:   SharedMem[in2]  $\leftarrow$  GlobalMem[g2]
7:   out1  $\leftarrow$  in1 · 2
8:   out2  $\leftarrow$  out1 + 1
9:   for stage  $\leftarrow$  0, stages − 1 do
10:     SHAREDMEM(out1, out2)  $\leftarrow$  BUTTERFLY(stage, in1, in2)
11:   end for
12:   GlobalMem[BITREVERSE(g1)]  $\leftarrow$  SharedMem[in1]
13:   GlobalMem[BITREVERSE(g2)]  $\leftarrow$  SharedMem[in2]
14: end procedure
```
