```
-bash-4.2$ ./hwcode 1 && ./hwcode 2 && ./hwcode 4 && ./hwcode 8 && ./hwcode 16 && ./hwcode 32 && ./hwcode 64 && ./hwcode 128 && ./hwcode 256 && ./hwco
de 512 && ./hwcode 1024
Using 1 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.340000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 2.280000 seconds to execute
Verify status 0
Speedup of 46%

Using 2 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.130000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 2.280000 seconds to execute
Verify status 0
Speedup of 37%

Using 4 tiles per row/column
```

```
Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.150000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 2.270000 seconds to execute
Verify status 0
Speedup of 38%

Using 8 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.220000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 2.230000 seconds to execute
Verify status 0
Speedup of 44%

Using 16 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
```

```
Done!
Matmul took 3.130000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 2.210000 seconds to execute
Verify status 0
Speedup of 41%

Using 32 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.140000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 1.820000 seconds to execute
Verify status 0
Speedup of 72%

Using 64 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.170000 seconds to execute.

Transposing Matrix...
```

Running matmul_tiles...
Matmul_tiles (with B transposed) took 1.670000 seconds to execute
Verify status 0
Speedup of 89%

Using 128 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.130000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 1.540000 seconds to execute
Verify status 0
Speedup of 103%

Using 256 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.190000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 1.450000 seconds to execute
Verify status 0
Speedup of 120%

Speedup of 120%

Using 512 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.240000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 2.000000 seconds to execute
Verify status 0
Speedup of 62%

Using 1024 tiles per row/column

Initializing Matrices...
Done!

Running matmul...
Done!
Matmul took 3.130000 seconds to execute.

Transposing Matrix...
Done!

Running matmul_tiles...
Matmul_tiles (with B transposed) took 3.740000 seconds to execute
Verify status 0
Speedup of -16%

-bash-4.2$