

AMS 148 HW 2

5.2.1a) Serial Saxpy times:

Serial Saxpy time for $n = 16$ is 0ms

Serial Saxpy time for $n = 128$ is 1ms

Serial Saxpy time for $n = 1024$ is 2ms

Serial Saxpy time for $n = 2048$ is 2ms

Serial Saxpy time for $n = 65536$ is 86ms

5.2.1b) GPU Saxpy times:

GPU Saxpy time for $n = 16$ is 0.01024ms

GPU Saxpy time for $n = 128$ is 0.00304ms

GPU Saxpy time for $n = 1024$ is 0.029696ms

GPU Saxpy time for $n = 2048$ is 0.00816ms

GPU Saxpy time for $n = 65536$ is 0.009856ms

5.2.2) Serial Mandelbrot times:

Serial Mandelbrot time for height/width = 1024 is 340000ms

Serial Mandelbrot time for height/width = 2048 is 1.44e+06ms

Serial Mandelbrot time for height/width = 4096 is 5.93e+06ms

Serial Mandelbrot time for height/width = 8192 is 2.381e+07ms

5.2.2) GPU Mandelbrot times:

GPU Mandelbrot for width 1024 and height 1024 time = 0.167936ms

GPU Mandelbrot for width 2048 and height 2048 time = 0.39696ms

GPU Mandelbrot for width 4096 and height 4096 time = 1.28266ms

GPU Mandelbrot for width 8192 and height 8192 time = 4.80682ms