INPUT and OUTPUT for Exercise 1:

11

11 31 0

101

101 547 0

1001

1001 7927 16

10001

10001 104743 705

100001

100001 1299721 85341

1000001

(note the last one did not run I let it sit for 8hrs… no output for the 1000001th prime)

INPUT and OUTPUT for Exercise 2:

Enter the matrix size and the matrix element: 500 2

Size:500 Time:296 ms

Enter the matrix size and the matrix element: 1000 2

Size:1000 Time:929 ms

Enter the matrix size and the matrix element: 1500 2

Size:1500 Time:8523 ms

Enter the matrix size and the matrix element: 2000 2

Size:2000 Time:51484 ms

Enter the matrix size and the matrix element: 2500 2

Size:2500 Time:120649 ms

Enter the matrix size and the matrix element: 3000 2

Size:3000 Time:229209 ms

INPUT and OUTPUT for Exercise 3:

Enter a positive integer: 10

The execution time to generate binary numbers from 0 to 1023.0 is 0 ms

Enter a positive integer: 12

The execution time to generate binary numbers from 0 to 4095.0 is 0 ms

Enter a positive integer: 14

The execution time to generate binary numbers from 0 to 16383.0 is 3 ms

Enter a positive integer: 16

The execution time to generate binary numbers from 0 to 65535.0 is 5 ms

Enter a positive integer: 18

The execution time to generate binary numbers from 0 to 262143.0 is 38 ms

Enter a positive integer: 20

The execution time to generate binary numbers from 0 to 1048575.0 is 59 ms

Enter a positive integer: 22

The execution time to generate binary numbers from 0 to 4194303.0 is 142 ms

Enter a positive integer: 24

The execution time to generate binary numbers from 0 to 1.6777215E7 is 405 ms

Enter a positive integer: 26

The execution time to generate binary numbers from 0 to 6.7108863E7 is 1865 ms

Enter a positive integer: 28

The execution time to generate binary numbers from 0 to 2.68435455E8 is 6917 ms

Enter a positive integer: 30

The execution time to generate binary numbers from 0 to 1.073741823E9 is 47044 ms

GRAPHS:

Exercise 1:

Exercise 2:

Exercise 3: