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Dr. Gustafson

Math 362 Fourier Analysis

September 4, 2017

Ch. 1.3 Homework

1.3.17

|  |  |
| --- | --- |
| Input | Output Command |
| a.)  >> r1=[154, 102, 102, 102, 154];  >> r2=[255, 77, 255, 77, 255];  >> r3=[255, 255, 127, 255, 255];  >> r4=[255, 0, 0, 0, 255];  >> r5=[255, 255, 255, 255, 255];  >> A=[r1; r2; r3; r4; r5;];  >> A  A =  154 102 102 102 154  255 77 255 77 255  255 255 127 255 255  255 0 0 0 255  255 255 255 255 255  >> MatrixPlot(A) |  |
| b.)  >> MatrixThresh(A,153)  Original\_Matrix =  154 102 102 102 154  255 77 255 77 255  255 255 127 255 255  255 0 0 0 255  255 255 255 255 255  Thresholded\_Matrix =  154 0 0 0 154  255 0 255 0 255  255 255 0 255 255  255 0 0 0 255  255 255 255 255 255 |  |

|  |  |
| --- | --- |
| c.) |  |
| d.)  Percent\_Reduction =  27.2727 |  |
| e.)  Compression\_Ratio =  'The compression ratio is 22 to 16, or 1.375000 to 1.' |  |