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Dr. Gustafson

Math 362 Fourier Analysis

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Homework 1.1

1.1.5

|  |  |
| --- | --- |
| >> x=[3,5]  x =  3 5  >> length(x)  ans =  2  >> VectorPlot(x,0,3,2,10) |  |

1.1.10

1.1.15

a.)

i.) }

ii.)

iii.)

b.)

i.)

ii.) }

iii.)}

|  |  |
| --- | --- |
| Command Window | Plots |
| >> fnplotsin(4)  tN =  0 0.2500 0.5000 0.7500  fN =  0 1.0000 0.0000 -1.0000 |  |
| >> fnplotsin(8)  tN =  0 0.1250 0.2500 0.3750 0.5000 0.6250 0.7500 0.8750  fN =  0 0.7071 1.0000 0.7071 0.0000 -0.7071 -1.0000 -0.7071 |  |
| >> fnplotsin(16)  tN =  Columns 1 through 11  0 0.0625 0.1250 0.1875 0.2500 0.3125 0.3750 0.4375 0.5000 0.5625 0.6250  Columns 12 through 16  0.6875 0.7500 0.8125 0.8750 0.9375  fN =  Columns 1 through 11  0 0.3827 0.7071 0.9239 1.0000 0.9239 0.7071 0.3827 0.0000 -0.3827 -0.7071  Columns 12 through 16  -0.9239 -1.0000 -0.9239 -0.7071 -0.3827 |  |

c.)

