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Math222

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Homework 2

1. (a) 2.750000000000000e+00;

2.875000000000000e+00;

2.812500000000000e+00;

2.781250000000000e+00;

a= 2.750000000000000e+00;

b= 2.812500000000000e+00

(b) 2.796157996808869e+00;

2.772948484224365e+00;

2.772604784310486e+00;

X4= 2.772604708265995e+00;

(c) -8.630583757082430e+00;

-9.596970913739501e+00;

-9.322270122372009e+00;

X4= -9.317247017715122e+00

The last one is different because the approximation is a bad approximation.

1. (a) r1= 6.497473775280650e-02;

r2= 6.116219911056137e-02;

r3= 6.140129908631708e-02;

r4= 6.140241188366750e-02;

r5= 6.140241153652425e-02

(b) The plot shows a linear line with slope around 1.5. The slope is what we expected to be for p within secant method. Thus it is a superlinear convergence.