
```
a = 2;
L1 = 1;
L2 = 1;

L3s = [1 1 2 1];
m1s = [1 1 1 10];
m2s = [1 2 1 1];

guesses = [1 .1 -1; .8 .1 -1.2; 1 .7 -1.2; 1.2 -.3 -.5];
guesses = vpa(guesses);
digits(100)
figure(5)
clf
figure(6)
clf

for i = 1:4
U = guesses(i,:);
Us = U;
L3 = L3s(i);
m1 = m1s(i);
m2 = m2s(i);

figure(i)
clf

for k = 1:20

D = [-L1*sin(U(1)) -L2*sin(U(2)) -L3*sin(U(3)); L1*cos(U(1)) L2*cos(U(2)) L3*cos(U(3))];
f = [L1*cos(U(1))+L2*cos(U(2))+L3*cos(U(3))-a; L1*sin(U(1))+L2*sin(U(2))+L3*sin(U(3))];

d = D\(-f);
U = U+d';
Us = [Us; U];

points = [0 0; L1*[cos(U(1)) -sin(U(1))]; [a 0] + L3*[-cos(U(3)) sin(U(3))]; a 0];
hold off
plot(points(:,1), points(:,2), '-', 'Color', [0 0 0], 'LineWidth', 3)
hold on
plot(points(2:3,1), points(2:3,2), 'o', 'Color', [1 0 0], 'LineWidth', 20)
axis equal
drawnow

end

figure(5)
hold on
semilogy(abs(Us(:,1))-Us(end,1)), 'Color', [i/4 0 1-i/4])
semilogy(abs(Us(:,2))-Us(end,2)), 'Color', [i/4 0 1-i/4])
semilogy(abs(Us(:,3))-Us(end,3)), 'Color', [i/4 0 1-i/4])
set(gca, 'YScale', 'log');
```

```

figure(6)
hold on
loglog(abs(Us(1:end-1,1))-Us(end,1)), abs(Us(2:end,1))-Us(end,1)), 'Color', [i/4 0 1-
loglog(abs(Us(1:end-1,2))-Us(end,2)), abs(Us(2:end,2))-Us(end,2)), 'Color', [i/4 0 1-
loglog(abs(Us(1:end-1,3))-Us(end,3)), abs(Us(2:end,3))-Us(end,3)), 'Color', [i/4 0 1-
set(gca, 'XScale', 'log');
set(gca, 'YScale', 'log');

disp(guesses(i,:))
disp(U)
disp(180/pi*U)
disp(' ')
end

[ 1.0, 0.1, -1.0]

[ 1.0471975511965977461542144610931676280657231331250352736583148641026054
[ 60.000000000000002081671198769965580549199529646045904595980828641451670

[ 0.8, 0.1, -1.2]

[ 0.9214330583229244593908724309326687969648891395339066353859483953061980
[ 52.794225345735404387556403610995421020963232673862259326280248156742180

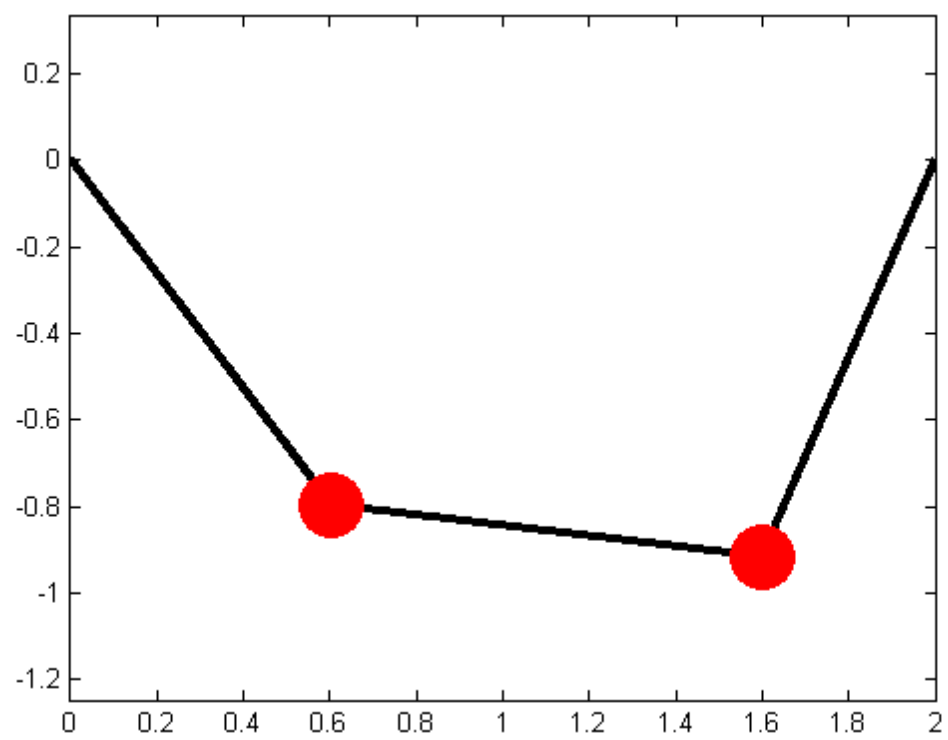
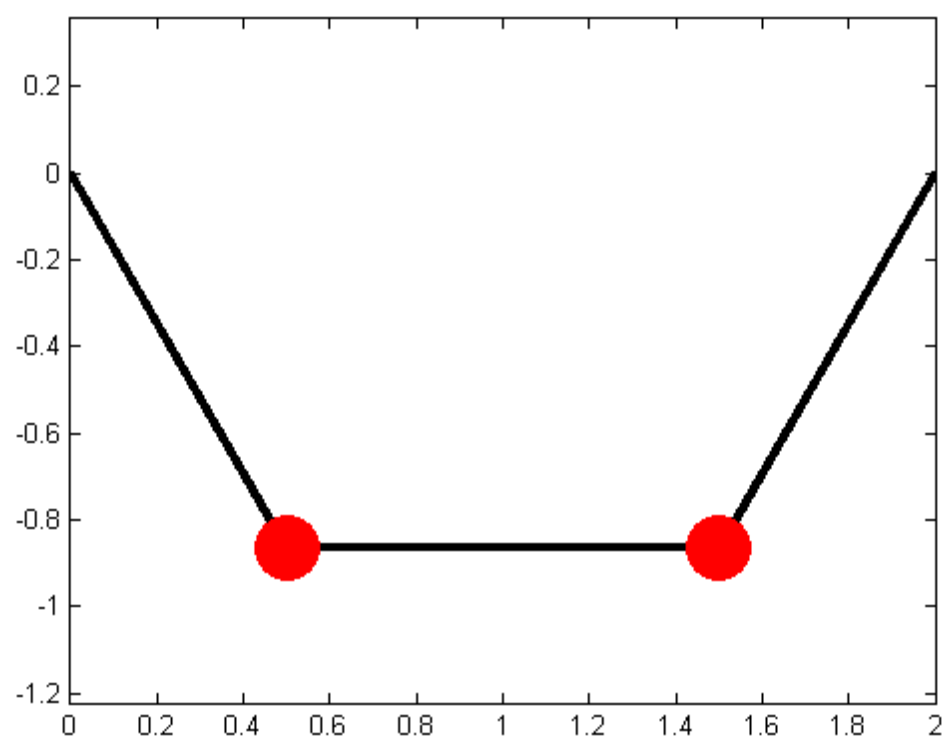
[ 1.0, 0.7, -1.2]

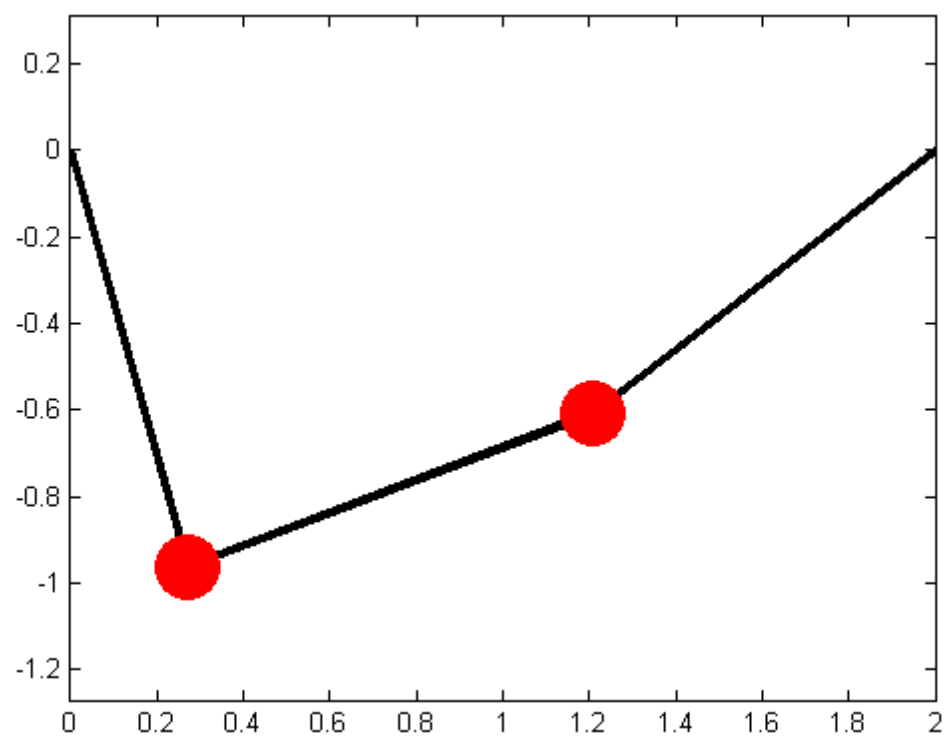
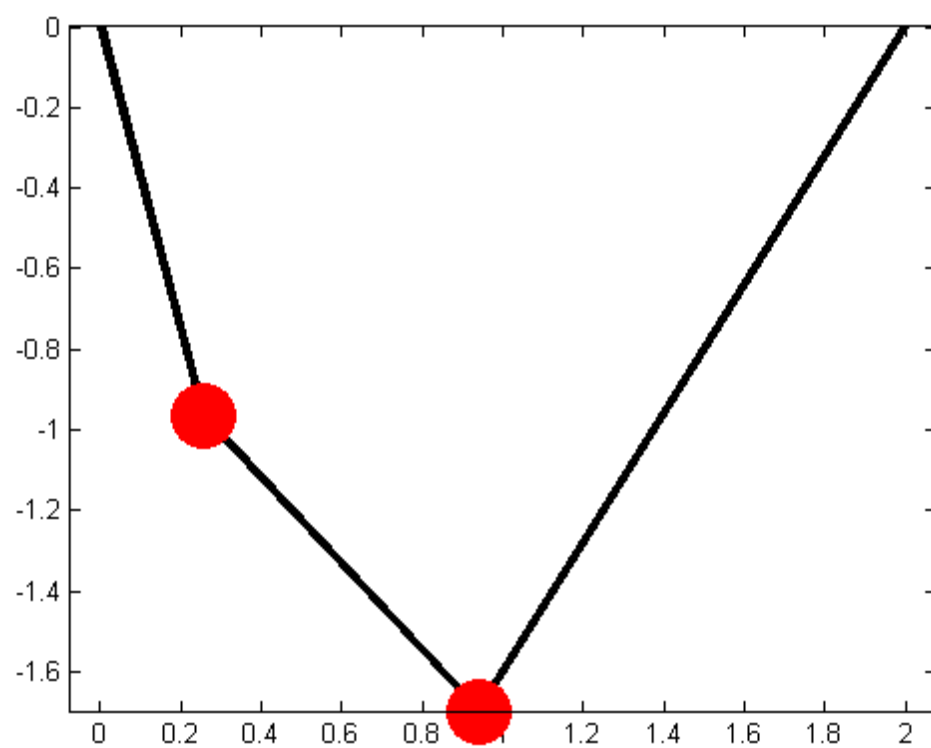
[ 1.3096533230648475781602007758570847337693805242964427604443931165077549
[ 75.037608036899078652469004457414450027317023941748117257471194768060397

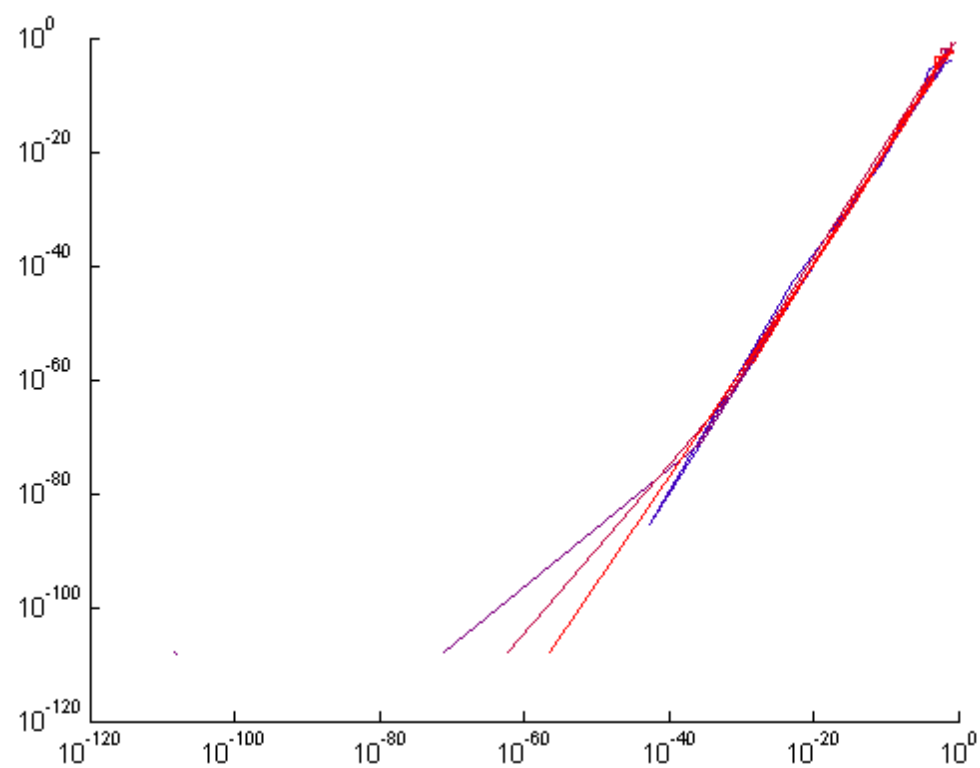
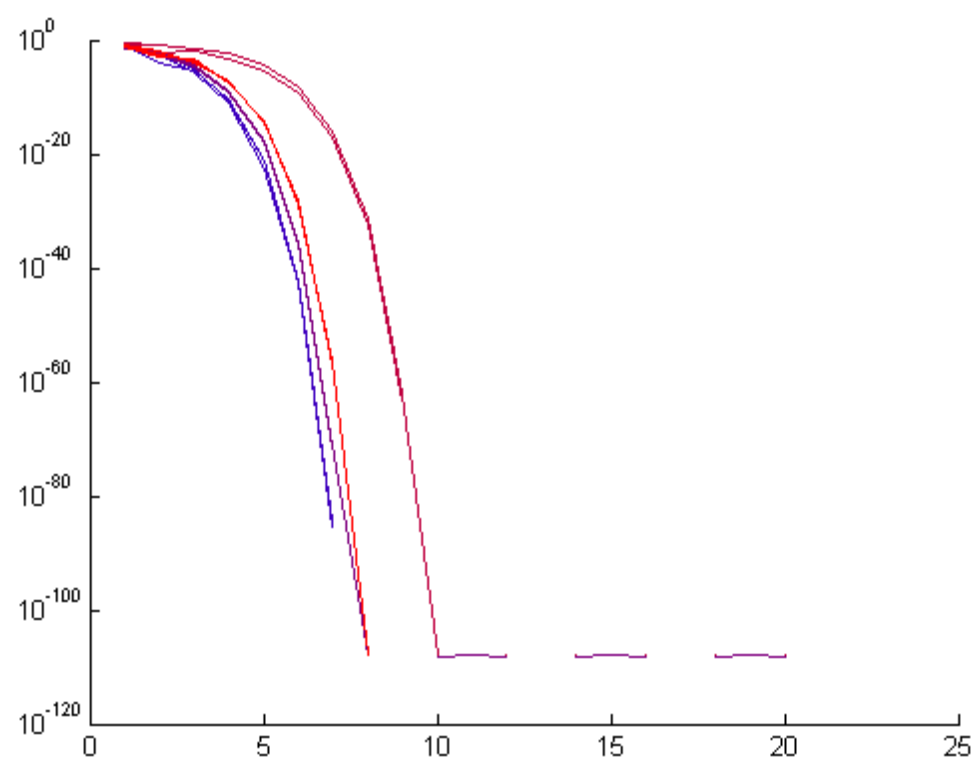
[ 1.2, -0.3, -0.5]

[ 1.2957349298291325102730555054126922755504985843242286750965725712303103
[ 74.240142846889171683912844735837197434262561652113588075296212653391370

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