
```

l_0 = 1;
l_1 = @(x) x-1;
l_2 = @(x) x^2-4*x+2;
l_3 = @(x) x^3-9*x^2+18*x-6;
fplot(l_0)
hold on
fplot(l_1)
fplot(l_2)
fplot(l_3)
hold off

% (b) verify that for n = 2 and n = 3.
% the quadrature nodes xi are the roots of the polynomials l2(x),
% l3(x)
sprintf('%f',l_2(0.585786))
sprintf('%f',l_2(0.585786))
sprintf('%f',l_2(3.41421))
% n = 3
sprintf('%f',l_3(0.415775))
sprintf('%f',l_3(2.29428))
sprintf('%f',l_3(6.28995))

Warning: Function behaves unexpectedly on array inputs. To improve
performance,
properly vectorize your function to return an output with the same
size and
shape as the input arguments.
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performance,
properly vectorize your function to return an output with the same
size and
shape as the input arguments.

ans =

    '0.000001'

ans =

    '0.000001'

ans =

    '-0.000010'

ans =

    '0.000005'

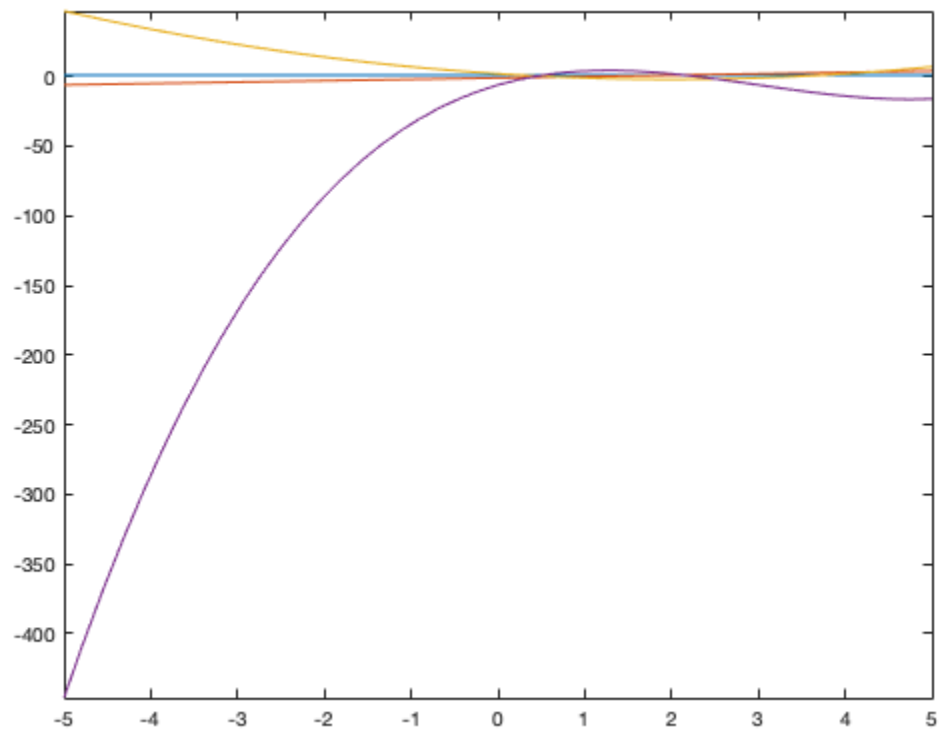
```

`ans =`

`'0.000003'`

`ans =`

`'0.000115'`



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