```matlab
% Obtaining coefficients by interpolation of data set X and Y with
% monomial basis

X = [0 1 4 9 16 25 36 49 64]; %Input values of X
Y = [0 1 2 3 4 5 6 7 8]; % Input values of Y
coeffs = interpolation(X,Y); %Calling of interpolation method to
 calculate coefficients

%Calculating difference of function values obtained using obtained
 function and by
%direct sqrt() method
x = 0.5:1:7.5;
for i = x
    display("Difference f(x)-sqrt(x) for x = "+i+" is "+(f(i,coeffs)-
sqrt(i))+" ");
end
%Plotting the obtained function and the sqrt function
x1 = 0.5:1:50;
x = 0.5:0.5:50;
y = zeros(1,100);
for i = x;
    y(2*i)=f(i,coeffs);
end
%plot
scatter(X,Y);
hold on;
plot(x,sqrt(x));
hold on;
plot(x,y);
```
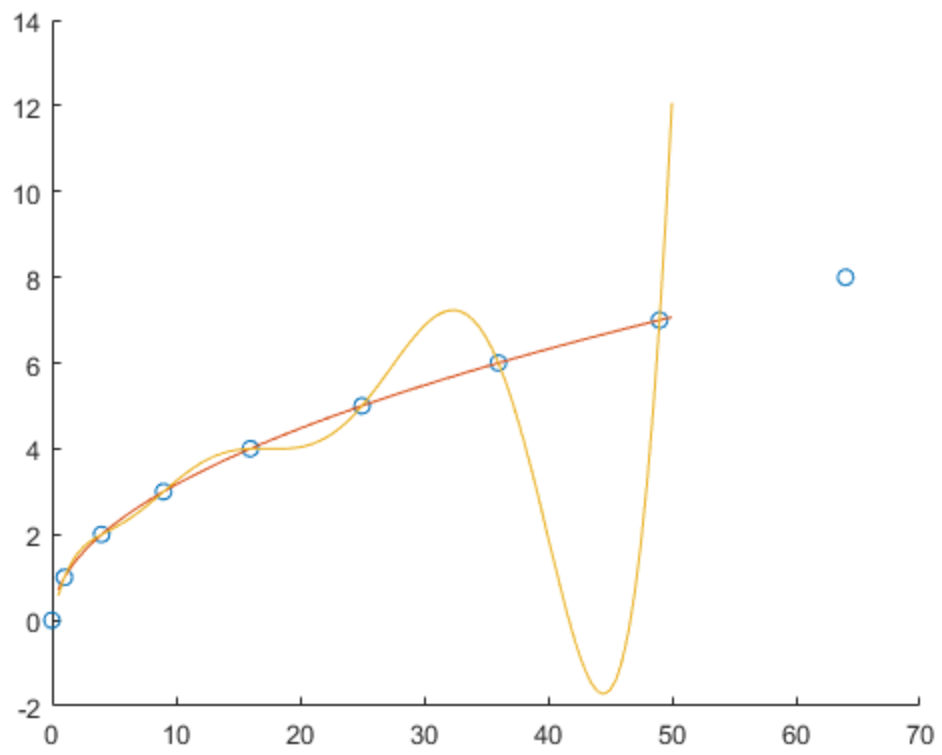
No. of operations in Gauss elimination
   516

No. of operations in back-substitution
    81

    "Difference f(x)-sqrt(x) for x = 0.5 is -0.13234 "

    "Difference f(x)-sqrt(x) for x = 1.5 is 0.086065 "

    "Difference f(x)-sqrt(x) for x = 2.5 is 0.11955 "

    "Difference f(x)-sqrt(x) for x = 3.5 is 0.048049 "

    "Difference f(x)-sqrt(x) for x = 4.5 is -0.045981 "

    "Difference f(x)-sqrt(x) for x = 5.5 is -0.11314 "

    "Difference f(x)-sqrt(x) for x = 6.5 is -0.13268 "

    "Difference f(x)-sqrt(x) for x = 7.5 is -0.1042 "

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