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# TO FIT THE CURVE IN THE POINTS (0,3),(2,1),(3,-1),(5,-2)
clc();
clear;
x = [0 2 3 5];
y = [3 1 -1 -2];
# to find the equation of the LINE fitting the above points use the command
p = polyfit(x,y,1);
# to find the equation of the QUADRATIC CURVE fitting the above points use
q = polyfit(x,y,2);
# Now consider horizontal vector with only 0.1 interval
h = 0:0.1:5;
# to validate the relation, we plot the equation found from p and q
plot(h,p(1).*h+2.8462,"linewidth",2,"color","red");grid on; hold on
plot(h,q(1).*h.^2+q(2).*h+q(3),"linewidth",2,"color","green");grid on;
hold on
# to plot the original points on the plot we write following
plot(0,3,"markersize",15);hold on
plot(2,1,"markersize",15);hold on
plot(3,-1,"markersize",15);hold on
plot(5,-2,"markersize",15);hold on

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