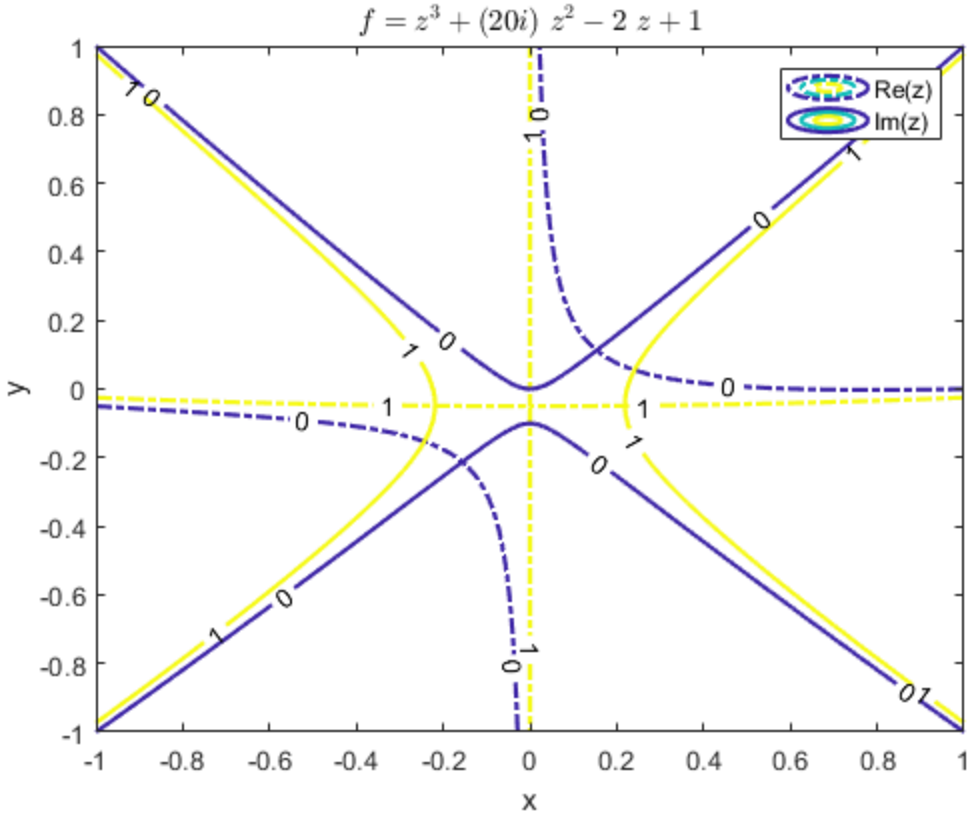
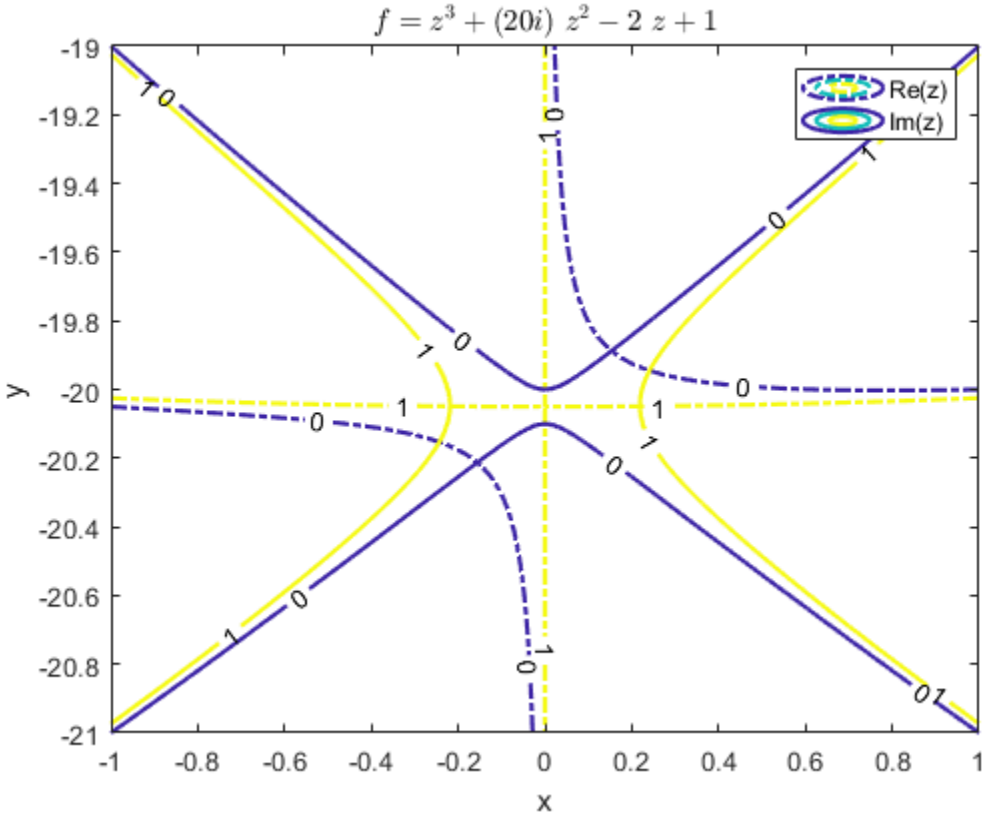
```
P = @(z) z.^3 + (1i.*20).*z.^2 - 2.*z + 1;
% ####### ######## ######## ### ###### # ############ #####
x = -1:0.01:1;
y = -1:0.01:1;
% ######## ####### ######## ###### # ############# #####
[X,Y] = meshgrid(x,y);
% ######### # ######## ####### ###### z - x+iy
% ####### # ######### ###### # ############ #####
ReP = X.^3 - 3.*X.*Y.^2 - 40.*X.*Y - 2.*X + 1;
ImP = 3.*X.^2.*Y - Y.^3 + 20.*X.^2 - 20.*Y.^2 - 2.*Y;

% ### ##### ## ####
figure(1)
% ######## ######## ############ #####
contour(X,Y,ReP,[0 1], 'ShowText','on','LineStyle', '-.', 'LineWidth',
 1.6);
hold on;
% ######## ######## ###### #####
contour(X,Y,ImP,[0 1], 'ShowText','on', 'LineWidth', 1.6);
hold off;
legend('Re(z)', 'Im(z)')
xlabel('x');
ylabel('y');
title('$f = z^3 + (20i)\ z^2 - 2\ z + 1$', 'Interpreter', 'latex');

% ###### ######
figure(2)
y = -21:0.01:-19;
x = -1:0.01:1;
[X,Y] = meshgrid(x,y);
% ######## ######## ############ #####
contour(X,Y,ReP,[0 1], 'ShowText','on','LineStyle', '-.', 'LineWidth',
 1.6);
hold on;
% ######## ######## ###### #####
contour(X,Y,ImP,[0 1], 'ShowText','on', 'LineWidth', 1.6);
hold off;
legend('Re(z)', 'Im(z)')
xlabel('x');
ylabel('y');
title('$f = z^3 + (20i)\ z^2 - 2\ z + 1$', 'Interpreter', 'latex');
```


$f = z^3 + (20i)\ z^2 - 2\ z + 1$
Re(z)
Im(z)
y
x


$f = z^3 + (20i)\ z^2 - 2\ z + 1$
Re(z)
Im(z)
y
x

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