

## Matlab notes for Homework #6

```
clear
syms x
f(x)=x^3-2*x+1; fp(x)=diff(f(x),x); g=[-1.5 0.5 1.5];
for j=1:3
    gf=g(j);
    for i=1:10
        gf=gf-f(gf)/fp(gf);
        i=i+1;
    end
    disp('If the first guess is'), g(j),
    disp('then our estimated zero is'), vpa(gf,4)
    j=j+1;
end
```

```
If the first guess is
ans = -1.5000
then our estimated zero is
ans = -1.618
If the first guess is
ans = 0.5000
then our estimated zero is
ans = 0.618
If the first guess is
ans = 1.5000
then our estimated zero is
ans = 1.0
```

```
fplot(f(x), 'k')
hold on
fplot(0, '--k')
axis([-2 2 -4 5])
```

