

## Notes for HW#4

The gradient field superimposed upon the contour plot.

```
x=-4:1:4;  
y=-4:1:4;  
[X, Y]=meshgrid(x,y);  
Z=X.^2-Y.^2;  
[FX, FY]=gradient(Z);  
quiver(X,Y,FX,FY,'r')  
hold on  
x1=-4:0.1:4;  
y1=-4:0.1:4;  
[X1, Y1]=meshgrid(x1,y1);  
Z1=X1.^2-Y1.^2;  
v=[-10,-5,-2,0,2,5,10];  
contour(X1,Y1,Z1,v,'k','showtext','on');
```

