function showLNorms()

x =-1:0.001:1;

figure()

clf

plot(x,1-abs(x),'b',x,sqrt(1-abs(x.^2)),'r',x,(1-abs(x.^3)).^(1/3),'g',x,abs(x)<1,'y')

grid on

hold on

axis square

xlim([-1.25,1.25])

ylim([-1.25,1.25])

legend({'|x|\_1=1','|x|\_2=1','|x|\_3=1','|x|\_\infty=1'})

plot(x,-1+abs(x),'b','HandleVisibility','off')

plot(x,-sqrt(1-abs(x.^2)),'r','HandleVisibility','off')

plot(x,-(1-abs(x.^3)).^(1/3),'g','HandleVisibility','off')

plot(x,-(abs(x)<1),'y','HandleVisibility','off')

end