Matlab code, save as a function m-file: cdf\_2.m

function [ f ] = cdf\_2( y )

%cdf for problem 2 of sample exam

if y<-1

f=0;

elseif y<1

f=1/2\*y^3+.5;

else

f=1;

end

end

Matlab code, save as a script m-file:

%sample exam 2

%problem 2

%pdf

clf

x=-1:.25:1;

g=inline('3/2\*y.^2');

y=linspace(-1,1);

plot(y,g(y),x,g(x),'\*')

ax = gca;

set(ax,'XTick',-1:.25:1);

grid on

%cdf

clf

x=-1.5:.5:1.5;

X=arrayfun(@cdf\_2,x);

y=linspace(-1.5,1.5);

Y=arrayfun(@cdf\_2,y);

plot(y,Y,x,X,'\*','LineWidth',4)

graph = gca;

set(graph,'XTick',-1.5:.5:1.5);

grid on

%area

clf

x=-1:.25:1;

g=inline('3/2\*y.^2');

y=linspace(-1,1);

plot(y,g(y),x,g(x),'\*')

ax = gca;

set(ax,'XTick',-1:.25:1);

grid on

hold on

a = linspace(1/4,3/4);

b = g(a);

area(a,b)

hold off