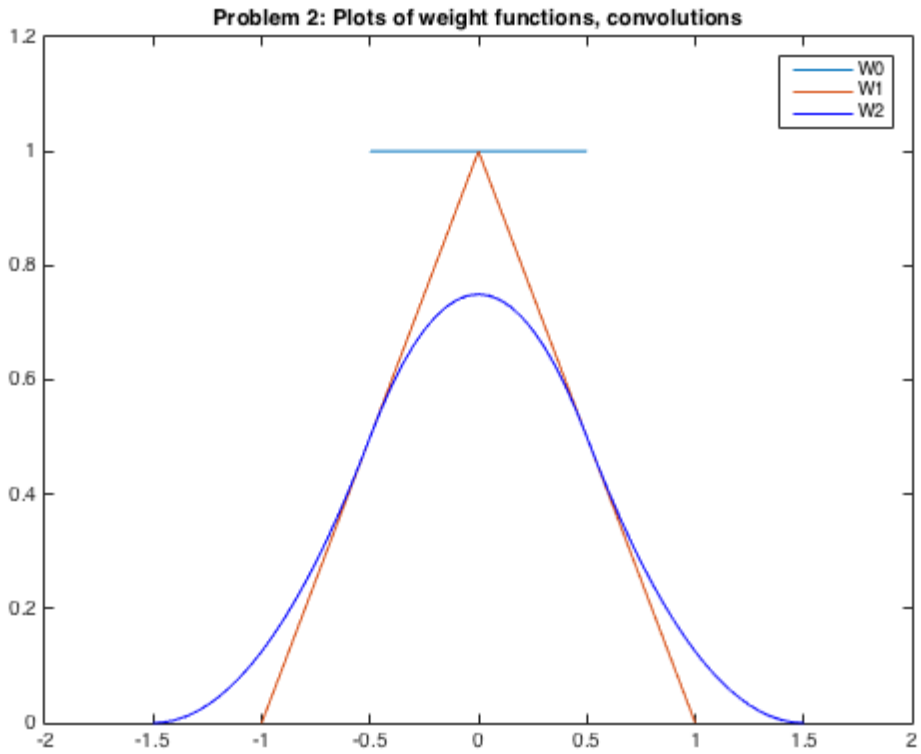
Contents

Plots convolutions for HW 3, problem 2

```
function[]=Math671_HW3_p2()

dx = 1;
xstep = 5e-2;

% W0 is defined on -0.5dx <= x < 0.5dx
x0 = -0.5:xstep:0.5;
W0 = ones(length(x0),1);

% W1 is defined on -1dx <= x < dx
x1 = -1:xstep:1;
W1 = 1-abs(x1);

% W2 is defined on on -1.5dx <= x < 1.5dx
x2_1 = -1.5:xstep:-0.5;
W2_1 = 0.5.*(1.5 + x2_1).^2;
x2_2 = -0.5:xstep:0.5;
W2_2 = (0.75- x2_2.^2);
x2_3 = 0.5:xstep:1.5;
W2_3 = 0.5.*(1.5 - x2_3).^2;

% Plot everything
plot(x0,W0,x1,W1,x2_1,W2_1,'b',x2_2,W2_2,'b',x2_3,W2_3,'b')
xlim([-2 2])
ylim([0 1.2])
legend('W0','W1','W2')
title('Problem 2: Plots of weight functions, convolutions')

end
```



Published with MATLAB® R2015a