FIR filter design problems, due Monday Nov 13

All problems from textbook

- 1) 10.5 (uses 4 filter types discussion, 10.2.1)
- 2) 10.1 part a) do by hand
- 3) 10.2 part a) do by hand
- 4) 10.1 parts b,c,d do in code (Matlab/Python)

Hint on #4: here is how you do 10.1 a) in Matlab:

```
% 25-long boxcar, cutoff frequency = pi/6, lowpass [b,a]=fir1(24,1/6,boxcar(25)); freqz(b,1);
```