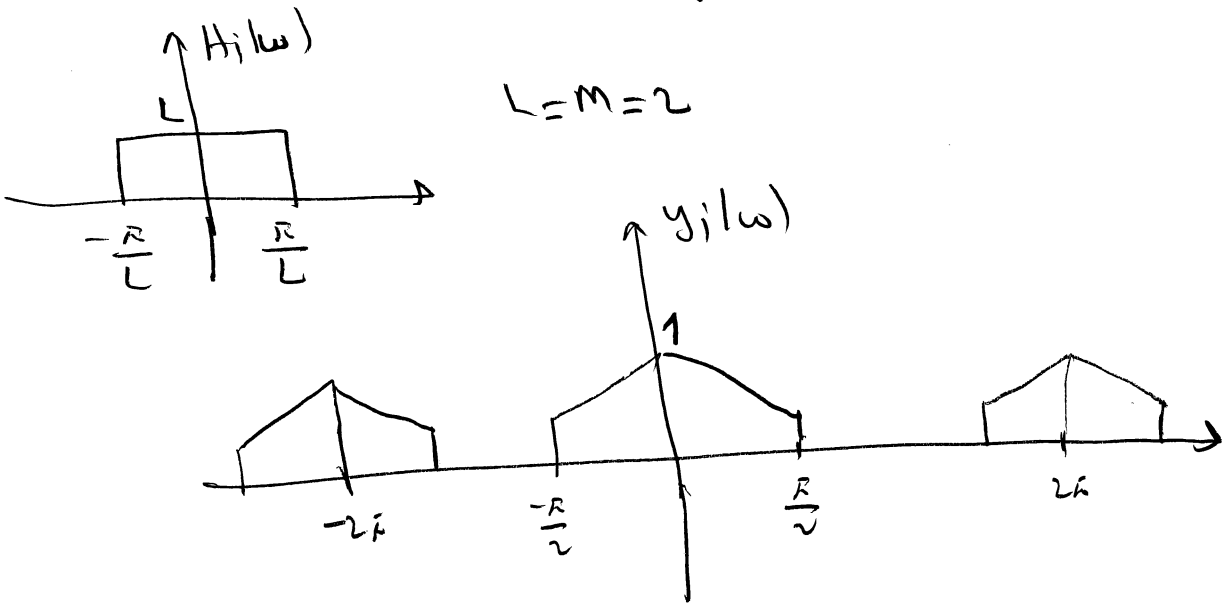
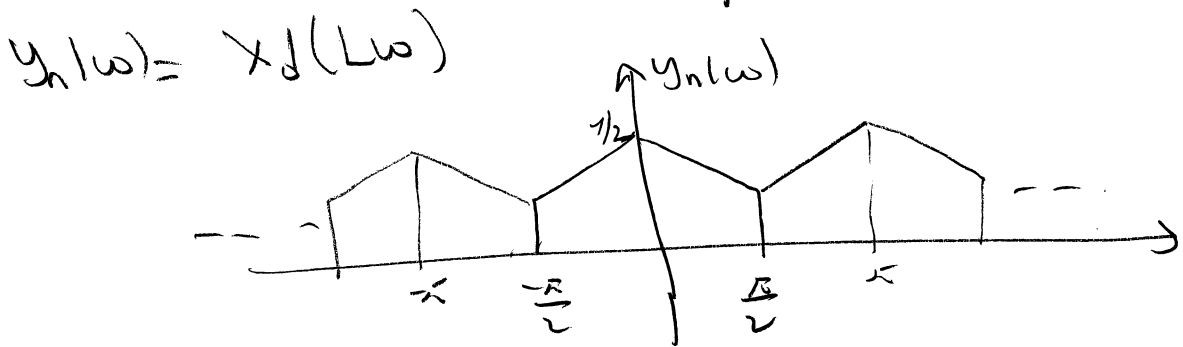
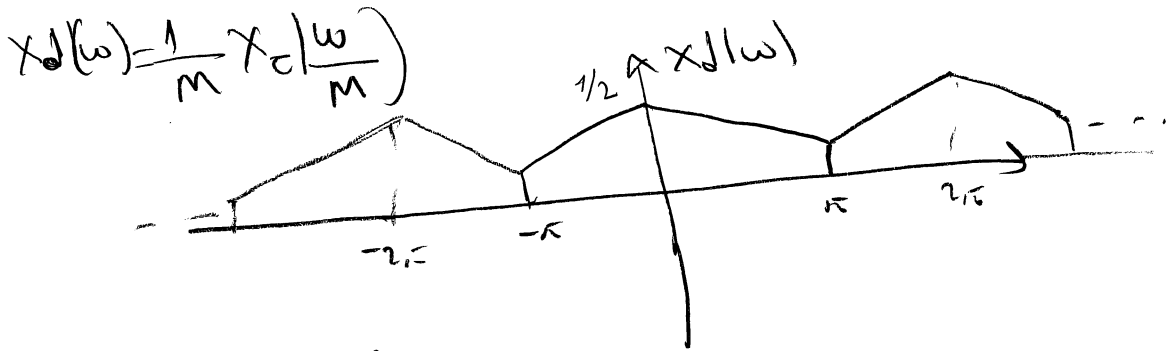
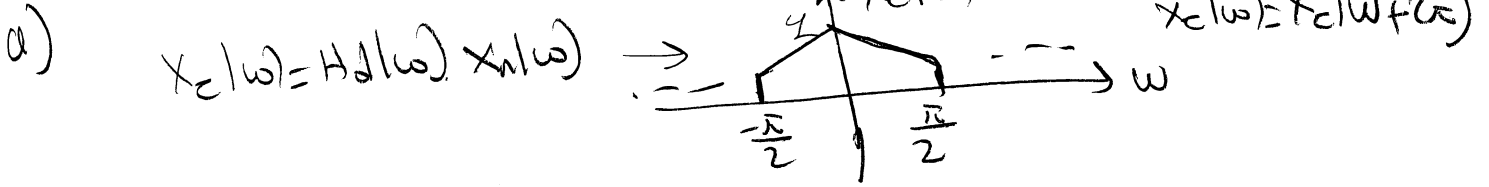
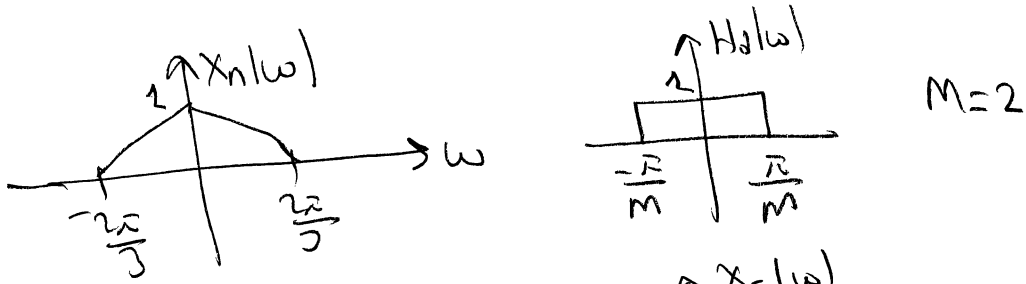


ECE 310 HW#2

1



b)

$X_c[n] = [1, 1.58, 2.0, 2.02, 2.58, 2.80, 3.00, 3.16, 2.92, 2.45, 2.58, 3.70, 2.80, 3.80]$

$X_d[n] = X_c[2n]$        $X_d[n] = [1, 2, 2.58, 3, 3.02, 3.58, 3.80]$

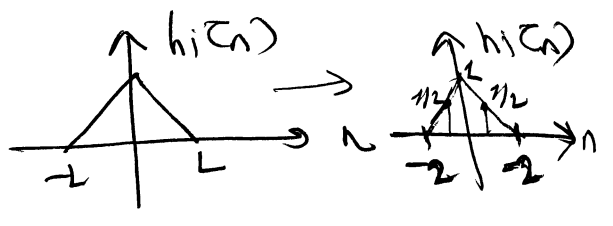
2

$$y[n] = [1 \ 0 \ 2 \ 0 \ 2.58 \ 0 \ 3 \ 0 \ 3.32 \ 0 \ 3.58 \ 0 \ 3.80 \ 0]$$

$$y_1[n] = \sum x[k] h[n-kL]$$

OR

$$y_1[n] = \sum y[k] h[n-k]$$



$$y_1[n] = y[0]h[n] + y[1]h[n-1] + y[2]h[n-2] + \dots + y[0]h[n-13]$$

$$y_1[1] = y[0]h[1] + y[1]h[0] + y[2]h[-2] + \dots + y[0]h[-12]$$

$$y_1[1] = y[0] \cdot \frac{1}{2} + y[1] \cdot \frac{1}{2} + y[2] \cdot 0 + \dots + 0$$
$$= \frac{y[0] + y[1]}{2}$$

$$y_1[1] = \frac{1+2}{2} = 1.5$$

}  
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