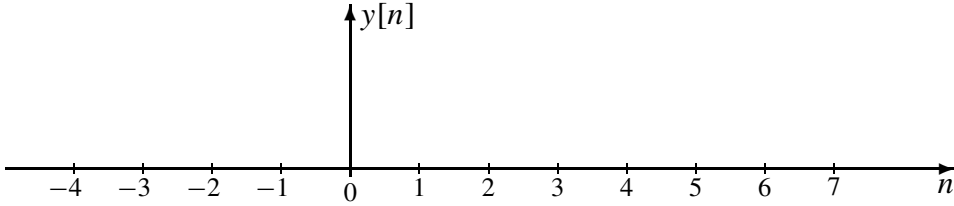
PROBLEM:

(a) If the filter coefficients of an FIR filter are $\{b_k\} = \{9, -19, 9\}$, make a plot of the output when the input is the signal: $x[n] = \delta[n-2] + \delta[n-3]$



Plot zero values also

(b) The magnitude of the frequency response, $\mathcal{H}(\hat{\omega})$, for the filter in part (a) has one of the shapes below. The vertical line in each plot is located at $\hat{\omega} = 0$. Choose the correct one and then draw the horizontal axis with correct labels. **In addition, label the important features such as the locations of peaks and valleys and the values at those frequencies.**