PROBLEM:

$$x[n] \longrightarrow \boxed{\begin{array}{c} \text{FIR FILTER} \\ \{b_k\} \end{array}} \longrightarrow y[n]$$
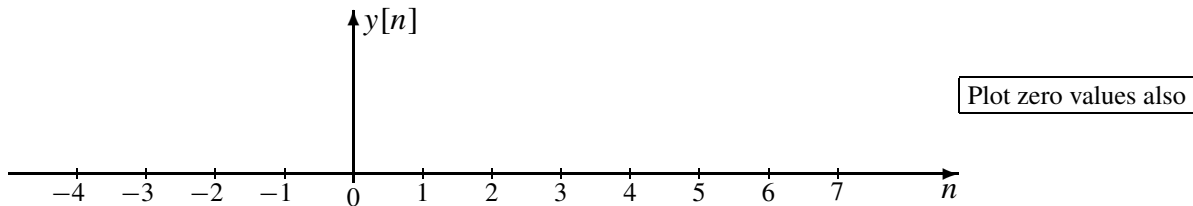
(a) If the filter coefficients of an FIR filter are $\{b_k\} = \{2, 0, 5, 0, 2\}$, make a $\boxed{\text{plot}}$ of the output when the input is the signal: $x[n] = \delta[n] - \delta[n-2]$

$\boxed{\text{Plot zero values also}}$

(b) Determine the frequency response, $\mathcal{H}(\hat{\omega})$, and give the answer as a $\boxed{\text{simple}}$ formula:

(c) Determine the magnitude of $\mathcal{H}(\hat{\omega})$ and present your answer as a a $\boxed{\text{plot}}$ of the magnitude vs. frequency. Label important features.