Fall 2018 - Quiz 6
ECE 301: Signals and Systems

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Problem 1 [30 points]

Find the output signals $y_1(t)$, $y_2(t)$, and $y_3(t)$, obtained when input x(t) is passed through LTI systems with impulse responses $h_1(t)$, $h_2(t)$, and $h_3(t)$ (as shown in Figure 1), respectively.
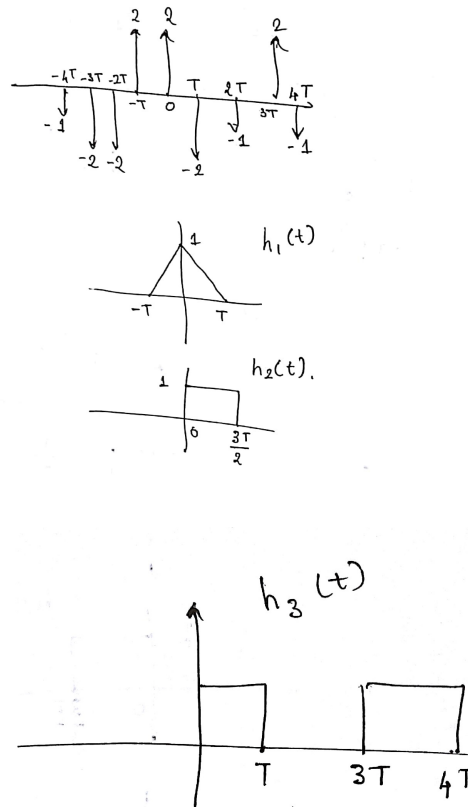

Figure 1

Problem 2 [10 points]

For each of the two signals depicted in Figure 2, can we sample at a frequency $\omega_s = 2\omega_M$, and guarantee perfect reconstruction? Justify your answer.
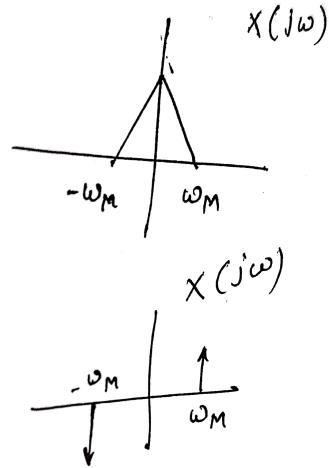

Figure 2