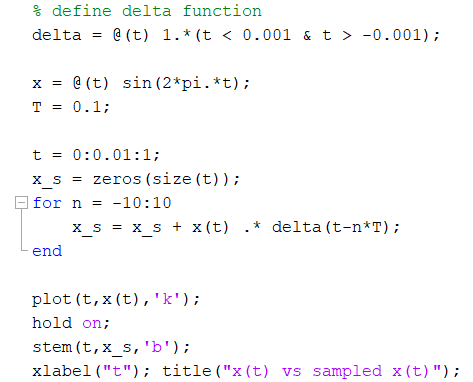
3.2-4) A *first order hold* (FOH) circuit can also be used to reconstruct a signal from its samples. The impulse response of this circuit is:

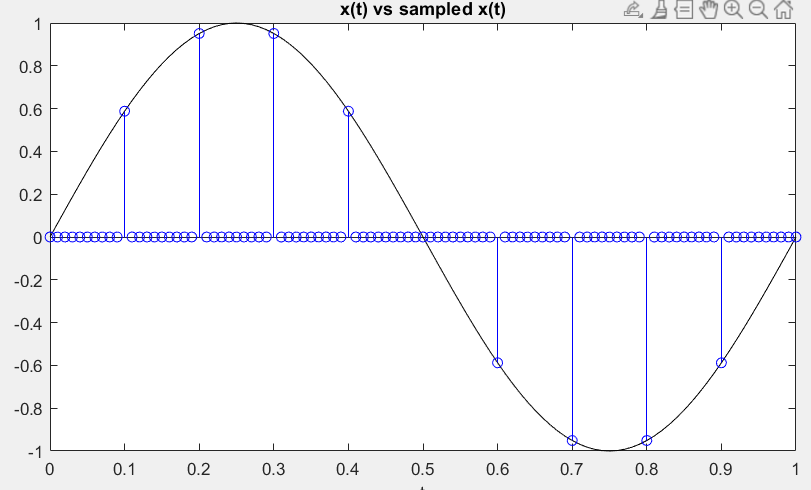
, where T is the sampling interval

1. Let

Then will be sampled every 0.1s and where n = … -2, -1, 0, 1, 2 …

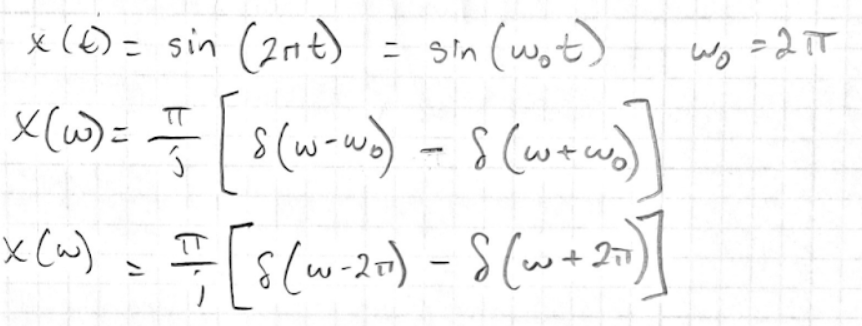
In MATLAB,



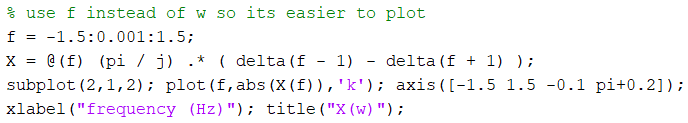


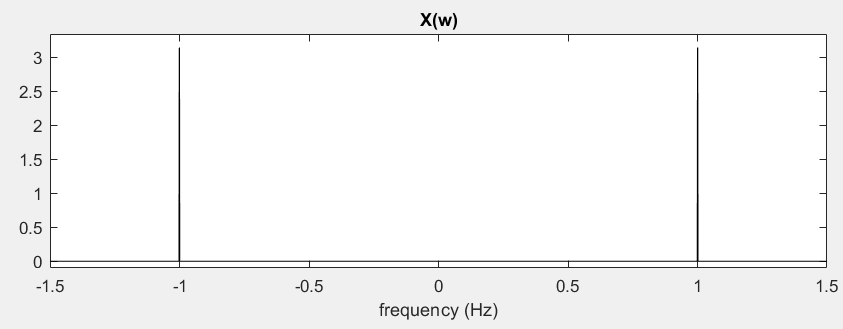
We know that is a periodic replication of spaced by sampling frequency

So, :

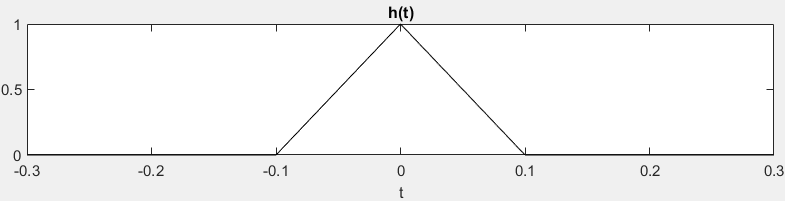


In MATLAB,





In MATLAB looks like:



Then is: