Blast From the Past!

Exam 1

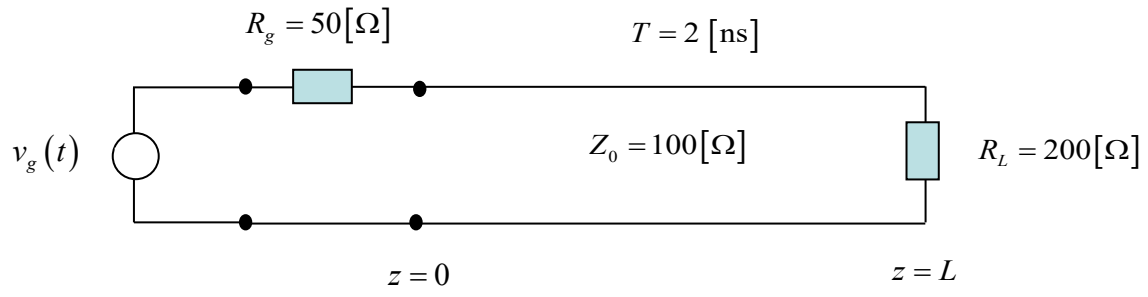
Fall 2018

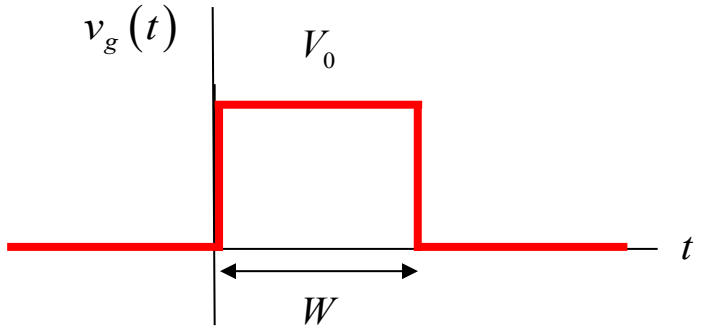
Problem 2 (35 pts)

A digital pulse of amplitude $V_0 = 3.0$ [V] and duration $W = 1.5$ [ns] is applied at the input to the transmission line circuit shown below.

a) Construct a bounce diagram for this problem that extends to a time of $4T$. (Make your bounce diagram on the next page.)

b) Make an accurate "oscilloscope trace" plot of the voltage $v(t)$ on the line at $z = L/2$. Make your plot on the graph that is given below. Label all voltage values on your plot, and label all times where the voltage changes. Plot to a time of 8 [ns].





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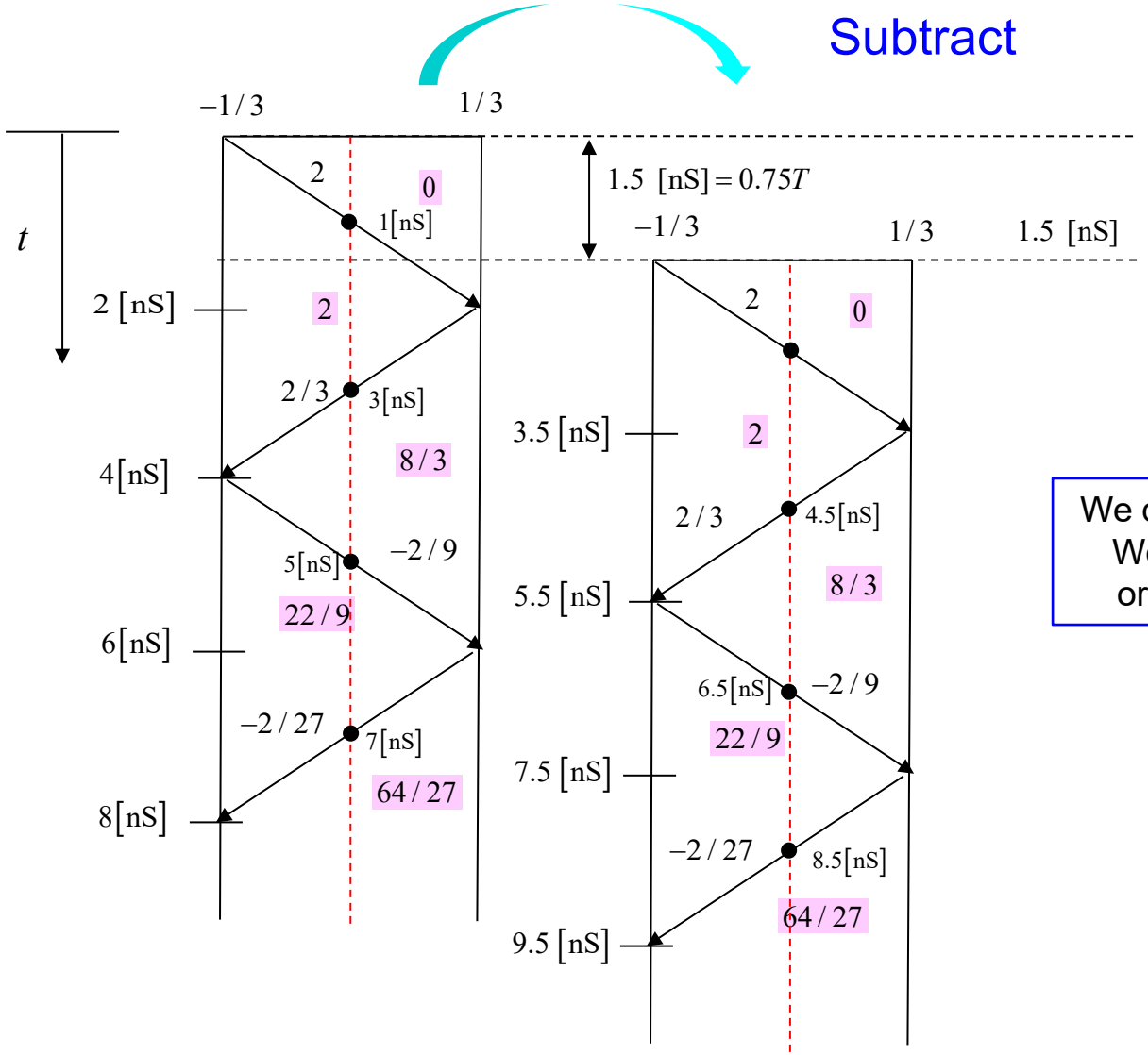

We don't need to make this second bounce diagram. We can just make an oscilloscope trace from the original bounce diagram and then shift it in time.

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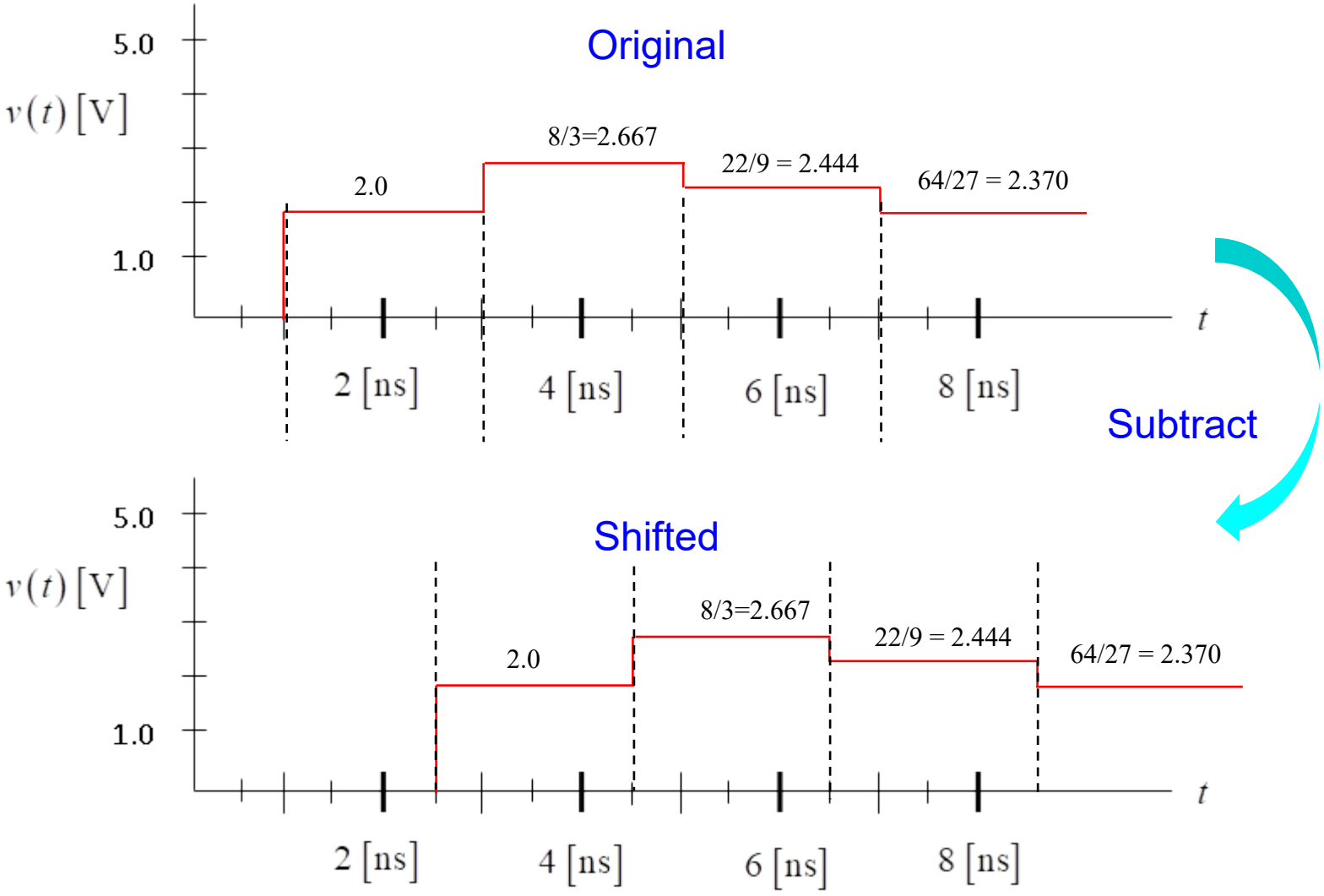

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