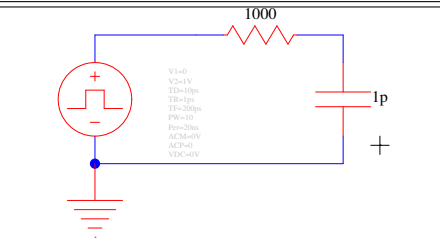
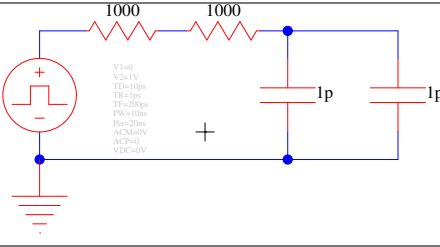
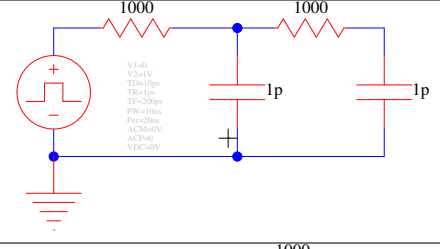
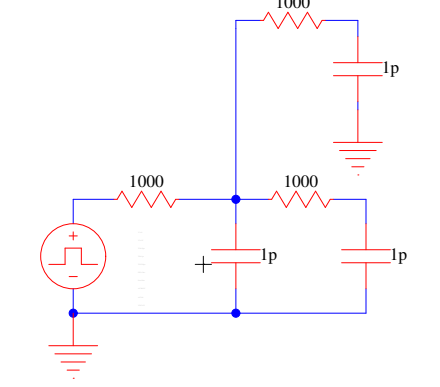
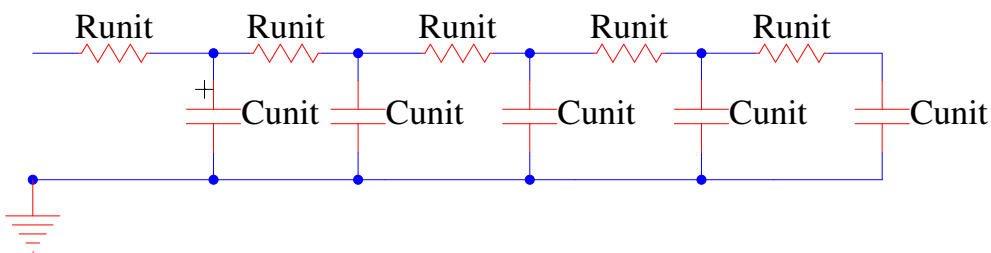


1. What is the delay (time constant) associated with each of the following?

Circuit	Time Constant
	
	
	
	

2. What is the sum of the integers 1 to N?

3. Delay of length N RC-ladder (length 5 shown) ?

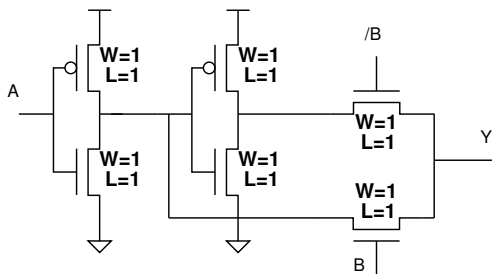


4. How does the above (problem 3) result compare to treating the R's and C's as lumped

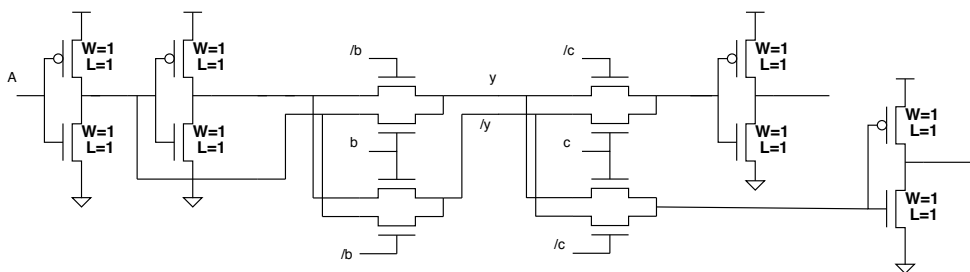
(all C's following the Rs)?



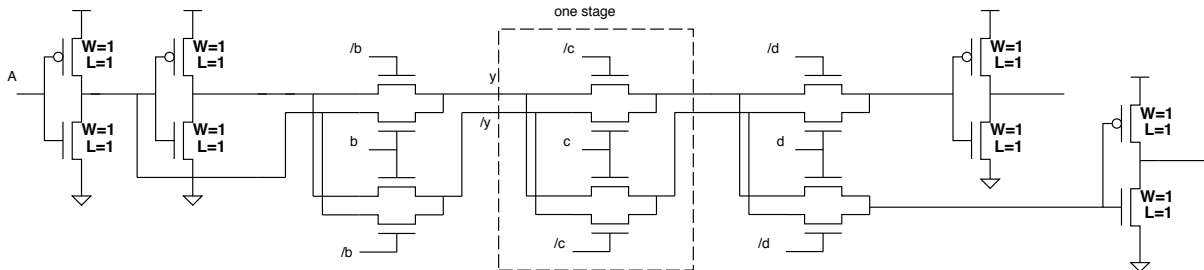
5. Delay driving A input of a copy of itself (A=1, B=0)



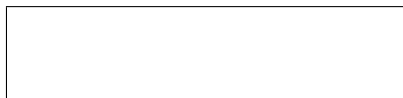
6. Delay from inverter shown on left to (but not including) inverter shown on right (A=1, B=C=0)



7. Delay from inverter shown on left to (but not including) inverter shown on right (A=1, B=C=D=0)



8. Delay above with k stages (previous 2 here $k = 2, k = 3$)



9. Delay when loaded by the A input of an identical xor2 gate.

