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ENGIN 446

April 7, 2021

Homework 4 – Testbench Results

4-bit Multiplier

Name	Value	0.000 ns	5.000 ns	10.000 ns	15.000 ns	20.000 ns	25.000 ns	30.000 ns	35.000 ns	40.000 ns	45.000 ns	50.000 ns	55.000 ns
▼ A_s[3:0]	6	6				14				3			
A_s[3]	0												
A_s[2]	1												
A_s[1]	1												
A_s[0]	0												
▼ B_s[3:0]	2	2				6				3			
B_s[3]	0												
B_s[2]	0												
B_s[1]	1												
B_s[0]	0												
▼ P_s[7:0]	12	12				36				9			
P_s[7]	0												
P_s[6]	0												
P_s[5]	0												
P_s[4]	0												
P_s[3]	1												
P_s[2]	1												
P_s[1]	0												
P_s[0]	0												

Results from the 4-bit Multiplier testbench show 6 different combinations between inputs A_s and B_s . The output vector P_s displays the correct answers for each combination given.

8-bit Multiplier

Name	Value	0.000 ns	5.000 ns	10.000 ns	15.000 ns	20.000 ns	25.000 ns	30.000 ns	35.000 ns	40.000 ns	45.000 ns	50.000 ns	55.000 ns
> A_s[7:0]	15	102				142				163			
> B_s[7:0]	239	2				70				3			
> P_s[15:0]	3585	204				7140				816			

Results from the 8-bit Multiplier testbench show 6 different combinations between inputs A_s and B_s . The output vector P_s displays the correct answers for each combination as well.