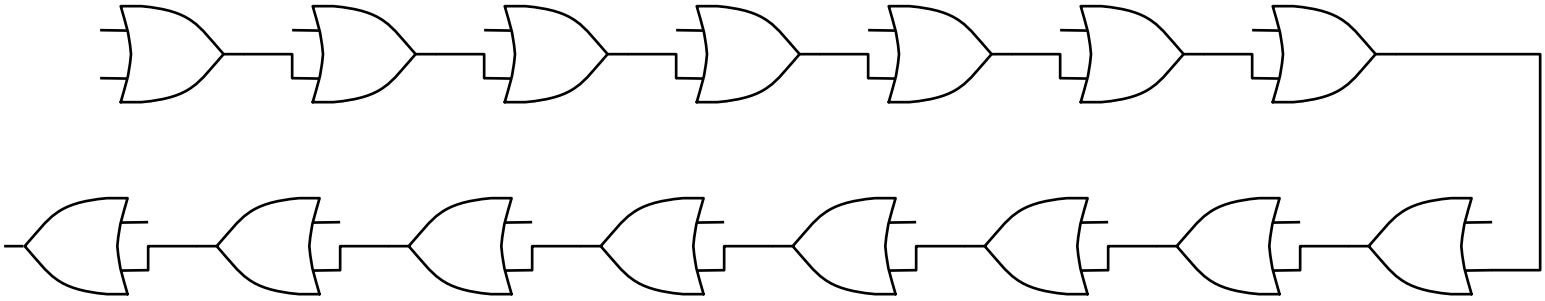
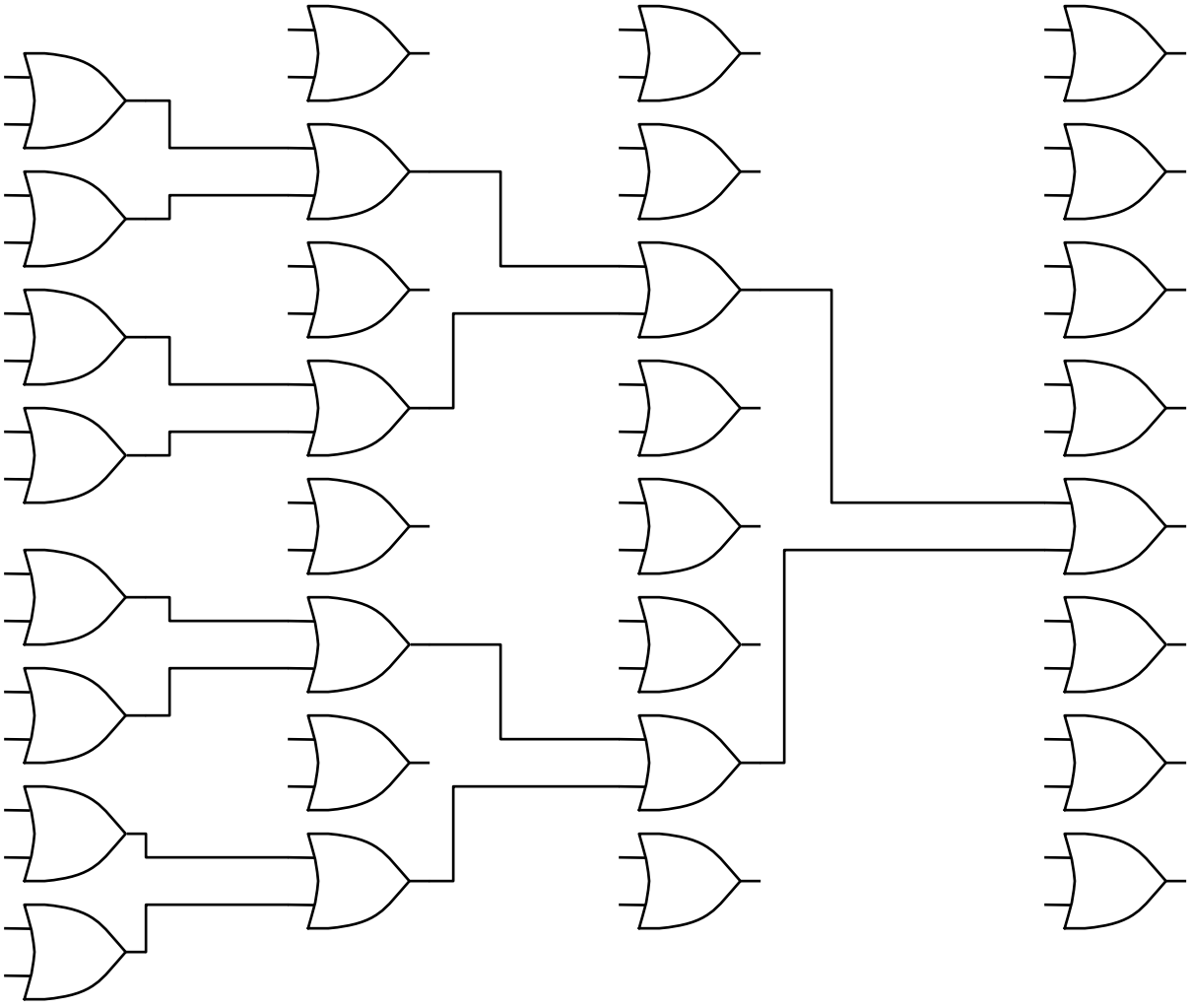
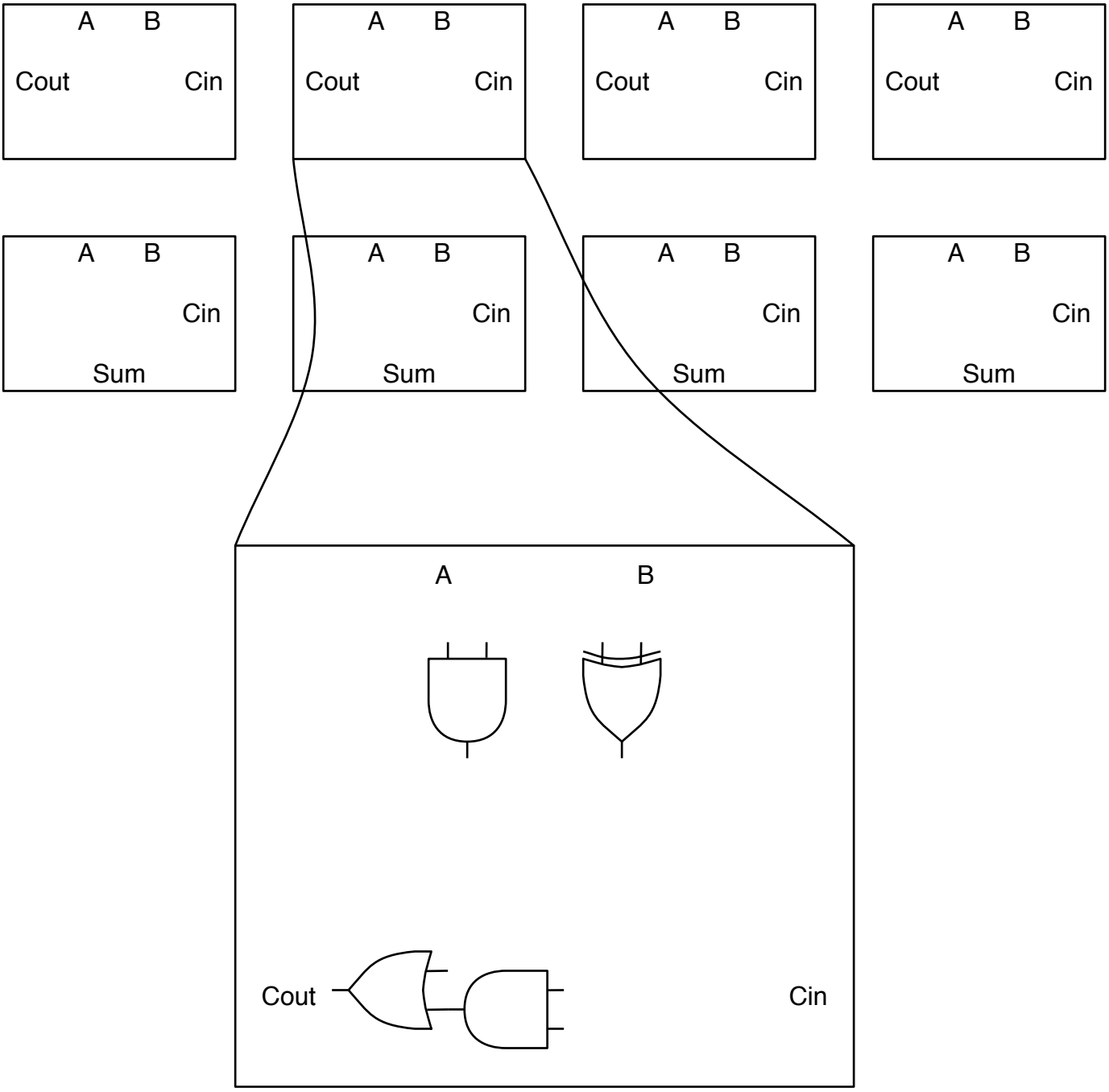
Chains and trees





"Refactoring" the full adder



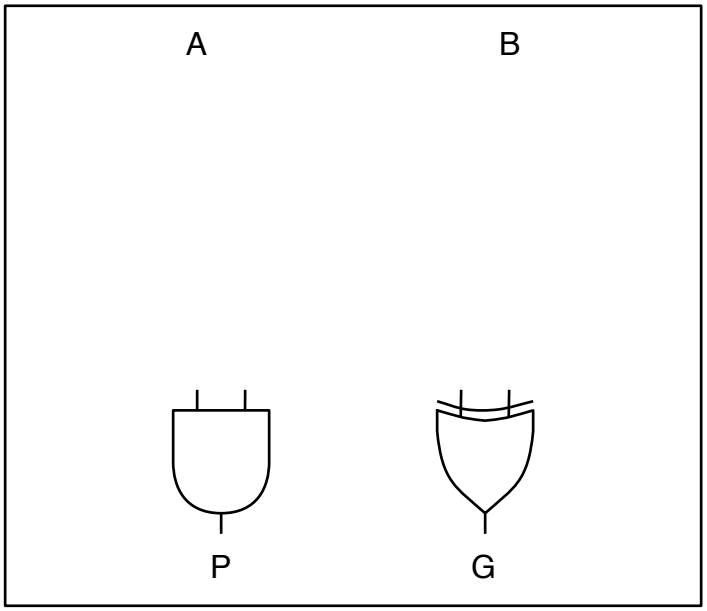
P0:1 = P0 & P1

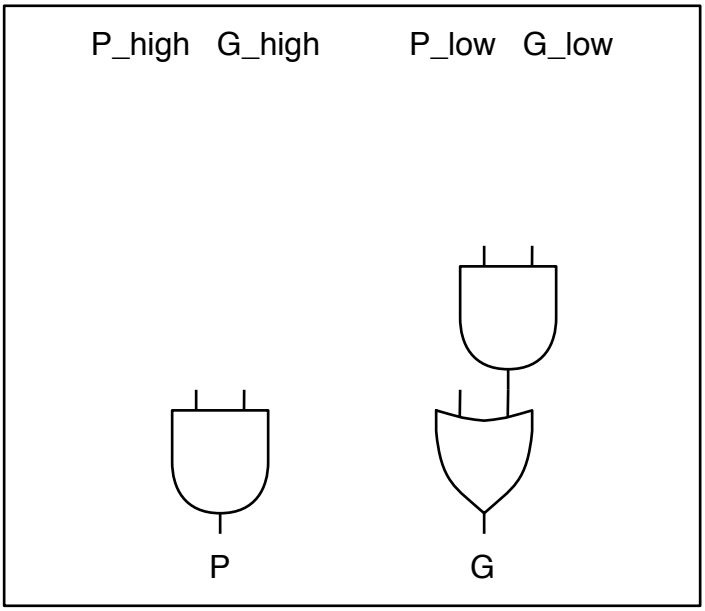
G0:1 = G1 | (P1 & G0)

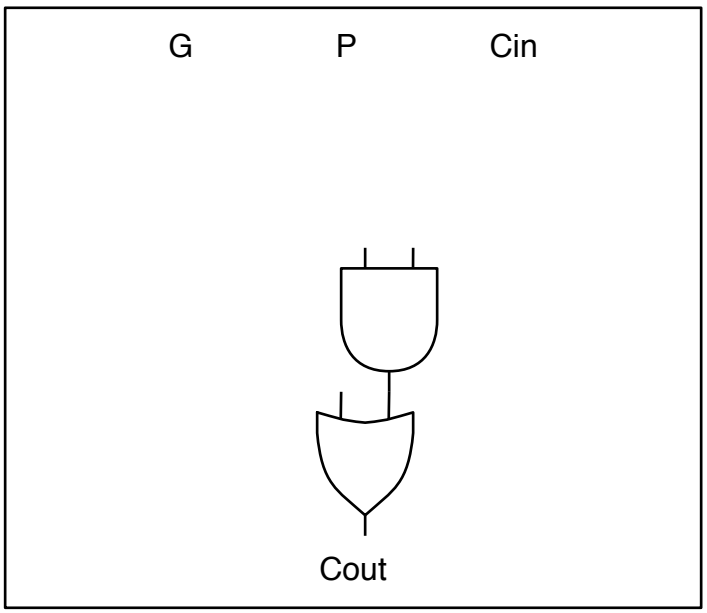
Pn:m = Pn:(k-1) & Pk:m

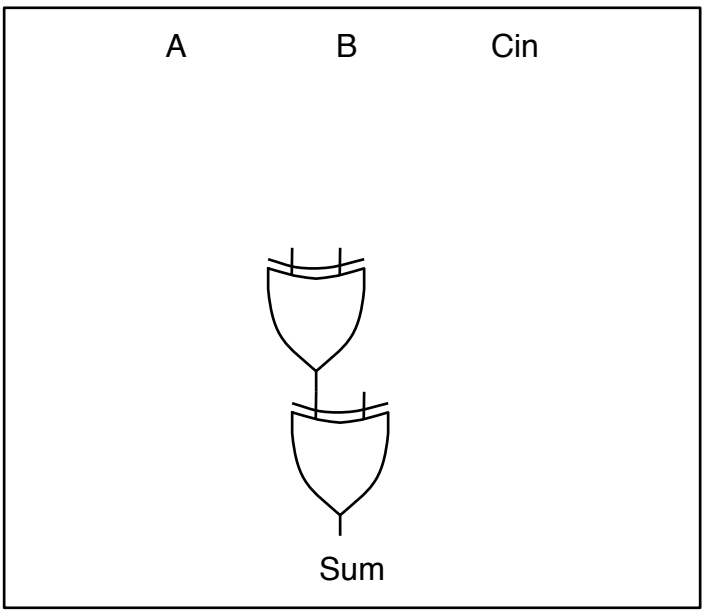
Gn:m = Gk:m | (Pk:m & Gn:(k-1))

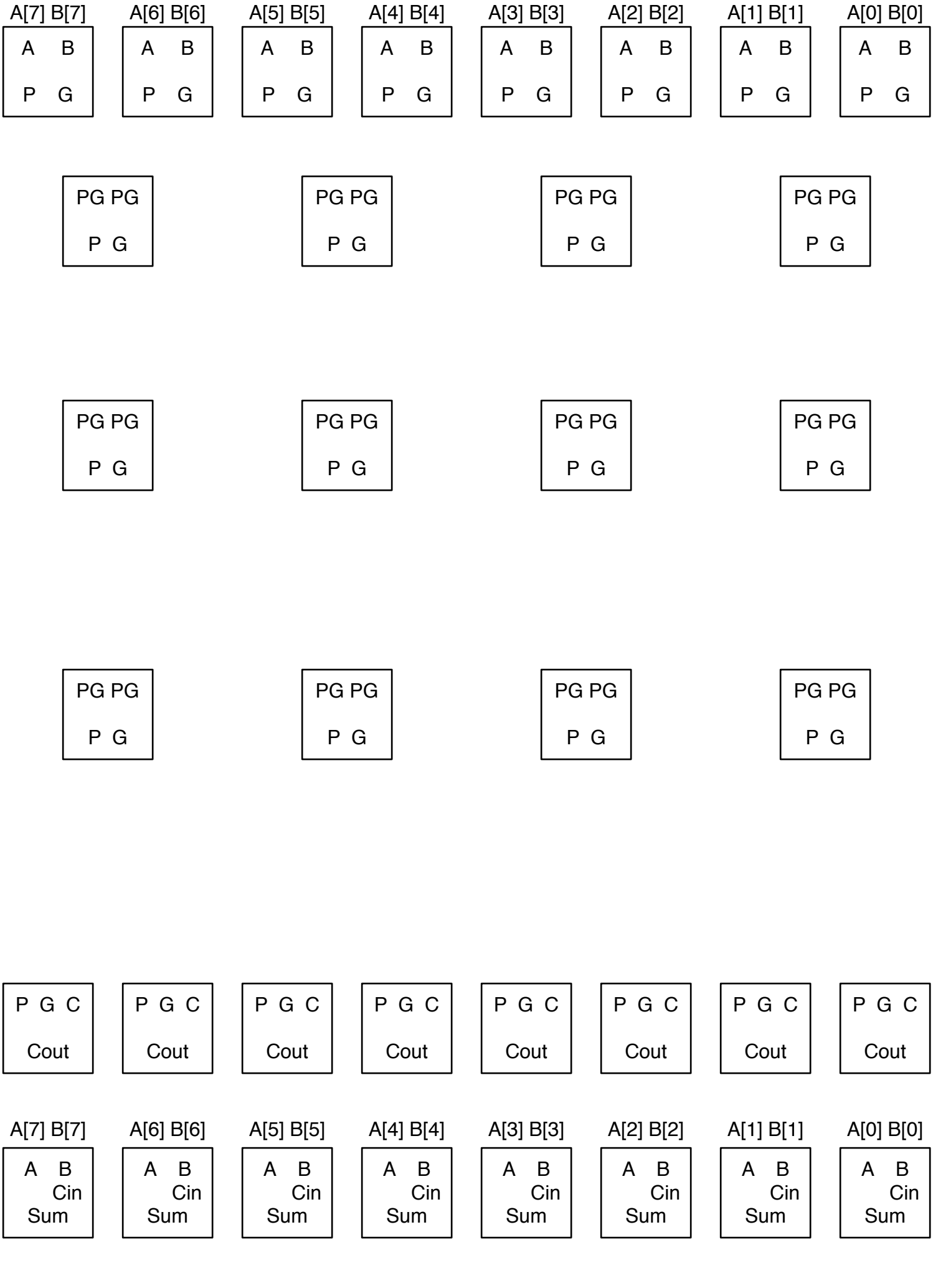
Cm = Gn:(m-1) | (Pn:(m-1) & Cn)










A[7] B[7]
A B
P G
A[6] B[6]
A B
P G
A[5] B[5]
A B
P G
A[4] B[4]
A B
P G
A[3] B[3]
A B
P G
A[2] B[2]
A B
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A[1] B[1]
A B
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A[0] B[0]
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A[7] B[7]
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A[0] B[0]
A B
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Sum