ECE 310 - Project 1 Ohm Patel

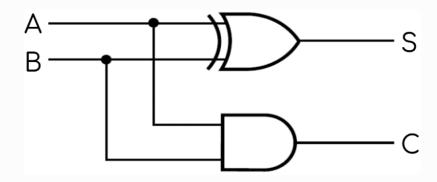
Legend

Integers

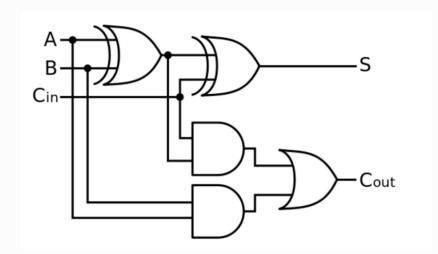
F = Full Adder H = Half Adder

Full Adders and Half Adders will be represented by Fx(s/c). Where x is the adder number and s/c is sum or carry. E.g. H2C (Half adder 2 carry)

Half Adder



Full Adder



						A,	A ₆	A ₅	Ay	A ₃	Az	A,	Ao		
							B7	B6	Bc	B4	B ₃	BZ	B,	Bo	
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		<	HAI,	FAS-	- FAC	HAO	A7B	, A6B,	ASB,	AuB.	AsB,	AZB,	A,B,	AOB,	
					4	A7B	, A ₆ B	ASB.	AuBz	As B2	AZB2	AIBE	AOB2		
A					A7B3	A6B	ASB	AuB	Ask	AZB.	A,B3	AOB3	mpa, diverse management		
(HA3, FAII - FA6, HAZ A3B4			Az By	A6B4	ASB	A4B	4 As B	AZB	Airs	AoBy		,			
		Enversal Constitution of the Constitution of t	AzBs	A6B	Asq.	AuBs	Asig	3 AZB	AIBS	AOBS					
		AzB6	A6B6	ASB,	A4B6	Asis	2 AZB	AB	AOB,		.4				
	AzBz	A6Bz	ASB,	Aug	Ask	AZB,	AIB	AOB,		•					
		MANAGEMENT MENGAMBAN		And recovery services and		A3B6	AzB6	A,B6	A _o B ₆	FZC	Fic	A ₀ B ₃	HoC	Hos	AoBo
FA18			- FAI	z, HAL	e i	ALMORE A CHESCON MANDESCENSIONED	THE STREET, ST	Aa Bz	OR THE STREET,	CONTRACTOR OF THE SECURITY OF	ANTIQUISIONE ANTIQUISION ANTIQUISI ANTIQUISION ANTIQUI	Foc	THE RESERVE AND ADDRESS OF THE PERSON OF THE		Commission of the Commission o
7			AZB5	A= B6	A COMMUNICATION OF THE			Fuc		THE RESIDENCE AND THE PERSON	17,5	Fis			
								F ₂ C		F6S					
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	A7B7	A6B7	II ₃ C		<u> </u>					I . I	i 8	ı	1	ı	
			province or new real or a real consensus or	1			1	Fisc	1	1	1	1	Hus	405	A ₆ B ₀
HA10-9, FA30-25, 1-		HA8-4	AZB5	AsB6	FIBC	Fzo C	FigC	Hs C	FISS	Fis C	F135	F125			
	A78-	2 F24C	F23 C	FzzC	Fzic	Fies	F175	FILS	H _s S	Fius	Marine in National Administration in Communication	n de la companya de l			
	Mec	H ₆ S	Fzy S	£32	FzzS	F215	FzoS	Figs							
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	A 7 B	7 H6S	Hac	F30 C	F29 C	Fz8C	F27 C	F26 C	FZGS	f ₂₅ S	H ₈ S	אט וא	[A32 -	3) UA	13 ~ 11
	H ₆ C	HIOC	HIOS	Has	F305	F29 S	F28 S	F27 S		acoming a second and the second and		Liberta	Lander of the Control	2. 111.	AND THE PROPERTY OF THE PROPER
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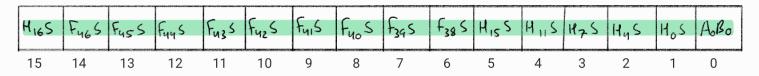
From the top we bring the single values down and Ripple Carry

Add the remaining partial sum. Carries

Fue C Fu

HIGC -> does not matter as 8×8 will always be 16 bits

Final Answer:



In total the Wallace tree has 15 Half Adders and 38 Full Adders.

If we include the Ripple Carry Adder, then in total we have 17 Half Adders and 47 Full Adders

Thus in total we have 17*1 (HA) + 47*2 (FA) = 111 AND Gates and 111 XOR Gates 47 OR Gates as each Full adder has 1.