

Clebsch-Gordan Coefficients

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Clebsch-Gordan...

Table 4.7: Clebsch-Gordan coefficients. (A square root sign is understood for every entry; the minus sign, if present, goes *outside* the radical.)

$|j m_j\rangle = |l m_l\rangle |s m_s\rangle$

$|s m_s\rangle = |s_1 m_{s1}\rangle |s_2 m_{s2}\rangle$

$1/2 \times 1/2$		1		1		0	
$+1/2$	$+1/2$	1	0	0	0		
$-1/2$	$-1/2$	$1/2$	$1/2$	1	0		
$-1/2$	$+1/2$	$1/2$	$-1/2$	-1	0		
		$-1/2$	$-1/2$	1			

$1 \times 1/2$		$3/2$		$1/2$		1	
$+1$	$+1/2$	$3/2$	$1/2$	$1/2$	$-1/2$		
0	$+1/2$	$1/3$	$2/3$	$3/2$	$1/2$		
0	$-1/2$	$2/3$	$-1/3$	$-1/2$	$-1/2$		
		0	$-1/2$	$2/3$	$1/3$	$3/2$	
		-1	$+1/2$	$1/3$	$-2/3$	$-3/2$	

2×1		3		2		1	
$+2$	$+1$	3	2	1	1		
$+2$	0	$1/3$	$2/3$	3	2	1	
$+2$	-1	$2/3$	$-1/3$	1	1	1	
		$+2$	-1	$1/15$	$1/3$	$3/5$	
		$+1$	0	$8/15$	$1/6$	$-3/10$	
		0	$+1$	$8/15$	$-1/2$	$1/10$	

1×1		2		1		1	
$+1$	$+1$	2	1	1	1		
0	0	$1/2$	$1/2$	2	1	0	
0	$+1$	$1/2$	$-1/2$	0	0	0	
		$+1$	-1	$1/6$	$1/2$	$1/3$	
		0	0	$2/3$	0	$-1/3$	
		-1	$+1$	$1/6$	$-1/2$	$1/3$	