

Table 10.7

ZEROS OF THE DERIVATIVE OF BESSEL FUNCTIONS OF HALF-INTEGER ORDER

		$J'_\nu(j'_{\nu,s})=0$				$Y'_\nu(y'_{\nu,s})=0$					
ν	s	$j'_{\nu,s}$	$J_\nu(j'_{\nu,s})$	$y'_{\nu,s}$	$(-1)^{n+1}Y_\nu(y'_{\nu,s})$	ν	s	$j'_{\nu,s}$	$J_\nu(j'_{\nu,s})$	$y'_{\nu,s}$	$(-1)^{n+1}Y_\nu(y'_{\nu,s})$
1/2	1	1.165561	+0.679192	2.975086	-0.456186	15/2	1	9.113402	+0.330874	11.535731	+0.266883
	2	4.604217	-0.369672	6.202750	+0.319331		2	13.525575	-0.236854	15.376058	-0.217283
	3	7.789884	+0.285287	9.371475	-0.260267		3	17.153587	+0.202841	18.885886	+0.191447
	4	10.949944	-0.240870	12.526476	+0.225258		4	20.587450	-0.182077	22.266861	-0.174147
	5	14.101725	+0.212340	15.676078	-0.201419		5	23.929631	+0.167294		
	6	17.249782	-0.192029	18.822999	+0.183841						
	7	20.395842	+0.176620	21.968393	-0.170188						
	8	23.540708	-0.164412								
3/2	1	2.460536	+0.525338	4.354435	+0.388891	17/2	1	10.180054	+0.318378	12.669130	-0.257833
	2	6.029292	-0.328062	7.655545	-0.290138		2	14.702493	-0.229449	16.586323	+0.210950
	3	9.261402	+0.263295	10.856531	+0.242910		3	18.390930	+0.197291	20.145940	-0.186505
	4	12.445260	-0.226711	14.029845	-0.213417		4	21.866965	-0.177623	23.563314	+0.170098
	5	15.611585	+0.202245	17.191285	+0.192678	19/2	1	11.241675	+0.307606	13.793646	+0.249935
	6	18.769469	-0.184363	20.346496	-0.177046		2	15.868463	-0.222927	17.784362	-0.205332
	7	21.922619	+0.170542	23.498023	+0.164709		3	19.615227	+0.192335	21.392422	+0.182067
5/2	1	3.632797	+0.457398	5.634297	-0.350669	21/2	1	12.299124	+0.298179	14.910648	-0.242951
	2	7.367009	-0.301449	9.030902	+0.270006		2	17.025072	-0.217118	18.971857	+0.200296
	3	10.663561	+0.247304	12.278863	-0.229783		3	20.828186	+0.187870	22.627032	-0.178048
	4	13.883370	-0.215670	15.480655	+0.203956		4	24.385974	-0.169950		
	5	17.072849	+0.194015	18.661309	-0.185432	23/2	1	13.353045	+0.289825	16.021196	+0.236710
	6	20.246945	-0.177917	21.830390	+0.171262		2	18.173567	-0.211893	20.150142	-0.195742
	7	23.412100	+0.165314	24.992411	-0.159953		3	22.031181	+0.183813	23.851147	+0.174383
7/2	1	4.762196	+0.415533	6.863232	+0.324651	25/2	1	14.403937	+0.282348	17.126125	-0.231081
	2	8.653134	-0.282237	10.356373	-0.254849		2	19.314945	-0.207156	21.320300	+0.191594
	3	12.018262	+0.234875	13.656304	+0.219318		3	23.225333	+0.180103		
	4	15.279081	-0.206685	16.891400	-0.196124	27/2	1	15.452196	+0.275596	18.226109	+0.225965
	5	18.496200	+0.187103	20.095393	+0.179270		2	20.450018	-0.202830	22.483219	-0.187792
	6	21.690284	-0.172377	23.281796	-0.166245		3	24.411571	+0.176690		
	7	24.870602	+0.160741				29/2	1	16.498138	+0.269455	19.321702
9/2	2	5.868420	+0.386006	8.060030	-0.305246	2		21.579459	-0.198856	23.639641	+0.184287
	3	9.904306	-0.267385	11.646354	+0.242810	31/2	1	17.542024	+0.263833	20.413362	+0.216981
4	13.337928	+0.224788	14.999624	-0.210673	2		22.703832	-0.195187	24.790191	-0.181040	
11/2	1	6.959746	+0.363557	9.234274	+0.289946	33/2	1	18.584071	+0.258658	21.501477	-0.213000
	2	11.129856	-0.255385	12.909478	-0.232895		2	23.823614	-0.191783		
	3	14.630406	+0.216349	16.315912	+0.203344	35/2	1	19.624460	+0.253871	22.586374	+0.209303
	4	17.977886	-0.192692	19.623229	-0.183714		2	24.939214	-0.188612		
	5	21.256291	+0.175987	22.879980	+0.169229	37/2	1	20.663347	+0.249423	23.668335	-0.205855
	6	24.496327	-0.163244				2	26.200000	-0.180000		
13/2	1	8.040535	+0.345649	10.391621	-0.277420	39/2	1	21.700865	+0.245275	24.747606	+0.202629
	2	12.335631	-0.245384	14.151399	+0.224513						
	3	15.901023	+0.209127	17.610124	-0.197009						
	4	19.291967	-0.187058	20.954335	+0.178651						
	5	22.602185	+0.171399	24.238863	-0.165043						

Values to greater accuracy and over a wider range are given in [10.31].

From National Bureau of Standards, Tables of spherical Bessel functions, vols. I, II. Columbia Univ. Press, New York, N.Y., 1947 (with permission).