

Stirnradgetriebe der Feinwerktechnik

Tabellen

DIN
58 405
Blatt 4

Spur gear drives for fine mechanics; tables

Engrenages cylindriques pour la mécanique de précision; tableaux

Maße in mm

In den Tabellen sind aus herstellungstechnischen Gründen zur Trennung der Dezimalstellen Punkte statt Kommata verwendet.

1. Zahnweiten w' (Siehe DIN 58 405 Blatt 1, Abschnitt 3.4)**1.1. Zahnweiten für Geradstirnräder**

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
10	-0,06	0,81	2	0,914	1,142	1,370	1,827	2,284	2,741	3,655	4,568	5,710	6,852	9,137	11,421	13,705
11	-0,11	0,64	2	0,916	1,146	1,375	1,833	2,291	2,749	3,666	4,582	5,728	6,873	9,165	11,456	13,747
12	-0,16	0,51	2	0,919	1,149	1,379	1,839	2,298	2,758	3,677	4,596	5,745	6,894	9,193	11,491	13,789
13	-0,21	0,40	2	0,922	1,153	1,383	1,844	2,305	2,766	3,688	4,610	5,763	6,915	9,221	11,526	13,831
	0,40	1,66	3	1,512	1,891	2,269	3,025	3,781	4,537	6,050	7,562	9,453	11,344	15,125	18,906	22,687
14	-0,25	0,30	2	0,925	1,156	1,387	1,850	2,312	2,775	3,699	4,624	5,780	6,936	9,249	11,561	13,873
	0,30	1,41	3	1,515	1,894	2,273	3,031	3,788	4,546	6,061	7,576	9,471	11,365	15,153	18,941	22,729
15	-0,29	0,21	2	0,928	1,160	1,391	1,855	2,319	2,783	3,711	4,638	5,798	6,957	9,277	11,596	13,915
	0,21	1,21	3	1,518	1,898	2,277	3,036	3,795	4,554	6,072	7,590	9,488	11,386	15,181	18,976	22,771
16	-0,34	0,14	2	0,930	1,163	1,396	1,861	2,326	2,791	3,722	4,652	5,815	6,978	9,305	11,631	13,957
	0,14	1,04	3	1,521	1,901	2,281	3,042	3,802	4,563	6,084	7,604	9,506	11,407	15,209	19,011	22,813
17	-0,37	0,07	2	0,933	1,167	1,400	1,867	2,333	2,800	3,733	4,666	5,833	6,999	9,333	11,666	13,999
	0,07	0,89	3	1,524	1,905	2,286	3,047	3,809	4,571	6,095	7,618	9,523	11,428	15,237	19,046	22,855
18	-0,41	0,00	2	0,936	1,170	1,404	1,872	2,340	2,808	3,744	4,680	5,850	7,020	9,361	11,701	14,041
	0,00	0,77	3	1,526	1,908	2,290	3,053	3,816	4,579	6,106	7,632	9,541	11,449	15,265	19,081	22,897
19	-0,45	-0,66	2	0,939	1,174	1,408	1,878	2,347	2,817	3,755	4,694	5,868	7,041	9,389	11,736	14,083
	-0,66	0,65	3	1,529	1,912	2,294	3,059	3,823	4,588	6,117	7,646	9,558	11,470	15,293	19,116	22,939
20	-0,49	-0,12	2	0,942	1,177	1,412	1,883	2,354	2,825	3,767	4,708	5,885	7,062	9,417	11,771	14,125
	-0,12	0,55	3	1,532	1,915	2,298	3,064	3,830	4,596	6,128	7,660	9,576	11,491	15,321	19,151	22,981
21	-0,52	-0,17	2	0,944	1,181	1,417	1,889	2,361	2,833	3,778	4,722	5,903	7,083	9,445	11,806	14,167
	-0,17	0,45	3	1,535	1,919	2,302	3,076	3,837	4,605	6,140	7,674	9,593	11,512	15,349	19,186	23,023
	0,45	1,44	4	2,125	2,657	3,188	4,251	5,313	6,376	8,501	10,627	13,283	15,940	21,253	26,566	31,880
22	-0,56	-0,23	2	0,947	1,184	1,421	1,895	2,368	2,842	3,789	4,736	5,920	7,104	9,473	11,841	14,209
	-0,23	0,36	3	1,538	1,922	2,307	3,075	3,844	4,613	6,151	7,688	9,611	11,533	15,377	19,221	23,065
	0,36	1,29	4	2,128	2,660	3,192	4,256	5,320	6,384	8,512	10,641	13,301	15,961	21,281	26,601	31,922
23	-0,59	-0,28	2	0,950	1,188	1,425	1,900	2,375	2,850	3,800	4,750	5,938	7,125	9,501	11,876	14,251
	-0,28	0,28	3	1,540	1,926	2,311	3,081	3,851	4,621	6,162	7,702	9,628	11,554	15,405	19,256	23,107
	0,28	1,15	4	2,131	2,664	3,196	4,262	5,327	6,393	8,524	10,655	13,318	15,982	21,309	26,636	31,964
24	-0,63	-0,33	2	0,953	1,191	1,429	1,906	2,382	2,859	3,811	4,764	5,955	7,146	9,529	11,911	14,293
	-0,33	0,21	3	1,543	1,929	2,315	3,087	3,858	4,630	6,173	7,716	9,646	11,575	15,433	19,291	23,149
	0,21	1,02	4	2,134	2,667	3,201	4,267	5,334	6,401	8,535	10,669	13,336	16,003	21,337	26,671	32,006
25	-0,66	-0,37	2	0,956	1,195	1,433	1,911	2,389	2,867	3,823	4,778	5,973	7,167	9,557	11,946	14,335
	-0,37	0,13	3	1,546	1,933	2,319	3,092	3,865	4,638	6,184	7,730	9,663	11,596	15,461	19,326	23,191
	0,13	0,90	4	2,137	2,671	3,205	4,273	5,341	6,410	8,546	10,683	13,353	16,024	21,365	26,706	32,048
26	-0,69	-0,42	2	0,958	1,198	1,438	1,917	2,396	2,875	3,834	4,792	5,990	7,189	9,585	11,981	14,377
	-0,42	0,07	3	1,549	1,936	2,323	3,098	3,872	4,647	6,196	7,744	9,681	11,617	15,489	19,361	23,233
	0,07	0,80	4	2,139	2,674	3,209	4,279	5,348	6,418	8,557	10,697	13,371	16,045	21,393	26,741	32,090
27	-0,73	-0,46	2	0,961	1,202	1,442	1,923	2,403	2,884	3,845	4,806	6,008	7,210	9,613	12,016	14,419
	-0,46	0,00	3	1,552	1,940	2,328	3,103	3,879	4,655	6,207	7,758	9,698	11,638	15,517	19,396	23,275
	0,00	0,70	4	2,142	2,678	3,213	4,284	5,355	6,426	8,568	10,711	13,388	16,066	21,421	26,777	32,132
28	-0,76	-0,51	2	0,964	1,205	1,446	1,928	2,410	2,892	3,856	4,820	6,025	7,231	9,641	12,051	14,461
	-0,51	-0,04	3	1,554	1,943	2,332	3,109	3,886	4,663	6,218	7,772	9,716	11,659	15,545	19,431	23,317
	-0,04	0,60	4	2,145	2,681	3,217	4,290	5,362	6,435	8,580	10,725	13,406	16,087	21,449	26,812	32,174
29	-0,79	-0,55	2	0,967	1,209	1,450	1,934	2,417	2,901	3,867	4,834	6,043	7,252	9,669	12,086	14,503
	-0,55	-0,12	3	1,557	1,947	2,336	3,115	3,893	4,672	6,229	7,786	9,733	11,680	15,573	19,466	23,359
	-0,12	0,51	4	2,148	2,685	3,222	4,295	5,369	6,443	8,591	10,739	13,423	16,108	21,477	26,847	32,216
30	-0,83	-0,59	2	0,970	1,212	1,455	1,939	2,424	2,909	3,879	4,848	6,060	7,273	9,697	12,121	14,545
	-0,59	-0,15	3	1,560	1,950	2,340	3,120	3,900	4,680	6,240	7,800	9,751	11,701	15,601	19,501	23,401
	-0,15	0,43	4	2,151	2,688	3,226	4,301	5,376	6,452	8,602	10,753	13,441	16,129	21,505	26,882	32,258
	0,43	1,23	5	2,741	3,426	4,111	5,482	6,852	8,223	10,964	13,705	17,131	20,557	27,410	34,262	41,114

Fortsetzung Seite 2 bis 30

Fachnormenausschuß Feinmechanik und Optik im Deutschen Normenausschuß (DNA)
Ausschuß Verzahnungen im DNA

Documents

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
31	-0.86	-0.63	2	0.972	1.216	1.459	1.945	2.431	2.917	3.890	4.862	6.078	7.294	9.725	12.156	14.587
	-0.63	-0.23	3	1.563	1.954	2.344	3.126	3.907	4.689	6.252	7.814	9.768	11.722	15.629	19.536	23.443
	-0.23	0.35	4	2.153	2.692	3.230	4.307	5.383	6.460	8.613	10.767	13.458	16.150	21.533	26.917	32.300
	0.35	1.16	5	2.744	3.430	4.116	5.488	6.859	8.231	10.975	13.719	17.148	20.578	27.438	34.297	41.156
32	-0.67	-0.29	3	1.566	1.957	2.349	3.131	3.914	4.697	6.263	7.828	9.786	11.743	15.657	19.571	23.485
	-0.29	0.27	4	2.156	2.695	3.234	4.312	5.390	6.468	8.625	10.781	13.476	16.171	21.561	26.952	32.342
	0.27	1.05	5	2.747	3.433	4.120	5.493	6.866	8.240	10.986	13.733	17.166	20.599	27.466	34.332	41.198
33	-0.71	-0.34	3	1.569	1.961	2.353	3.137	3.921	4.706	6.274	7.843	9.803	11.764	15.685	19.606	23.528
	-0.34	0.20	4	2.159	2.699	3.238	4.318	5.397	6.477	8.636	10.795	13.493	16.192	21.589	26.987	32.384
	0.20	0.94	5	2.749	3.437	4.124	5.499	6.873	8.248	10.997	13.747	17.183	20.620	27.494	34.367	41.240
34	-0.75	-0.39	3	1.571	1.964	2.357	3.143	3.928	4.714	6.285	7.857	9.821	11.785	15.713	19.641	23.570
	-0.39	0.13	4	2.162	2.702	3.243	4.323	5.404	6.485	8.647	10.809	13.511	16.213	21.617	27.022	32.426
	0.13	0.85	5	2.752	3.440	4.128	5.504	6.880	8.256	11.009	13.761	17.201	20.641	27.522	34.402	41.282
35	-0.79	-0.44	3	1.574	1.968	2.361	3.148	3.935	4.722	6.296	7.871	9.838	11.806	15.741	19.676	23.612
	-0.44	0.06	4	2.165	2.706	3.247	4.329	5.411	6.494	8.658	10.823	13.528	16.234	21.645	27.057	32.468
	0.06	0.75	5	2.755	3.444	4.132	5.510	6.887	8.265	11.020	13.775	17.218	20.662	27.550	34.437	41.324
36	-0.82	-0.49	3	1.577	1.971	2.365	3.154	3.942	4.731	6.308	7.885	9.856	11.827	15.769	19.711	23.654
	-0.49	0.00	4	2.167	2.709	3.251	4.335	5.418	6.502	8.669	10.837	13.546	16.255	21.673	27.092	32.510
	0.00	0.66	5	2.758	3.447	4.137	5.516	6.894	8.273	11.031	13.789	17.236	20.683	27.578	34.472	41.366
37	-0.86	-0.54	3	1.580	1.975	2.370	3.159	3.949	4.739	6.319	7.899	9.873	11.848	15.797	19.746	23.696
	-0.54	-0.06	4	2.170	2.713	3.255	4.340	5.425	6.510	8.681	10.851	13.563	16.276	21.701	27.127	32.552
	-0.06	0.58	5	2.761	3.451	4.141	5.521	6.901	8.282	11.042	13.803	17.253	20.704	27.606	34.507	41.408
38	-0.90	-0.58	3	1.583	1.978	2.374	3.165	3.956	4.748	6.330	7.913	9.891	11.869	15.825	19.781	23.738
	-0.58	-0.12	4	2.173	2.716	3.259	4.346	5.432	6.519	8.692	10.865	13.581	16.297	21.729	27.162	32.594
	-0.12	0.50	5	2.763	3.454	4.145	5.527	6.908	8.290	11.053	13.817	17.271	20.725	27.634	34.542	41.450
	0.50	1.30	6	3.354	4.192	5.031	6.708	8.384	10.061	13.415	16.769	20.961	25.153	33.538	41.922	50.307
39	-0.94	-0.63	3	1.585	1.982	2.378	3.171	3.963	4.756	6.341	7.927	9.908	11.890	15.853	19.816	23.780
	-0.63	-0.18	4	2.176	2.720	3.264	4.351	5.439	6.527	8.703	10.879	13.598	16.318	21.757	27.197	32.636
	-0.18	0.42	5	2.766	3.458	4.149	5.532	6.915	8.298	11.065	13.831	17.288	20.746	27.662	34.577	41.492
	0.42	1.19	6	3.357	4.196	5.035	6.713	8.391	10.070	13.426	16.783	20.979	25.174	33.566	41.957	50.349
40	-0.97	-0.67	3	1.588	1.985	2.382	3.176	3.970	4.764	6.352	7.941	9.926	11.911	15.881	19.851	23.822
	-0.67	-0.24	4	2.179	2.723	3.268	4.357	5.446	6.536	8.714	10.893	13.616	16.339	21.785	27.232	32.678
	-0.24	0.34	5	2.769	3.461	4.153	5.538	6.922	8.307	11.076	13.845	17.306	20.767	27.690	34.612	41.534
	0.34	1.09	6	3.359	4.199	5.039	6.719	8.398	10.078	13.438	16.797	20.996	25.195	33.594	41.992	50.391
41	-0.72	-0.29	4	2.181	2.727	3.272	4.363	5.453	6.544	8.725	10.907	13.633	16.360	21.813	27.267	32.720
	-0.29	0.27	5	2.772	3.465	4.158	5.544	6.929	8.315	11.087	13.859	17.324	20.788	27.718	34.647	41.576
	0.27	1.00	6	3.362	4.203	5.043	6.724	8.405	10.087	13.449	16.811	21.014	25.216	33.622	42.027	50.433
42	-0.76	-0.35	4	2.184	2.730	3.276	4.368	5.460	6.552	8.737	10.921	13.651	16.381	21.841	27.302	32.762
	-0.35	0.20	5	2.775	3.468	4.162	5.549	6.936	8.324	11.098	13.873	17.341	20.809	27.746	34.682	41.618
	0.20	0.90	6	3.365	4.206	5.047	6.730	8.412	10.095	13.460	16.825	21.031	25.237	33.650	42.062	50.475
43	-0.80	-0.40	4	2.187	2.734	3.280	4.374	5.467	6.561	8.748	10.935	13.668	16.402	21.869	27.337	32.804
	-0.40	0.13	5	2.777	3.472	4.166	5.555	6.943	8.332	11.109	13.887	17.359	20.830	27.774	34.717	41.660
	0.13	0.81	6	3.368	4.210	5.052	6.736	8.419	10.103	13.471	16.839	21.049	25.258	33.678	42.097	50.517
44	-0.84	-0.45	4	2.190	2.737	3.285	4.379	5.474	6.569	8.759	10.949	13.686	16.423	21.897	27.372	32.846
	-0.45	0.06	5	2.780	3.475	4.170	5.560	6.950	8.340	11.121	13.901	17.376	20.851	27.802	34.752	41.702
	0.06	0.73	6	3.371	4.213	5.056	6.741	8.426	10.112	13.482	16.853	21.066	25.279	33.706	42.132	50.559
45	-0.88	-0.50	4	2.193	2.741	3.289	4.385	5.481	6.578	8.770	10.963	13.703	16.444	21.925	27.407	32.888
	-0.50	0.00	5	2.783	3.479	4.174	5.566	6.957	8.349	11.132	13.915	17.394	20.872	27.830	34.787	41.744
	0.00	0.64	6	3.373	4.217	5.060	6.747	8.433	10.120	13.494	16.867	21.084	25.300	33.734	42.167	50.601
46	-0.93	-0.55	4	2.195	2.744	3.293	4.391	5.488	6.586	8.781	10.977	13.721	16.465	21.953	27.442	32.930
	-0.55	-0.06	5	2.786	3.482	4.179	5.572	6.964	8.357	11.143	13.929	17.411	20.893	27.858	34.822	41.787
	-0.06	0.56	6	3.376	4.220	5.064	6.752	8.440	10.129	13.505	16.881	21.101	25.321	33.762	42.202	50.643
47	-0.97	-0.60	4	2.198	2.748	3.297	4.396	5.495	6.594	8.793	10.991	13.738	16.486	21.981	27.477	32.972
	-0.60	-0.12	5	2.789	3.486	4.183	5.577	6.971	8.366	11.154	13.943	17.429	20.914	27.886	34.857	41.829
	-0.12	0.49	6	3.379	4.224	5.068	6.758	8.447	10.137	13.516	16.895	21.119	25.342	33.790	42.237	50.685
	0.49	1.24	7	3.969	4.962	5.954	7.939	9.924	11.908	15.878	19.847	24.8				

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
56	-1.01	-0.62	5	2.814	3.517	4.221	5.628	7.034	8.441	11.255	14.069	17.586	21.103	28.138	35.172	42.207
	-0.62	-0.12	6	3.404	4.255	5.106	6.808	8.511	10.213	13.617	17.021	21.276	25.532	34.042	42.553	51.063
	-0.12	0.48	7	3.995	4.993	5.992	7.989	9.987	11.984	15.979	19.973	24.966	29.960	39.946	49.933	59.919
	0.48	1.20	8	4.585	5.731	6.878	9.170	11.463	13.755	18.340	22.925	28.657	34.388	45.851	57.313	68.776
57	-1.05	-0.67	5	2.817	3.521	4.225	5.633	7.041	8.450	11.266	14.083	17.604	21.124	28.166	35.207	42.249
	-0.67	-0.18	6	3.407	4.259	5.111	6.814	8.518	10.221	13.628	17.035	21.294	25.553	34.070	42.588	51.105
	-0.18	0.41	7	3.997	4.997	5.996	7.995	9.994	11.992	15.990	19.987	24.984	29.981	39.974	49.968	59.961
	0.41	1.11	8	4.588	5.735	6.882	9.176	11.470	13.764	18.351	22.939	28.674	34.409	45.879	57.348	68.818
58	-1.10	-0.72	5	2.819	3.524	4.229	5.639	7.048	8.458	11.278	14.097	17.621	21.145	28.194	35.242	42.291
	-0.72	-0.24	6	3.410	4.262	5.115	6.820	8.525	10.229	13.639	17.049	21.311	25.574	34.098	42.623	51.147
	-0.24	0.33	7	4.000	5.000	6.000	8.000	10.001	12.001	16.001	20.001	25.001	30.002	40.002	50.003	60.003
	0.33	1.03	8	4.591	5.738	6.886	9.181	11.477	13.772	18.363	22.953	28.692	34.430	45.907	57.383	68.860
59	-0.77	-0.30	6	3.413	4.266	5.119	6.825	8.532	10.238	13.650	17.063	21.329	25.595	34.126	42.658	51.189
	-0.30	0.26	7	4.003	5.004	6.005	8.006	10.008	12.009	16.012	20.015	25.019	30.023	40.030	50.038	60.046
	0.26	0.94	8	4.593	5.742	6.890	9.187	11.484	13.780	18.374	22.967	28.709	34.451	45.935	57.418	68.902
	-0.81	-0.36	6	3.415	4.269	5.123	6.831	8.539	10.246	13.662	17.077	21.346	25.616	34.154	42.693	51.231
60	-0.36	0.20	7	4.006	5.007	6.009	8.012	10.015	12.018	16.023	20.029	25.036	30.044	40.058	50.073	60.088
	0.20	0.86	8	4.596	5.745	6.894	9.193	11.491	13.789	18.385	22.981	28.727	34.472	45.963	57.453	68.944
	-0.86	-0.41	6	3.418	4.273	5.127	6.836	8.546	10.255	13.673	17.091	21.364	25.637	34.182	42.728	51.273
	-0.41	0.13	7	4.009	5.011	6.013	8.017	10.022	12.026	16.035	20.043	25.054	30.065	40.086	50.108	60.130
61	0.13	0.78	8	4.599	5.749	6.899	9.198	11.498	13.797	18.396	22.995	28.744	34.493	45.991	57.488	68.986
	-0.91	-0.47	6	3.421	4.276	5.132	6.842	8.553	10.263	13.684	17.105	21.381	25.658	34.210	42.763	51.315
	-0.47	0.06	7	4.011	5.014	6.017	8.023	10.029	12.034	16.046	20.057	25.071	30.086	40.114	50.143	60.172
	0.06	0.70	8	4.602	5.752	6.903	9.204	11.505	13.806	18.407	23.009	28.762	34.514	46.019	57.523	69.028
63	-0.96	-0.52	6	3.424	4.280	5.136	6.848	8.560	10.271	13.695	17.119	21.399	25.679	34.238	42.798	51.357
	-0.52	0.00	7	4.014	5.018	6.021	8.028	10.036	12.041	16.057	20.071	25.089	30.107	40.142	50.178	60.214
	0.00	0.62	8	4.605	5.756	6.907	9.209	11.512	13.814	18.419	23.023	28.779	34.535	46.047	57.558	69.070
	-1.00	-0.58	6	3.427	4.283	5.140	6.853	8.567	10.280	13.706	17.133	21.416	25.700	34.266	42.833	51.399
64	-0.58	-0.06	7	4.017	5.021	6.026	8.034	10.043	12.051	16.068	20.085	25.106	30.128	40.170	50.213	60.256
	-0.06	0.55	8	4.607	5.759	6.911	9.215	11.519	13.822	18.430	23.037	28.797	34.556	46.075	57.593	69.112
	-1.05	-0.63	6	3.429	4.287	5.144	6.859	8.574	10.288	13.718	17.147	21.434	25.721	34.294	42.868	51.441
	-0.63	-0.12	7	4.020	5.025	6.030	8.040	10.050	12.060	16.079	20.099	25.124	30.149	40.198	50.248	60.298
65	-0.12	0.47	8	4.610	5.763	6.915	9.221	11.526	13.831	18.441	23.051	28.814	34.577	46.103	57.628	69.154
	0.47	1.18	9	5.201	6.501	7.801	10.401	13.002	15.602	20.803	26.003	32.504	39.005	52.007	65.009	78.010
	-1.09	-0.68	6	3.432	4.290	5.148	6.864	8.581	10.297	13.729	17.161	21.451	25.742	34.322	42.903	51.483
	-0.68	-0.19	7	4.023	5.028	6.034	8.045	10.057	12.068	16.091	20.113	25.142	30.170	40.226	50.283	60.340
66	-0.19	0.40	8	4.613	5.766	6.920	9.226	11.533	13.839	18.452	23.065	28.832	34.598	46.131	57.666	69.196
	0.40	1.09	9	5.203	6.504	7.805	10.407	13.009	15.610	20.814	26.017	32.522	39.026	52.035	65.044	78.052
	-1.13	-0.73	6	3.435	4.294	5.153	6.870	8.588	10.305	13.740	17.175	21.469	25.763	34.350	42.938	51.525
	-0.73	-0.24	7	4.025	5.032	6.038	8.051	10.064	12.076	16.102	20.127	25.159	30.191	40.254	50.318	60.382
67	-0.24	0.33	8	4.616	5.770	6.924	9.232	11.540	13.848	18.463	23.079	28.849	34.619	46.159	57.698	69.238
	0.33	1.01	9	5.206	6.508	7.809	10.413	13.016	15.619	20.825	26.031	32.539	39.047	52.063	65.079	78.094
	-0.78	-0.30	7	4.028	5.035	6.042	8.056	10.071	12.085	16.113	20.141	25.177	30.212	40.282	50.353	60.424
	-0.30	0.26	8	4.619	5.773	6.928	9.237	11.547	13.856	18.475	23.093	28.867	34.640	46.187	57.733	69.280
68	0.26	0.93	9	5.209	6.511	7.814	10.418	13.023	15.627	20.836	26.045	32.557	39.068	52.091	65.114	78.136
	-0.83	-0.36	7	4.031	5.039	6.047	8.062	10.078	12.093	16.124	20.155	25.194	30.233	40.310	50.388	60.466
	-0.36	0.20	8	4.621	5.777	6.932	9.243	11.554	13.864	18.486	23.107	28.884	34.661	46.215	57.768	69.322
	0.20	0.85	9	5.212	6.515	7.818	10.424	13.030	15.636	20.848	26.059	32.574	39.089	52.119	65.149	78.178
70	-0.88	-0.42	7	4.034	5.042	6.051	8.068	10.085	12.102	16.135	20.169	25.212	30.254	40.338	50.423	60.508
	-0.42	0.13	8	4.625	5.780	6.936	9.249	11.561	13.873	18.497	23.121	28.902	34.682	46.243	57.803	69.364
	0.13	0.77	9	5.215	6.518	7.822	10.429	13.037	15.644	20.859	26.073	32.592	39.110	52.147	65.184	78.220
	-0.93	-0.47	7	4.037	5.046	6.055	8.073	10.092	12.110	16.147	20.183	25.229	30.275	40.366	50.458	60.550
71	-0.47	0.06	8	4.627	5.784	6.941	9.254	11.568	13.881	18.508	23.135	28.919	34.703	46.271	57.838	69.406
	0.06	0.69	9	5.217	6.522	7.826	10.435	13.044	15.652	20.870	26.087	32.609	39.131	52.175	65.219	78.262
	-0.98	-0.53	7	4.039	5.049	6.059	8.079	10.099	12.118	16.158	20.197	25.247	30.296	40.394	50.493	60.592
	-0.53	0.00	8	4.630	5.787	6.945	9.260	11.575	13.890	18.519	23.149	28.937	34.724	46.299	57.873	69.448
72	0.00	0.62	9	5.220	6.525	7.830	10.441	13.051	15.661	20.881	26.102	32.627	39.152	52.203	65.254	78.305
	-1.03	-0.58	7	4.042	5.053	6.063	8.084	10.106	12.127	16.169	20.211	25.264	30.317	40.422	50.528	60.634
	-0.58	-0.06	8	4.633	5.791	6.949	9.265	11.582	13.898	18.531	23.163	28.954	34.745	46.327	57.908	69.490
	-0.06	0.54	9	5.223	6.529	7.835	10.446	13.058	15.669	20.892	26.116	32.644	39.173	52.231	65.289	78.347
74	-1.07	-0.64	7	4.0.												

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
81	-1.00	-0.53	8	4.655	5.819	6.983	9.310	11.638	13.965	18.620	23.275	29.094	34.913	46.551	58.189	69.826
	-0.53	0.00	9	5.246	6.557	7.868	10.491	13.114	15.737	20.982	26.228	32.784	39.341	52.455	65.569	78.683
	0.00	0.61	10	5.836	7.295	8.754	11.672	14.590	17.508	23.344	29.180	36.475	43.770	58.359	72.949	87.539
82	-1.04	-0.59	8	4.658	5.822	6.987	9.316	11.645	13.974	18.632	23.289	29.112	34.934	46.579	58.224	69.868
	-0.59	-0.06	9	5.248	6.560	7.872	10.497	13.121	15.745	20.993	26.242	32.802	39.362	52.483	65.604	78.725
	-0.06	0.54	10	5.839	7.298	8.758	11.677	14.597	17.516	23.355	29.194	36.492	43.791	58.387	72.984	87.581
83	-1.09	-0.64	8	4.661	5.826	6.991	9.321	11.652	13.982	18.643	23.303	29.129	34.955	46.607	58.259	69.910
	-0.64	-0.13	9	5.251	6.564	7.877	10.502	13.128	15.753	21.004	26.256	32.819	39.383	52.511	65.639	78.767
	-0.13	0.47	10	5.842	7.302	8.762	11.683	14.604	17.525	23.366	29.208	36.510	43.812	58.415	73.019	87.623
84	-1.04	-0.70	8	4.663	5.829	6.995	9.327	11.659	13.990	18.654	23.317	29.147	34.976	46.635	58.294	69.952
	-0.70	-0.19	9	5.254	6.567	7.881	10.508	13.135	15.762	21.016	26.270	32.837	39.404	52.539	65.674	78.809
	-0.19	0.40	10	5.844	7.305	8.767	11.689	14.611	17.533	23.377	29.222	36.527	43.833	58.443	73.054	87.665
85	-1.04	-0.70	11	6.435	8.043	9.652	12.870	16.087	19.304	25.739	32.174	40.217	48.261	64.348	80.435	96.521
	-0.75	-0.25	9	5.257	6.571	7.885	10.513	13.142	15.770	21.027	26.284	32.854	39.425	52.567	65.709	78.851
	-0.25	0.33	10	5.847	7.309	8.771	11.694	14.618	17.541	23.389	29.236	36.545	43.854	58.471	73.089	87.707
86	-0.75	-0.33	11	6.438	8.047	9.656	12.875	16.094	19.313	25.750	32.188	40.235	48.282	64.376	80.470	96.563
	-0.80	-0.31	9	5.260	6.574	7.889	10.519	13.149	15.779	21.038	26.298	32.872	39.446	52.595	65.744	78.893
	-0.31	0.26	10	5.850	7.312	8.775	11.700	14.625	17.550	23.400	29.250	36.562	43.875	58.499	73.124	87.749
87	-0.80	-0.31	11	6.440	8.050	9.661	12.881	16.101	19.321	25.761	32.202	40.252	48.303	64.404	80.505	96.606
	-0.86	-0.37	9	5.262	6.578	7.893	10.525	13.156	15.787	21.049	26.312	32.889	39.467	52.623	65.779	78.935
	-0.37	0.19	10	5.853	7.316	8.779	11.705	14.632	17.558	23.411	29.264	36.580	43.896	58.527	73.159	87.791
88	-0.86	-0.37	11	6.443	8.054	9.665	12.886	16.108	19.330	25.773	32.216	40.270	48.324	64.432	80.540	96.648
	-0.91	-0.42	9	5.265	6.581	7.898	10.530	13.163	15.795	21.060	26.326	32.907	39.488	52.651	65.814	78.977
	-0.42	0.13	10	5.856	7.319	8.783	11.711	14.639	17.567	23.422	29.278	36.597	43.917	58.555	73.194	87.833
89	-0.91	-0.42	11	6.446	8.057	9.669	12.892	16.115	19.338	25.784	32.230	40.287	48.345	64.460	80.575	96.690
	-0.96	-0.48	9	5.268	6.585	7.902	10.536	13.170	15.804	21.072	26.340	32.924	39.509	52.679	65.849	79.019
	-0.48	0.06	10	5.858	7.323	8.788	11.717	14.646	17.575	23.433	29.292	36.615	43.938	58.583	73.229	87.875
90	-0.96	-0.48	11	6.449	8.061	9.673	12.898	16.122	19.346	25.795	32.244	40.305	48.366	64.488	80.610	96.732
	-1.01	-0.54	9	5.271	6.588	7.906	10.541	13.177	15.812	21.083	26.354	32.942	39.530	52.707	65.884	79.061
	-0.54	0.00	10	5.861	7.326	8.792	11.722	14.653	17.583	23.445	29.306	36.632	43.959	58.611	73.264	87.917
91	-1.01	-0.54	11	6.452	8.064	9.677	12.903	16.129	19.355	25.806	32.258	40.322	48.387	64.516	80.645	96.774
	-1.06	-0.59	9	5.274	6.592	7.910	10.547	13.184	15.821	21.094	26.368	32.960	39.551	52.735	65.919	79.103
	-0.59	-0.06	10	5.864	7.330	8.796	11.728	14.660	17.592	23.456	29.320	36.650	43.980	58.639	73.299	87.959
92	-1.06	-0.59	11	6.454	8.068	9.682	12.909	16.136	19.363	25.817	32.272	40.340	48.408	64.544	80.680	96.816
	-1.11	-0.65	9	5.276	6.595	7.914	10.553	13.191	15.829	21.105	26.382	32.977	39.572	52.763	65.954	79.145
	-0.65	-0.13	10	5.867	7.333	8.800	11.733	14.667	17.600	23.467	29.334	36.667	44.001	58.667	73.334	88.001
93	-1.11	-0.65	11	6.457	8.071	9.686	12.914	16.143	19.372	25.829	32.286	40.357	48.429	64.572	80.715	96.858
	-0.13	0.47	12	7.048	8.810	10.571	14.095	17.619	21.143	28.190	35.238	44.048	52.857	70.476	88.095	105.714
	-0.47	1.13	12	7.048	8.810	10.571	14.095	17.619	21.143	28.190	35.238	44.048	52.857	70.476	88.095	105.714
94	-1.16	-0.70	9	5.279	6.599	7.919	10.558	13.198	15.837	21.116	26.396	32.995	39.593	52.791	65.989	79.187
	-0.70	-0.19	10	5.870	7.337	8.804	11.739	14.674	17.609	23.478	29.348	36.685	44.022	58.695	73.369	88.043
	-0.19	0.40	11	6.460	8.075	9.690	12.920	16.150	19.380	25.840	32.300	40.375	48.450	64.600	80.750	96.900
95	-1.16	-0.70	12	7.050	8.813	10.576	14.101	17.626	21.151	28.202	35.252	44.065	52.878	70.504	88.130	105.756
	-0.76	-0.25	10	5.872	7.340	8.809	11.745	14.681	17.617	23.489	29.362	36.702	44.043	58.723	73.404	88.085
	-0.25	0.33	11	6.463	8.078	9.694	12.926	16.157	19.388	25.851	32.314	40.392	48.471	64.628	80.785	96.942
96	-0.76	-0.25	12	7.053	8.817	10.580	14.106	17.633	21.160	28.213	35.266	44.083	52.899	70.532	88.165	105.798
	-0.81	-0.31	10	5.875	7.344	8.813	11.750	14.688	17.625	23.501	29.376	36.720	44.064	58.752	73.439	88.127
	-0.31	0.26	11	6.466	8.082	9.698	12.931	16.164	19.397	25.862	32.328	40.410	48.492	64.656	80.820	96.984
97	-0.81	-0.31	12	7.056	8.820	10.584	14.112	17.640	21.168	28.224	35.280	44.100	52.920	70.560	88.200	105.840
	-0.87	-0.37	10	5.878	7.347	8.817	11.756	14.695	17.634	23.512	29.390	36.737	44.085	58.780	73.474	88.169
	-0.37	0.19	11	6.468	8.085	9.703	12.937	16.171	19.405	25.874	32.342	40.427	48.513	64.684	80.855	97.026
98	-0.87	-0.37	12	7.059	8.824	10.588	14.118	17.647	21.176	28.235	35.294	44.118	52.941	70.588	88.235	105.882
	-0.92	-0.43	10	5.881	7.351	8.821	11.762	14.702	17.642	23.523	29.404	36.755	44.106	58.808	73.509	88.211
	-0.43	0.13	11	6.471	8.089	9.707	12.942	16.178	19.414	25.885	32.356	40.445	48.534	64.712	80.890	97.068
99	-0.92	-0.43	12	7.062	8.827	10.592	14.123	17.654	21.185	28.246	35.308	44.135	52.962	70.616	88.270	105.924
	-0.97	-0.48	10	5.884	7.354	8.825	11.767	14.709	17.651	23.534	29.418	36.772	44.127	58.836	73.544	88.253
	-0.48	0.06	11	6.474	8.092	9.711	12.948	16.185	19.422	25.896	32.370	40.462	48.555	64.740	80.925	97.110
100	-0.97	-0.48	12	7.064	8.831	10.597	14.129	17.661	21.193	28.258	35.322	44.153	52.983	70.644	88.305	105.966
	-1.02	-0.54	10	5.886	7.358	8.830	11.773	14.716	17.659	23.545	29.432	36.790	44.148	58.864	73.579	88.295

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
106	-0.93	-0.43	11	6.496	8.120	9.745	12.993	16.241	19.489	25.986	32.482	40.602	48.723	64.964	81.205	97.446
	-0.43	0.13	12	7.087	8.859	10.630	14.174	17.717	21.260	28.347	35.434	44.293	53.151	70.868	88.585	106.302
	0.13	0.74	13	7.677	9.597	11.516	15.354	19.193	23.032	30.709	38.386	47.983	57.579	76.772	95.966	115.159
107	-0.98	-0.49	11	6.499	8.124	9.749	12.998	16.248	19.498	25.997	32.496	40.620	48.744	64.992	81.240	97.488
	-0.49	0.06	12	7.090	8.862	10.634	14.179	17.724	21.269	28.358	35.448	44.310	53.172	70.896	88.620	106.344
	0.06	0.67	13	7.680	9.600	11.520	15.360	19.200	23.040	30.720	38.400	48.000	57.600	76.800	96.001	115.201
108	-1.03	-0.54	11	6.502	8.127	9.753	13.004	16.255	19.506	26.008	32.510	40.637	48.765	65.020	81.275	97.530
	-0.54	0.00	12	7.092	8.866	10.639	14.185	17.731	21.277	28.370	35.462	44.328	53.193	70.924	88.655	106.386
	0.00	0.60	13	7.683	9.604	11.524	15.366	19.207	23.049	30.731	38.414	48.018	57.621	76.828	96.036	115.243
109	-1.08	-0.60	11	6.505	8.131	9.757	13.010	16.262	19.514	26.019	32.524	40.655	48.786	65.048	81.310	97.572
	-0.60	-0.06	12	7.095	8.869	10.643	14.190	17.738	21.286	28.381	35.476	44.345	53.214	70.952	88.690	106.428
	-0.06	0.53	13	7.686	9.607	11.528	15.371	19.214	23.057	30.743	38.428	48.035	57.642	76.856	96.071	115.285
110	-1.13	-0.66	11	6.508	8.134	9.761	13.015	16.269	19.523	26.030	32.538	40.672	48.807	65.076	81.345	97.614
	-0.66	-0.13	12	7.098	8.873	10.647	14.196	17.745	21.294	28.392	35.490	44.363	53.235	70.980	88.725	106.470
	-0.13	0.46	13	7.688	9.611	11.533	15.377	19.221	23.065	30.754	38.442	48.053	57.663	76.884	96.106	115.327
	0.46	1.11	14	8.279	10.349	12.418	16.558	20.697	24.837	33.115	41.394	51.743	62.092	82.789	103.486	124.183
111	-1.19	-0.71	11	6.510	8.138	9.766	13.021	16.276	19.531	26.042	32.552	40.690	48.828	65.104	81.380	97.656
	-0.71	-0.19	12	7.101	8.876	10.651	14.202	17.752	21.302	28.403	35.504	44.380	53.256	71.008	88.760	106.512
	-0.19	0.39	13	7.691	9.614	11.537	15.382	19.228	23.074	30.765	38.456	48.070	57.684	76.912	96.141	115.369
	0.39	1.03	14	8.282	10.352	12.423	16.562	20.704	24.845	33.127	41.408	51.760	62.113	82.817	103.521	124.225
112	-0.77	-0.25	12	7.104	8.880	10.655	14.207	17.759	21.311	28.414	35.518	44.398	53.277	71.036	88.795	106.554
	-0.25	0.33	13	7.694	9.618	11.541	15.388	19.235	23.082	30.776	38.470	48.088	57.705	76.940	96.176	115.411
	0.33	0.96	14	8.284	10.356	12.427	16.569	20.711	24.853	33.138	41.422	51.778	62.134	82.845	103.556	124.267
113	-0.82	-0.31	12	7.106	8.883	10.660	14.213	17.766	21.319	28.426	35.532	44.415	53.298	71.064	88.830	106.596
	-0.31	0.26	13	7.697	9.621	11.545	15.394	19.242	23.091	30.787	38.484	48.105	57.726	76.968	96.211	115.453
	0.26	0.88	14	8.287	10.359	12.431	16.575	20.718	24.862	33.149	41.436	51.795	62.155	82.873	103.591	124.309
114	-0.88	-0.37	12	7.109	8.887	10.664	14.218	17.773	21.328	28.437	35.546	44.433	53.319	71.092	88.865	106.638
	-0.37	0.19	13	7.700	9.625	11.549	15.399	19.249	23.099	30.799	38.498	48.123	57.747	76.997	96.246	115.495
	0.19	0.81	14	8.290	10.363	12.435	16.580	20.725	24.870	33.160	41.450	51.813	62.176	82.901	103.626	124.351
115	-0.93	-0.43	12	7.112	8.890	10.668	14.224	17.780	21.336	28.448	35.560	44.450	53.340	71.120	88.900	106.680
	-0.43	0.13	13	7.702	9.628	11.554	15.405	19.256	23.107	30.810	38.512	48.140	57.768	77.025	96.281	115.537
	0.13	0.74	14	8.293	10.366	12.439	16.586	20.732	24.879	33.172	41.464	51.830	62.197	82.929	103.661	124.393
116	-0.99	-0.49	12	7.115	8.894	10.672	14.230	17.787	21.344	28.459	35.574	44.468	53.361	71.148	88.935	106.722
	-0.49	0.06	13	7.705	9.632	11.558	15.411	19.263	23.116	30.821	38.526	48.158	57.789	77.053	96.316	115.579
	0.06	0.67	14	8.296	10.370	12.444	16.591	20.739	24.887	33.183	41.478	51.848	62.218	82.957	103.696	124.435
117	-1.04	-0.55	12	7.118	8.897	10.676	14.235	17.794	21.353	28.471	35.588	44.485	53.382	71.176	88.970	106.764
	-0.55	0.00	13	7.708	9.635	11.562	15.416	19.270	23.124	30.832	38.540	48.175	57.810	77.081	96.351	115.621
	0.00	0.60	14	8.298	10.373	12.448	16.597	20.746	24.895	33.194	41.492	51.865	62.239	82.985	103.731	124.477
118	-1.09	-0.60	12	7.120	8.901	10.681	14.241	17.801	21.361	28.482	35.602	44.503	53.403	71.204	89.005	106.806
	-0.60	-0.06	13	7.711	9.639	11.566	15.422	19.277	23.133	30.843	38.554	48.193	57.831	77.109	96.386	115.663
	-0.06	0.53	14	8.301	10.377	12.452	16.603	20.753	24.904	33.205	41.506	51.883	62.260	83.013	103.766	124.519
119	-1.14	-0.66	12	7.123	8.904	10.685	14.246	17.808	21.370	28.493	35.616	44.520	53.424	71.232	89.040	106.848
	-0.66	-0.13	13	7.714	9.642	11.570	15.427	19.284	23.141	30.855	38.568	48.210	57.852	77.137	96.421	115.705
	-0.13	0.46	14	8.304	10.380	12.456	16.608	20.760	24.912	33.216	41.520	51.901	62.281	83.041	103.801	124.561
	0.46	1.10	15	8.895	11.118	13.342	17.789	22.236	26.684	35.578	44.473	55.591	66.709	88.945	111.181	133.418
120	-1.20	-0.72	12	7.126	8.908	10.689	14.252	17.815	21.378	28.504	35.630	44.538	53.445	71.260	89.075	106.890
	-0.72	-0.19	13	7.716	9.646	11.575	15.433	19.291	23.149	30.866	38.582	48.228	57.873	77.165	96.456	115.747
	-0.19	0.39	14	8.307	10.384	12.460	16.614	20.767	24.921	33.228	41.534	51.918	62.302	83.069	103.836	124.603
	0.39	1.03	15	8.897	11.122	13.346	17.795	22.243	26.692	35.589	44.487	55.608	66.730	88.973	111.216	133.460
121	-0.77	-0.25	13	7.719	9.649	11.579	15.439	19.298	23.158	30.877	38.596	48.245	57.894	77.193	96.491	115.789
	-0.25	0.33	14	8.310	10.387	12.465	16.619	20.774	24.929	33.239	41.548	51.936	62.323	83.097	103.871	124.645
	0.33	0.95	15	8.900	11.125	13.350	17.800	22.250	26.700	35.600	44.501	55.626	66.751	89.001	111.251	133.502
122	-0.83	-0.31	13	7.722	9.653	11.583	15.444	19.305	23.166	30.888	38.610	48.263	57.915	77.221	96.526	115.831
	-0.31	0.26	14	8.312	10.391	12.469	16.625	20.781	24.937	33.250	41.562	51.953	62.344	83.125	103.906	124.687
	0.26	0.88	15	8.903	11.129	13.354	17.806	22.257	26.709	35.612	44.515	55.643	66.772	89.029	111.286	133.544
123	-0.88	-0.37	13	7.725	9.656	11.587	15.450	19.312	23.175	30.899	38.624	48.280	57.936	77.249	96.561	115.873
	-0.37	0.19	14	8.315	10.394	12.473	16.631	20.788	24.946	33.261	41.576	51.971	62.365	83.153	103.941	124.729
	0.19	0.81	15	8.906	11.132	13.359	17.811	22.264	26.717	35.623	44.529	55.661	66.793	89.057	111.321	133.586
124	-0.94	-0.43	13	7.728	9.660	<										

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
131	-0.83	-0.31	14	8.338	10.422	12.507	16.675	20.844	25.013	33.351	41.688	52.111	62.533	83.377	104.221	125.065
	-0.31	0.26	15	8.928	11.160	13.392	17.856	22.320	26.784	35.712	44.641	55.801	66.961	89.281	111.602	133.922
	0.26	0.88	16	9.519	11.898	14.278	19.037	23.796	28.556	38.074	47.593	59.491	71.389	95.185	118.982	142.778
132	-0.89	-0.37	14	8.340	10.426	12.511	16.681	20.851	25.021	33.362	41.702	52.128	62.554	83.405	104.256	125.107
	-0.37	0.19	15	8.931	11.164	13.396	17.862	22.327	26.793	35.724	44.655	55.818	66.982	89.309	111.637	133.964
	0.19	0.81	16	9.521	11.902	14.282	19.043	23.803	28.564	38.085	47.607	59.508	71.410	95.213	119.017	142.820
133	-0.94	-0.43	14	8.343	10.429	12.515	16.687	20.858	25.030	33.373	41.716	52.146	62.575	83.433	104.291	125.149
	-0.43	0.13	15	8.934	11.167	13.401	17.867	22.334	26.801	35.735	44.669	55.836	67.003	89.337	111.672	134.006
	0.13	0.73	16	9.524	11.905	14.286	19.048	23.810	28.572	38.097	47.621	59.526	71.431	95.241	119.052	142.862
134	-1.00	-0.49	14	8.346	10.433	12.519	16.692	20.865	25.038	33.384	41.730	52.163	62.596	83.461	104.326	125.191
	-0.49	0.06	15	8.937	11.171	13.405	17.873	22.341	26.810	35.746	44.683	55.853	67.024	89.365	111.707	134.048
	0.06	0.66	16	9.527	11.909	14.290	19.054	23.817	28.581	38.108	47.635	59.543	71.452	95.270	119.087	142.904
135	-1.05	-0.55	14	8.349	10.436	12.523	16.698	20.872	25.047	33.396	41.744	52.181	62.617	83.489	104.361	125.233
	-0.55	0.00	15	8.939	11.174	13.409	17.879	22.348	26.818	35.757	44.697	55.871	67.045	89.393	111.742	134.090
	0.00	0.60	16	9.530	11.912	14.295	19.060	23.824	28.589	38.119	47.649	59.561	71.473	95.298	119.122	142.946
136	-1.11	-0.61	14	8.352	10.440	12.528	16.703	20.879	25.055	33.407	41.758	52.198	62.638	83.517	104.396	125.275
	-0.61	-0.06	15	8.942	11.178	13.413	17.884	22.355	26.826	35.769	44.711	55.888	67.066	89.421	111.777	134.132
	-0.06	0.53	16	9.533	11.916	14.299	19.065	23.831	28.598	38.130	47.663	59.578	71.494	95.326	119.157	142.988
137	-1.16	-0.67	14	8.355	10.443	12.532	16.709	20.886	25.064	33.418	41.773	52.216	62.659	83.545	104.431	125.318
	-0.67	-0.13	15	8.945	11.181	13.417	17.890	22.362	26.835	35.780	44.725	55.906	67.087	89.449	111.812	134.174
	-0.13	0.46	16	9.535	11.919	14.303	19.071	23.838	28.606	38.141	47.677	59.596	71.515	95.354	119.192	143.030
138	-1.21	-0.72	14	8.357	10.447	12.536	16.715	20.893	25.072	33.429	41.787	52.233	62.680	83.573	104.466	125.360
	-0.72	-0.19	15	8.948	11.185	13.422	17.895	22.369	26.843	35.791	44.739	55.923	67.108	89.477	111.847	134.216
	-0.19	0.39	16	9.538	11.923	14.307	19.076	23.845	28.614	38.153	47.691	59.613	71.536	95.382	119.227	143.072
139	-0.78	-0.25	15	8.951	11.188	13.426	17.901	22.376	26.852	35.802	44.753	55.941	67.129	89.505	111.882	134.258
	-0.25	0.32	16	9.541	11.926	14.311	19.082	23.852	28.623	38.164	47.705	59.631	71.557	95.410	119.262	143.114
	0.32	0.94	17	10.131	12.664	15.197	20.263	25.328	30.394	40.526	50.657	63.321	75.985	101.314	126.642	151.971
140	-0.84	-0.31	15	8.953	11.192	13.430	17.907	22.383	26.860	35.813	44.767	55.958	67.150	89.533	111.917	134.300
	-0.31	0.26	16	9.544	11.930	14.316	19.088	23.859	28.631	38.175	47.719	59.648	71.578	95.438	119.297	143.156
	0.26	0.87	17	10.134	12.668	15.201	20.268	25.335	30.403	40.537	50.671	63.339	76.006	101.342	126.677	152.013

1.2. Zahnweiten für Schrägstirnräder mit $\beta_0 = 10^\circ$

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
10	-0.08	0.73	2	0.915	1.144	1.372	1.830	2.287	2.745	3.660	4.575	5.718	6.862	9.149	11.436	13.724
11	-0.14	0.57	2	0.918	1.147	1.377	1.836	2.295	2.753	3.671	4.589	5.736	6.884	9.178	11.473	13.767
12	-0.19	0.45	2	0.921	1.151	1.381	1.842	2.302	2.762	3.683	4.604	5.755	6.906	9.208	11.509	13.811
	0.45	1.80	3	1.511	1.889	2.267	3.022	3.778	4.534	6.045	7.556	9.445	11.334	15.112	18.890	22.668
13	-0.23	0.34	2	0.924	1.155	1.386	1.847	2.309	2.771	3.695	4.618	5.773	6.928	9.237	11.546	13.855
	0.34	1.51	3	1.514	1.893	2.271	3.028	3.785	4.542	6.056	7.571	9.463	11.356	15.141	18.926	22.712
14	-0.28	0.25	2	0.927	1.158	1.390	1.853	2.317	2.780	3.706	4.633	5.791	6.950	9.266	11.583	13.899
	0.25	1.28	3	1.517	1.896	2.276	3.034	3.793	4.551	6.068	7.585	9.481	11.378	15.170	18.963	22.756
15	-0.32	0.16	2	0.930	1.162	1.394	1.859	2.324	2.789	3.718	4.648	5.810	6.972	9.295	11.619	13.943
	0.16	1.09	3	1.520	1.900	2.280	3.040	3.800	4.560	6.080	7.600	9.500	11.400	15.200	19.000	22.799
16	-0.36	0.09	2	0.932	1.166	1.399	1.865	2.331	2.797	3.730	4.662	5.828	6.993	9.325	11.656	13.987
	0.09	0.93	3	1.523	1.904	2.284	3.046	3.807	4.569	6.092	7.614	9.518	11.422	15.229	19.036	22.843
17	-0.40	0.02	2	0.935	1.169	1.403	1.871	2.338	2.806	3.742	4.677	5.846	7.015	9.354	11.692	14.031
	0.02	0.80	3	1.526	1.907	2.289	3.052	3.815	4.577	6.103	7.629	9.536	11.444	15.258	19.073	22.887
18	-0.44	-0.05	2	0.938	1.173	1.407	1.877	2.346	2.815	3.753	4.692	5.864	7.037	9.383	11.729	14.075
	-0.05	0.67	3	1.529	1.911	2.293	3.057	3.822	4.586	6.115	7.644	9.555	11.466	15.287	19.109	22.931
19	-0.48	-0.11	2	0.941	1.177	1.412	1.882	2.353	2.824	3.765	4.706	5.883	7.059	9.412	11.766	14.119
	-0.11	0.56	3	1.532	1.915	2.298	3.063	3.829	4.595	6.127	7.658	9.573	11.488	15.317	19.146	22.975
20	-0.52	-0.17	2	0.944	1.180	1.416	1.888	2.360	2.833	3.777	4.721	5.901	7.081	9.442	11.802	14.163
	-0.17	0.46	3	1.535	1.918	2.302	3.069	3.836	4.604	6.138	7.673	9.591	11.509	15.346	19.182	23.019
	0.46	1.46	4	2.125	2.656	3.188	4.256	5.313	6.375	8.500	10.625	13.281	15.938	21.250	26.563	31.875
21	-0.55	-0.22	2	0.947	1.184	1.421	1.894	2.368	2.841	3.788	4.735	5.919	7.103	9.471	11.839	14.206
	-0.22	0.37	3	1.538	1.922	2.306	3.075	3.844	4.613	6.150	7.688	9.610	11.531	15.375	19.219	23.063
	0.37	1.30	4	2.128	2.660	3.192	4.256	5.320	6.384	8.512	10.640	13.300	15.960	21.279	26.599	31.919
22	-0.59	-0.28	2	0.950	1.188	1.425	1.900	2.375	2.850	3.800	4.750	5.938	7.125	9.500	11.875	14.250
	-0.28	0.28	3	1.540	1.926	2.311	3.081	3.851	4.621	6.162	7.702	9.628	11.553	15.404	19.256	23.107
	0.28	1.15	4	2.131	2.664	3.196	4.262	5.327	6.393	8.523	10.654	13.318	15.982	21.309	26.636	31.963
23	-0.63	-0.33	2	0.953	1.191	1.429	1.906	2.382	2.859	3.812	4.765	5.956	7.147	9.529	11.912	14.294
	-0.33	0.20	3	1.543	1.929	2.315	3.087	3.858	4.630	6.173	7.717	9.646	11.575	15.434	19.292	23.151
	0.20	1.02	4	2.134	2.667	3.201	4.268	5.334	6.401	8.535	10.668	13.336	16.003	21.338	26.672	32.007
24	-0.66	-0.38	2	0.956	1.195	1.434	1.912	2.390	2.868	3.823	4.779	5.974	7.169	9.559	11.948	14.338
	-0.38	0.13	3	1.546	1.933	2.319	3.093	3.866	4.639	6.185	7.731	9.664	11.597	15.463	19.329	23.194
	0.13	0.90	4	2.137	2.671	3.205	4.273	5.342	6.410	8.547	10.684	13.355	16.025	21.367	26.709	32.051
25	-0.70	-0.42	2	0.959	1.198	1.438	1.918	2.397	2.876	3.835	4.794	5.992	7.191	9.588	11.985	14.382
	-0.42	0.06	3	1.549	1.937	2.324	3.098	3.873	4.648	6.197	7.746	9.683	11.619	15.492	19.365	23.238
	0.06	0.78	4	2.140	2.675	3.209	4.279	5.349	6.419	8.559	10.698	13.373	16.047	21.397	26.746	32.095
26	-0.73	-0.47	2	0.962	1.202	1.443	1.923	2.404	2.885	3.847	4.809	6.011	7.213	9.617	12.022	14.426
	-0.47	-0.01	3	1.552	1.940	2.328	3.104	3.880	4.656	6.209	7.761	9.701	11.641	15.522	19.402	23.282
	-0.01	0.66	4	2.143	2.678	3.214	4.285	5.356	6.428	8.570	10.713	13.391	16.069	21.426	26.782	32.139
27	-0.77	-0.51	2	0.965	1.206	1.447	1.929	2.412	2.894	3.859	4.823	6.029	7.235	9.647	12.058	14.470
	-0.51	-0.07	3	1.555	1.944	2.333	3.110	3.888	4.665	6.220	7.775	9.719	11.663	15.551	19.438	23.326
	-0.07	0.58	4	2.146	2.682	3.218	4.291	5.364	6.437	8.582	10.728	13.409	16.091	21.455	26.819	32.183
28	-0.80	-0.56	2	0.968	1.209	1.451	1.935	2.419	2.903	3.870	4.838	6.047	7.257	9.676	12.095	14.514
	-0.56	-0.14	3	1.558	1.948	2.337	3.116	3.895	4.674	6.232	7.790	9.738	11.685	15.580	19.475	23.370
	-0.14	0.49	4	2.148	2.686	3.223	4.297	5.371	6.445	8.594	10.742	13.428	16.113	21.484	26.855	32.226
29	-0.84	-0.59	2	0.971	1.213	1.456	1.941	2.426	2.912	3.882	4.853	6.066	7.279	9.705	12.131	14.558
	-0.59	-0.20	3	1.561	1.951	2.341	3.122	3.902	4.683	6.244	7.805	9.756	11.707	15.609	19.512	23.414
	-0.20	0.41	4	2.151	2.689	3.227	4.303	5.378	6.454	8.605	10.757	13.446	16.135	21.514	26.892	32.270
30	-0.87	-0.64	2	0.973	1.217	1.460	1.947	2.434	2.920	3.894	4.867	6.084	7.301	9.734	12.168	14.601
	-0.64	-0.25	3	1.564	1.955	2.346	3.128	3.910	4.692	6.255	7.819	9.774	11.729	15.639	19.548	23.458
	-0.25	0.32	4	2.154	2.693	3.231	4.309	5.386	6.463	8.617	10.771	13.464	16.157	21.543	26.929	32.314
31	-0.89	-0.66	2	0.976	1.221	1.464	1.951	2.442	2.928	3.902	4.880	6.101	7.320	9.758	12.196	14.633
	-0.66	-0.27	3	1.567	1.958	2.350	3.134	3.917	4.700	6.267	7.834	9.792	11.751	15.668	19.585	23.502
	-0.27	0.34	4	2.157	2.697	3.236	4.314	5.393	6.472	8.629	10.786	13.483	16.179	21.572	26.965	32.358
32	-0.91	-0.68	2	0.979	1.225	1.467	1.955	2.446	2.932	3.906	4.886	6.107	7.325	9.763	12.204	14.645
	-0.68	-0.29	3	1.570	1.962	2.355	3.139	3.924	4.709	6.279	7.849	9.811	11.773	15.697	19.621	23.546
	-0.29	0.36	4	2.160	2.700	3.240	4.320	5.400	6.480	8.641	10.801	13.501	16.201	21.601	27.002	32.402
33	-0.93	-0.70	2	0.982	1.229	1.470	1.959	2.450	2.936	3.910	4.890	6.113	7.333	9.771	12.218	14.657
	-0.70	-0.31	3	1.573	1.966	2.359	3.145	3.932	4.718	6.291	7.863	9.829	11.795	15.726	19.658	23.590
	-0.31	0.38	4	2.163	2.704	3.245	4.326	5.408	6.489	8.652	10.815	13.519	16.223	21.631	27.038	32.446
34	-0.95	-0.72	2	0.985	1.233	1.473	1.962	2.454	2.939	3.914	4.894	6.117	7.337	9.775	12.226	14.665
	-0.72	-0.33	3	1.576	1.969	2.363	3.151	3.939	4.727	6.302	7.878	9.847	11.817	15.756	19.695	23.633
	-0.33	0.40	4	2.166	2.707	3.249	4.332	5.415	6.498	8.664	10.830	13.537	16.245	21.660	27.075	32.490
35	-0.97	-0.74	2	0.988	1.237	1.476	1.965	2.458	2.942	3.918	4.898	6.121	7.341	9.779	12.234	14.673
	-0.74	-0.35	3	1.578	1.973	2.368	3.157	3.946	4.735	6.314	7.892	9.866	11.839	15.785	19.731	23.677
	-0.35	0.42	4	2.169	2.711	3.253	4.338	5.422	6.507	8.676	10.845	13.556	16.267	21.689	27.111	32.534
36	-0.99	-0.76	2	0.991	1.241	1.479	1.968	2.462	2.946	3.922	4.902	6.125	7.345	9.783	12.242	14.681
	-0.76	-0.37	3	1.581	1.977	2.372	3.163	3.954	4.744	6.326	7.907	9.884	11.861	15.814	19.768	23.721
	-0.37	0.44	4	2.172	2.715	3.258	4.344	5.430	6.516	8.687	10.859	13.574	16.289	21.718	27.148	32.578
37	-1.01	-0.78	2	0.994	1.245	1.482	1.971	2.466	2.949	3.926	4.906	6.129	7.349	9.787	12.250	14.689
	-0.78	-0.39	3	1.584	1.980	2.377	3.169	3.961	4							

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
38	-0.96	-0.66	3	1.587	1.984	2.381	3.175	3.968	4.762	6.349	7.936	9.920	11.905	15.873	19.841	23.809
	-0.66	-0.22	4	2.178	2.722	3.267	4.355	5.444	6.533	8.711	10.888	13.611	16.333	21.777	27.221	32.665
	-0.22	0.36	5	2.768	3.460	4.152	5.536	6.920	8.304	11.072	13.841	17.301	20.761	27.681	34.602	41.522
	0.36	1.12	6	3.359	4.199	5.038	6.717	8.396	10.076	13.434	16.793	20.991	25.189	33.585	41.982	50.378
39	-0.70	-0.28	4	2.181	2.726	3.271	4.361	5.452	6.542	8.722	10.903	13.629	16.355	21.806	27.258	32.709
	-0.28	0.29	5	2.771	3.464	4.157	5.542	6.928	8.313	11.084	13.855	17.319	20.783	27.710	34.638	41.566
	0.29	1.02	6	3.361	4.202	5.042	6.723	8.404	10.084	13.446	16.807	21.009	25.211	33.615	42.018	50.422
40	-0.75	-0.34	4	2.184	2.729	3.275	4.367	5.459	6.551	8.734	10.918	13.647	16.377	21.835	27.294	32.753
	-0.34	0.21	5	2.774	3.467	4.161	5.548	6.935	8.322	11.096	13.870	17.337	20.805	27.740	34.675	41.610
	0.21	0.92	6	3.364	4.206	5.047	6.729	8.411	10.093	13.458	16.822	21.028	25.233	33.644	42.055	50.466
41	-0.79	-0.39	4	2.186	2.733	3.280	4.373	5.466	6.559	8.746	10.932	13.665	16.399	21.865	27.331	32.797
	-0.39	0.14	5	2.777	3.471	4.165	5.554	6.942	8.331	11.108	13.885	17.356	20.827	27.769	34.711	41.654
	0.14	0.83	6	3.367	4.209	5.051	6.735	8.418	10.102	13.469	16.837	21.046	25.255	33.673	42.092	50.510
42	-0.84	-0.45	4	2.189	2.737	3.284	4.379	5.474	6.568	8.758	10.947	13.684	16.421	21.894	27.368	32.841
	-0.45	0.07	5	2.780	3.475	4.170	5.560	6.950	8.339	11.119	13.899	17.374	20.849	27.798	34.748	41.697
	0.07	0.74	6	3.370	4.213	5.055	6.741	8.426	10.111	13.481	16.851	21.064	25.277	33.703	42.128	50.554
43	-0.88	-0.50	4	2.192	2.740	3.288	4.385	5.481	6.577	8.769	10.962	13.702	16.442	21.923	27.404	32.885
	-0.50	0.00	5	2.783	3.478	4.174	5.566	6.957	8.348	11.131	13.914	17.392	20.871	27.828	34.784	41.741
	0.00	0.65	6	3.373	4.216	5.060	6.746	8.433	10.120	13.493	16.866	21.082	25.299	33.732	42.165	50.598
44	-0.92	-0.55	4	2.195	2.744	3.293	4.391	5.488	6.586	8.781	10.976	13.720	16.464	21.953	27.441	32.929
	-0.55	-0.06	5	2.786	3.482	4.179	5.571	6.964	8.357	11.143	13.928	17.411	20.893	27.857	34.821	41.785
	-0.06	0.57	6	3.376	4.220	5.064	6.752	8.440	10.128	13.504	16.881	21.101	25.321	33.761	42.201	50.642
45	-0.97	-0.60	4	2.198	2.748	3.297	4.396	5.495	6.595	8.793	10.991	13.739	16.486	21.982	27.477	32.973
	-0.60	-0.12	5	2.789	3.486	4.183	5.577	6.972	8.366	11.154	13.943	17.429	20.915	27.886	34.858	41.829
	-0.12	0.49	6	3.379	4.224	5.069	6.758	8.448	10.137	13.516	16.895	21.119	25.343	33.790	42.238	50.686
	0.49	1.24	7	3.969	4.962	5.954	7.939	9.924	11.908	15.878	19.847	24.809	29.771	39.695	49.618	59.542
46	-1.01	-0.65	4	2.201	2.751	3.302	4.402	5.503	6.603	8.804	11.006	13.757	16.508	22.011	27.514	33.017
	-0.65	-0.19	5	2.792	3.489	4.187	5.583	6.979	8.375	11.166	13.958	17.447	20.937	27.915	34.894	41.873
	-0.19	0.41	6	3.382	4.227	5.073	6.764	8.455	10.146	13.528	16.910	21.137	25.365	33.820	42.275	50.729
	0.41	1.14	7	3.972	4.965	5.957	7.945	9.931	11.917	15.890	19.862	24.827	29.793	39.724	49.655	59.586
47	-1.05	-0.70	4	2.204	2.755	3.306	4.408	5.510	6.612	8.816	11.020	13.775	16.530	22.040	27.550	33.060
	-0.70	-0.25	5	2.794	3.493	4.192	5.589	6.986	8.383	11.178	13.972	17.465	20.958	27.945	34.931	41.917
	-0.25	0.33	6	3.385	4.231	5.077	6.770	8.462	10.156	13.540	16.924	21.156	25.387	33.849	42.311	50.773
	0.33	1.04	7	3.975	4.969	5.963	7.951	9.938	11.926	15.901	19.877	24.846	29.815	39.753	49.691	59.630
48	-0.75	-0.31	5	2.797	3.497	4.196	5.595	6.993	8.392	11.190	13.987	17.484	20.980	27.974	34.967	41.961
	-0.31	0.26	6	3.388	4.235	5.082	6.776	8.470	10.163	13.551	16.939	21.174	25.409	33.878	42.348	50.817
	0.26	0.95	7	3.978	4.973	5.967	7.956	9.946	11.935	15.913	19.891	24.864	29.837	39.782	49.728	59.674
49	-0.80	-0.37	5	2.800	3.500	4.200	5.601	7.001	8.401	11.201	14.002	17.502	21.002	28.003	35.004	42.005
	-0.37	0.18	6	3.391	4.238	5.086	6.781	8.477	10.172	13.563	16.954	21.192	25.431	33.907	42.384	50.861
	0.18	0.86	7	3.981	4.976	5.972	7.962	9.953	11.943	15.925	19.906	24.882	29.859	39.812	49.765	59.717
50	-0.85	-0.42	5	2.803	3.504	4.205	5.606	7.008	8.410	11.213	14.016	17.520	21.024	28.032	35.040	42.049
	-0.42	0.11	6	3.394	4.242	5.090	6.787	8.484	10.181	13.575	16.968	21.210	25.452	33.937	42.421	50.905
	0.11	0.77	7	3.984	4.980	5.976	7.968	9.960	11.952	15.936	19.920	24.901	29.881	39.841	49.801	59.761
51	-0.89	-0.48	5	2.806	3.508	4.209	5.612	7.015	8.418	11.225	14.031	17.539	21.046	28.062	35.077	42.092
	-0.48	0.05	6	3.397	4.246	5.095	6.793	8.491	10.190	13.586	16.983	21.229	25.474	33.966	42.457	50.949
	0.05	0.69	7	3.987	4.984	5.981	7.974	9.968	11.961	15.948	19.935	24.919	29.903	39.870	49.838	59.805
52	-0.94	-0.53	5	2.809	3.511	4.214	5.618	7.023	8.427	11.236	14.045	17.557	21.068	28.091	35.114	42.136
	-0.53	-0.02	6	3.400	4.249	5.099	6.799	8.499	10.199	13.598	16.998	21.247	25.496	33.995	42.494	50.993
	-0.02	0.61	7	3.990	4.987	5.985	7.980	9.975	11.970	15.960	19.950	24.937	29.925	39.899	49.874	59.849
53	-0.99	-0.59	5	2.812	3.515	4.218	5.624	7.030	8.436	11.248	14.060	17.575	21.090	28.120	35.150	42.180
	-0.59	-0.09	6	3.402	4.253	5.104	6.805	8.506	10.207	13.610	17.012	21.265	25.518	34.024	42.531	51.037
	-0.09	0.53	7	3.993	4.991	5.989	7.986	9.982	11.979	15.971	19.964	24.955	29.947	39.929	49.911	59.893
54	-1.03	-0.64	5	2.815	3.519	4.222	5.630	7.037	8.445	11.260	14.075	17.593	21.112	28.149	35.187	42.224
	-0.64	-0.15	6	3.405	4.257	5.108	6.811	8.513	10.216	13.621	17.027	21.284	25.540	34.054	42.567	51.081
	-0.15	0.45	7	3.996	4.995	5.994	7.992	9.989	11.987	15.983	19.979	24.974	29.968	39.958	49.947	59.937
	0.45	1.17	8	4.586	5.733	6.879	9.172	11.466	13.759	18.345	22.931	28.664	34.397	45.862	57.328	68.793
55	-1.07	-0.69	5	2.818	3.522	4.227	5.636	7.045	8.454	11.271	14.089	17.612	21.134	28.179	35.223	42.268
	-0.69	-0.21	6	3.408	4.260	5.112	6.817	8.521	10.225	13.633	17.041	21.302	25.562	34.083	42.604	51.124
	-0.21	0.37	7	3.999	4.998	5.998	7.997	9.997	11.996	15.995	19.994	24.992	29.990	39.987	49.984	59.981
	0.37	1.07	8	4.589	5.736	6.884	9.178	11.473	13.767	18.357	22.946	28.682	34.419	45.892	57.364	68.837
56	-C.74	-0.27	6	3.411	4.264	5.117	6.822	8.528	10.							

z	Profilverschiebungsfaktor x		z'	Zahnweite w' bei einem Modul m												
	über	bis		0,2	0,25	0,3	0,4	0,5	0,6	0,8	1,0	1,25	1,5	2,0	2,5	3,0
63	-1.08	-0.67	6	3.432	4.290	5.148	6.863	8.579	10.295	13.727	17.159	21.448	25.738	34.317	42.896	51.476
	-0.67	-0.17	7	4.022	5.028	6.033	8.044	10.055	12.066	16.089	20.111	25.138	30.166	40.221	50.277	60.332
	-0.17	0.42	8	4.613	5.766	6.919	9.225	11.531	13.838	18.450	23.063	28.829	34.594	46.126	57.657	69.188
	0.42	1.11	9	5.203	6.504	7.804	10.406	13.007	15.609	20.812	26.015	32.519	39.022	52.030	65.037	78.045
64	-1.13	-0.73	6	3.435	4.293	5.152	6.869	8.587	10.304	13.739	17.173	21.466	25.760	34.346	42.933	51.520
	-0.73	-0.24	7	4.025	5.031	6.038	8.050	10.063	12.075	16.100	20.125	25.157	30.188	40.251	50.313	60.376
	-0.24	0.34	8	4.615	5.769	6.923	9.231	11.539	13.846	18.462	23.077	28.847	34.616	46.155	57.694	69.232
	0.34	1.02	9	5.206	6.507	7.809	10.412	13.015	15.618	20.824	26.030	32.537	39.044	52.059	65.074	78.089
65	-0.78	-0.30	7	4.028	5.035	6.042	8.056	10.070	12.084	16.112	20.140	25.175	30.210	40.280	50.350	60.420
	-0.30	0.27	8	4.618	5.773	6.928	9.237	11.546	13.855	18.474	23.092	28.865	34.638	46.184	57.730	69.276
	0.27	0.93	9	5.209	6.511	7.813	10.418	13.022	15.627	20.835	26.044	32.555	39.066	52.088	65.111	78.133
66	-0.83	-0.36	7	4.031	5.039	6.046	8.062	10.077	12.093	16.124	20.155	25.193	30.232	40.309	50.386	60.464
	-0.36	0.20	8	4.621	5.777	6.932	9.243	11.553	13.864	18.485	23.107	28.883	34.660	46.213	57.767	69.320
	0.20	0.85	9	5.212	6.515	7.818	10.424	13.029	15.635	20.847	26.059	32.574	39.088	52.118	65.147	78.177
67	-0.88	-0.42	7	4.034	5.042	6.051	8.068	10.085	12.102	16.135	20.169	25.212	30.254	40.338	50.423	60.508
	-0.42	0.13	8	4.624	5.780	6.936	9.249	11.561	13.873	18.497	23.121	28.902	34.682	46.243	57.803	69.364
	0.13	0.77	9	5.215	6.518	7.822	10.429	13.037	15.644	20.859	26.073	32.592	39.110	52.147	65.184	78.220
68	-0.93	-0.48	7	4.037	5.046	6.055	8.074	10.092	12.110	16.147	20.184	25.230	30.276	40.368	50.460	60.552
	-0.48	0.06	8	4.627	5.784	6.941	9.254	11.568	13.882	18.509	23.136	28.920	34.704	46.272	57.840	69.408
	0.06	0.69	9	5.218	6.522	7.826	10.435	13.044	15.653	20.870	26.088	32.610	39.132	52.176	65.220	78.264
69	-0.98	-0.53	7	4.040	5.050	6.060	8.079	10.099	12.119	16.159	20.198	25.248	30.298	40.397	50.496	60.595
	-0.53	-0.01	8	4.630	5.788	6.945	9.260	11.575	13.890	18.520	23.151	28.938	34.726	46.301	57.877	69.452
	-0.01	0.61	9	5.221	6.526	7.831	10.441	13.051	15.662	20.882	26.103	32.628	39.154	52.205	65.257	78.308
70	-1.03	-0.59	7	4.043	5.053	6.064	8.085	10.107	12.128	16.170	20.213	25.266	30.320	40.426	50.533	60.639
	-0.59	-0.07	8	4.633	5.791	6.950	9.266	11.583	13.899	18.532	23.165	28.957	34.748	46.330	57.913	69.496
	-0.07	0.53	9	5.223	6.529	7.835	10.447	13.059	15.670	20.894	26.117	32.647	39.176	52.235	65.293	78.352
71	-1.08	-0.65	7	4.046	5.057	6.068	8.091	10.114	12.137	16.182	20.228	25.285	30.342	40.455	50.569	60.683
	-0.65	-0.14	8	4.636	5.795	6.954	9.272	11.590	13.908	18.544	23.180	28.975	34.770	46.360	57.950	69.540
	-0.14	0.46	9	5.226	6.533	7.840	10.453	13.066	15.679	20.906	26.132	32.685	39.198	52.264	65.330	78.396
	0.46	1.14	10	5.817	7.271	8.725	11.634	14.542	17.450	23.267	29.084	36.355	43.626	58.168	72.710	87.252
72	-1.13	-0.70	7	4.048	5.061	6.073	8.097	10.121	12.145	16.194	20.242	25.303	30.364	40.485	50.606	60.727
	-0.70	-0.20	8	4.639	5.799	6.958	9.278	11.597	13.917	18.556	23.194	28.993	34.792	46.389	57.986	69.583
	-0.20	0.38	9	5.229	6.537	7.844	10.459	13.073	15.688	20.917	26.147	32.683	39.220	52.293	65.367	78.440
	0.38	1.06	10	5.820	7.275	8.730	11.640	14.549	17.459	23.279	29.099	36.373	43.648	58.198	72.747	87.296
73	-0.76	-0.26	8	4.642	5.802	6.963	9.284	11.605	13.925	18.567	23.209	29.011	34.814	46.418	58.023	69.627
	-0.26	0.31	9	5.232	6.540	7.848	10.465	13.081	15.697	20.929	26.161	32.702	39.242	52.323	65.403	78.484
	0.31	0.97	10	5.823	7.278	8.734	11.645	14.557	17.468	23.291	29.113	36.392	43.670	58.227	72.783	87.340
74	-0.81	-0.32	8	4.645	5.806	6.967	9.290	11.612	13.934	18.579	23.224	29.030	34.836	46.448	58.059	69.671
	-0.32	0.24	9	5.235	6.544	7.853	10.470	13.088	15.706	20.941	26.176	32.720	39.264	52.352	65.440	78.528
	0.24	0.89	10	5.826	7.282	8.738	11.651	14.564	17.477	23.302	29.128	36.410	43.692	58.256	72.820	87.384
75	-0.86	-0.38	8	4.648	5.810	6.972	9.295	11.619	13.943	18.591	23.238	29.048	34.858	46.477	58.096	69.715
	-0.38	0.17	9	5.238	6.548	7.857	10.476	13.095	15.714	20.952	26.191	32.738	39.286	52.381	65.476	78.572
	0.17	0.81	10	5.829	7.286	8.743	11.657	14.571	17.486	23.314	29.143	36.428	43.714	58.285	72.857	87.428
76	-0.92	-0.44	8	4.651	5.813	6.976	9.301	11.627	13.952	18.602	23.253	29.066	34.880	46.506	58.133	69.759
	-0.44	0.10	9	5.241	6.551	7.862	10.482	13.103	15.723	20.964	26.205	32.756	39.308	52.410	65.513	78.615
	0.10	0.73	10	5.831	7.289	8.747	11.663	14.579	17.494	23.326	29.157	36.447	43.736	58.315	72.893	87.472
77	-0.97	-0.50	8	4.654	5.817	6.980	9.307	11.634	13.961	18.614	23.268	29.085	34.901	46.535	58.169	69.803
	-0.50	0.04	9	5.244	6.555	7.866	10.488	13.110	15.732	20.976	26.220	32.775	39.330	52.440	65.549	78.659
	0.04	0.65	10	5.834	7.293	8.752	11.668	14.586	17.503	23.338	29.172	36.465	43.758	58.344	72.930	87.516
78	-1.02	-0.56	8	4.656	5.821	6.985	9.313	11.641	13.969	18.626	23.282	29.103	34.923	46.565	58.206	69.847
	-0.56	-0.03	9	5.247	6.559	7.870	10.494	13.117	15.741	20.988	26.234	32.793	39.352	52.469	65.586	78.703
	-0.03	0.58	10	5.837	7.297	8.756	11.675	14.593	17.512	23.349	29.187	36.483	43.780	58.373	72.966	87.560
79	-1.07	-0.62	8	4.659	5.824	6.989	9.319	11.648	13.978	18.638	23.297	29.121	34.945	46.594	58.242	69.891
	-0.62	-0.10	9	5.250	6.562	7.875	10.500	13.125	15.749	20.999	26.249	32.811	39.374	52.498	65.623	78.747
	-0.10	0.50	10	5.840	7.300	8.760	11.680	14.601	17.521	23.361	29.201	36.501	43.802	58.402	73.003	87.604
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