

AZIMUTH PATTERN Horizontal Polarization

Proposal No. **C-70281**
 Date **22-Feb-17**
 Call Letters **WSVN 9**
 Frequency **189 MHz**
 Antenna Type **THV-10A9/VP P200**

 Gain **2.12 (3.27dB)**
Calculated

 Directional
 Drawing # **THV-P200 H**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.975	36	0.841	72	0.445	108	0.375	144	0.599	180	0.975	216	0.841	252	0.445	288	0.375	324	0.599
1	0.979	37	0.830	73	0.438	109	0.376	145	0.611	181	0.979	217	0.830	253	0.438	289	0.376	325	0.611
2	0.984	38	0.819	74	0.432	110	0.378	146	0.623	182	0.984	218	0.819	254	0.432	290	0.378	326	0.623
3	0.987	39	0.807	75	0.426	111	0.379	147	0.635	183	0.987	219	0.807	255	0.426	291	0.379	327	0.635
4	0.991	40	0.796	76	0.421	112	0.381	148	0.647	184	0.991	220	0.796	256	0.421	292	0.381	328	0.647
5	0.994	41	0.784	77	0.415	113	0.382	149	0.660	185	0.994	221	0.784	257	0.415	293	0.382	329	0.660
6	0.996	42	0.772	78	0.411	114	0.384	150	0.672	186	0.996	222	0.772	258	0.411	294	0.384	330	0.672
7	0.998	43	0.759	79	0.406	115	0.387	151	0.685	187	0.998	223	0.759	259	0.406	295	0.387	331	0.685
8	0.999	44	0.747	80	0.402	116	0.389	152	0.697	188	0.999	224	0.747	260	0.402	296	0.389	332	0.697
9	1.000	45	0.735	81	0.399	117	0.392	153	0.710	189	1.000	225	0.735	261	0.399	297	0.392	333	0.710
10	1.000	46	0.722	82	0.395	118	0.395	154	0.722	190	1.000	226	0.722	262	0.395	298	0.395	334	0.722
11	1.000	47	0.710	83	0.392	119	0.399	155	0.735	191	1.000	227	0.710	263	0.392	299	0.399	335	0.735
12	0.999	48	0.697	84	0.389	120	0.402	156	0.747	192	0.999	228	0.697	264	0.389	300	0.402	336	0.747
13	0.998	49	0.685	85	0.387	121	0.406	157	0.759	193	0.998	229	0.685	265	0.387	301	0.406	337	0.759
14	0.996	50	0.672	86	0.384	122	0.411	158	0.772	194	0.996	230	0.672	266	0.384	302	0.411	338	0.772
15	0.994	51	0.660	87	0.382	123	0.416	159	0.784	195	0.994	231	0.660	267	0.382	303	0.416	339	0.784
16	0.991	52	0.647	88	0.381	124	0.421	160	0.796	196	0.991	232	0.647	268	0.381	304	0.421	340	0.796
17	0.987	53	0.635	89	0.379	125	0.426	161	0.807	197	0.987	233	0.635	269	0.379	305	0.426	341	0.807
18	0.984	54	0.623	90	0.378	126	0.432	162	0.819	198	0.984	234	0.623	270	0.378	306	0.432	342	0.819
19	0.979	55	0.611	91	0.376	127	0.438	163	0.830	199	0.979	235	0.611	271	0.376	307	0.438	343	0.830
20	0.975	56	0.599	92	0.375	128	0.445	164	0.841	200	0.975	236	0.599	272	0.375	308	0.445	344	0.841
21	0.969	57	0.587	93	0.374	129	0.452	165	0.852	201	0.969	237	0.587	273	0.374	309	0.452	345	0.852
22	0.964	58	0.576	94	0.374	130	0.460	166	0.863	202	0.964	238	0.576	274	0.374	310	0.460	346	0.863
23	0.957	59	0.564	95	0.373	131	0.467	167	0.873	203	0.957	239	0.564	275	0.373	311	0.467	347	0.873
24	0.951	60	0.553	96	0.373	132	0.476	168	0.883	204	0.951	240	0.553	276	0.373	312	0.476	348	0.883
25	0.944	61	0.543	97	0.372	133	0.484	169	0.893	205	0.944	241	0.543	277	0.372	313	0.484	349	0.893
26	0.936	62	0.532	98	0.372	134	0.493	170	0.902	206	0.936	242	0.532	278	0.372	314	0.493	350	0.902
27	0.928	63	0.522	99	0.372	135	0.502	171	0.911	207	0.928	243	0.522	279	0.372	315	0.502	351	0.911
28	0.920	64	0.512	100	0.372	136	0.512	172	0.920	208	0.920	244	0.512	280	0.372	316	0.512	352	0.920
29	0.911	65	0.502	101	0.372	137	0.522	173	0.928	209	0.911	245	0.502	281	0.372	317	0.522	353	0.928
30	0.902	66	0.493	102	0.372	138	0.532	174	0.936	210	0.902	246	0.493	282	0.372	318	0.532	354	0.936
31	0.893	67	0.484	103	0.372	139	0.543	175	0.944	211	0.893	247	0.484	283	0.372	319	0.543	355	0.944
32	0.883	68	0.476	104	0.373	140	0.553	176	0.951	212	0.883	248	0.476	284	0.373	320	0.553	356	0.951
33	0.873	69	0.467	105	0.373	141	0.564	177	0.957	213	0.873	249	0.467	285	0.373	321	0.564	357	0.957
34	0.863	70	0.460	106	0.374	142	0.576	178	0.964	214	0.863	250	0.459	286	0.374	322	0.576	358	0.964
35	0.852	71	0.452	107	0.374	143	0.587	179	0.969	215	0.852	251	0.452	287	0.374	323	0.587	359	0.969

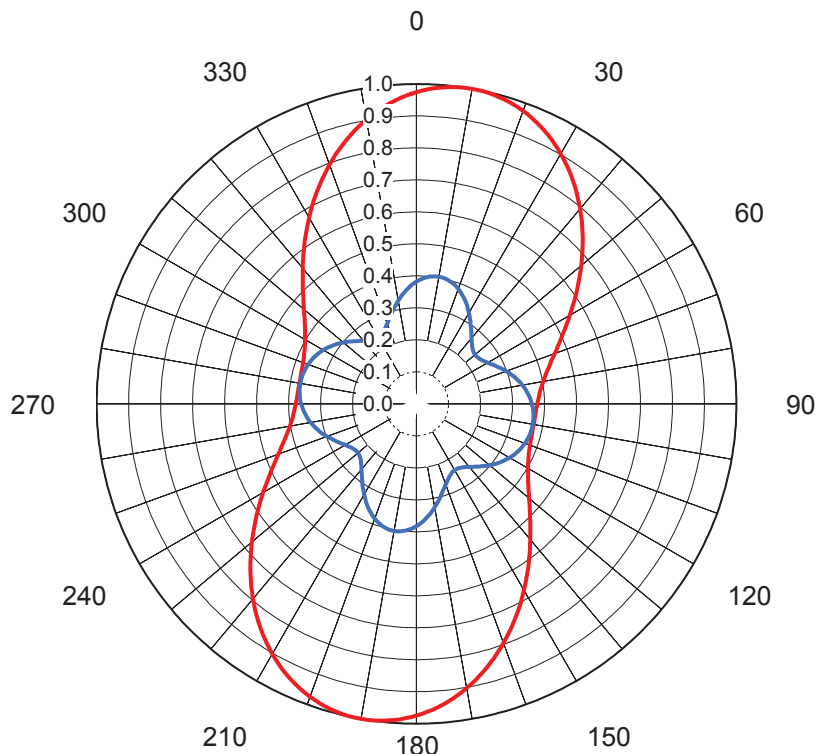
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AZIMUTH OVERLAY

Proposal No. **C-70281**
 Date **22-Feb-17**
 Call Letters **WSVN 9**
 Frequency **189 MHz**
 Antenna Type **THV-10A9/VP P200**

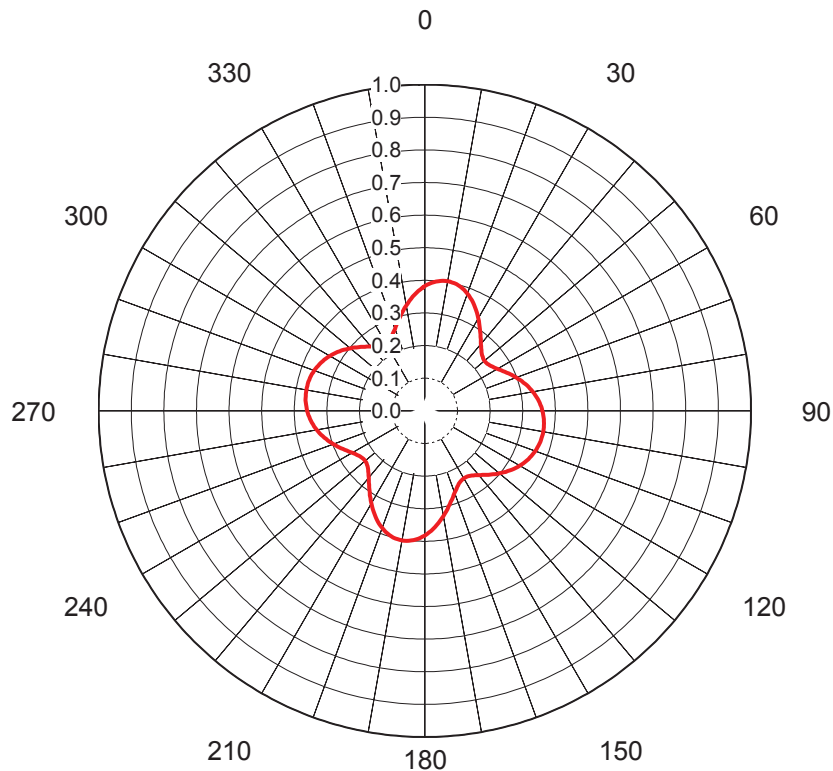
Red Drawing # **THV-P200 H**

Blue Drawing # **THV-P200 V**



Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.975	36	0.841	72	0.445	108	0.375	144	0.599	180	0.975	216	0.841	252	0.445	288	0.375
1	0.979	37	0.830	73	0.438	109	0.376	145	0.611	181	0.979	217	0.830	253	0.438	289	0.376
2	0.984	38	0.819	74	0.432	110	0.378	146	0.623	182	0.984	218	0.819	254	0.432	290	0.378
3	0.987	39	0.807	75	0.426	111	0.379	147	0.635	183	0.987	219	0.807	255	0.426	291	0.379
4	0.991	40	0.796	76	0.421	112	0.381	148	0.647	184	0.991	220	0.796	256	0.421	292	0.381
5	0.994	41	0.784	77	0.415	113	0.382	149	0.660	185	0.994	221	0.784	257	0.415	293	0.382
6	0.996	42	0.772	78	0.411	114	0.384	150	0.672	186	0.996	222	0.772	258	0.411	294	0.384
7	0.998	43	0.759	79	0.406	115	0.387	151	0.685	187	0.998	223	0.759	259	0.406	295	0.387
8	0.999	44	0.747	80	0.402	116	0.389	152	0.697	188	0.999	224	0.747	260	0.402	296	0.389
9	1.000	45	0.735	81	0.399	117	0.392	153	0.710	189	1.000	225	0.735	261	0.399	297	0.392
10	1.000	46	0.722	82	0.395	118	0.395	154	0.722	190	1.000	226	0.722	262	0.395	298	0.395
11	1.000	47	0.710	83	0.392	119	0.399	155	0.735	191	1.000	227	0.710	263	0.392	299	0.399
12	0.999	48	0.697	84	0.389	120	0.402	156	0.747	192	0.999	228	0.697	264	0.389	300	0.402
13	0.998	49	0.685	85	0.387	121	0.406	157	0.759	193	0.998	229	0.685	265	0.387	301	0.406
14	0.996	50	0.672	86	0.384	122	0.411	158	0.772	194	0.996	230	0.672	266	0.384	302	0.411
15	0.994	51	0.660	87	0.382	123	0.416	159	0.784	195	0.994	231	0.660	267	0.382	303	0.416
16	0.991	52	0.647	88	0.381	124	0.421	160	0.796	196	0.991	232	0.647	268	0.381	304	0.421
17	0.987	53	0.635	89	0.379	125	0.426	161	0.807	197	0.987	233	0.635	269	0.379	305	0.426
18	0.984	54	0.623	90	0.378	126	0.432	162	0.819	198	0.984	234	0.623	270	0.378	306	0.432
19	0.979	55	0.611	91	0.376	127	0.438	163	0.830	199	0.979	235	0.611	271	0.376	307	0.438
20	0.975	56	0.599	92	0.375	128	0.445	164	0.841	200	0.975	236	0.599	272	0.375	308	0.445
21	0.969	57	0.587	93	0.374	129	0.452	165	0.852	201	0.969	237	0.587	273	0.374	309	0.452
22	0.964	58	0.576	94	0.374	130	0.460	166	0.863	202	0.964	238	0.576	274	0.374	310	0.460
23	0.957	59	0.564	95	0.373	131	0.467	167	0.873	203	0.957	239	0.564	275	0.373	311	0.467
24	0.951	60	0.553	96	0.373	132	0.476	168	0.883	204	0.951	240	0.553	276	0.373	312	0.476
25	0.944	61	0.543	97	0.372	133	0.484	169	0.893	205	0.944	241	0.543	277	0.372	313	0.484
26	0.936	62	0.532	98	0.372	134	0.493	170	0.902	206	0.936	242	0.532	278	0.372	314	0.493
27	0.928	63	0.522	99	0.372	135	0.502	171	0.911	207	0.928	243	0.522	279	0.372	315	0.502
28	0.920	64	0.512	100	0.372	136	0.512	172	0.920	208	0.920	244	0.512	280	0.372	316	0.512
29	0.911	65	0.502	101	0.372	137	0.522	173	0.928	209	0.911	245	0.502	281	0.372	317	0.522
30	0.902	66	0.493	102	0.372	138	0.532	174	0.936	210	0.902	246	0.493	282	0.372	318	0.532
31	0.893	67	0.484	103	0.372	139	0.543	175	0.944	211	0.893	247	0.484	283	0.372	319	0.543
32	0.883	68	0.476	104	0.373	140	0.553	176	0.951	212	0.883	248	0.476	284	0.373	320	0.553
33	0.873	69	0.467	105	0.373	141	0.564	177	0.957	213	0.873	249	0.467	285	0.373	321	0.564
34	0.863	70	0.460	106	0.374	142	0.576	178	0.964	214	0.863	250	0.459	286	0.374	322	0.576
35	0.852	71	0.452	107	0.374	143	0.587	179	0.969	215	0.852	251	0.452	287	0.374	323	0.587

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AZIMUTH PATTERN Vertical Polarization

Proposal No. **C-70281**
 Date **22-Feb-17**
 Call Letters **WSVN 9**
 Frequency **189 MHz**
 Antenna Type **THV-10A9/VP P200**
 Gain **1.58 (1.97dB)**
Calculated
 Drawing # **THV-P200 V**

Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value	Deg	Value
0	0.382	36	0.290	72	0.307	108	0.364	144	0.245	180	0.382	216	0.290	252	0.307	288	0.364
1	0.386	37	0.284	73	0.311	109	0.362	145	0.243	181	0.386	217	0.284	253	0.311	289	0.362
2	0.390	38	0.278	74	0.315	110	0.361	146	0.241	182	0.390	218	0.278	254	0.315	290	0.361
3	0.393	39	0.273	75	0.319	111	0.359	147	0.240	183	0.393	219	0.273	255	0.319	291	0.359
4	0.396	40	0.268	76	0.322	112	0.357	148	0.239	184	0.396	220	0.268	256	0.322	292	0.357
5	0.398	41	0.263	77	0.326	113	0.355	149	0.239	185	0.398	221	0.263	257	0.326	293	0.355
6	0.400	42	0.258	78	0.330	114	0.353	150	0.239	186	0.400	222	0.258	258	0.330	294	0.353
7	0.401	43	0.254	79	0.333	115	0.350	151	0.240	187	0.401	223	0.254	259	0.333	295	0.350
8	0.403	44	0.251	80	0.336	116	0.348	152	0.241	188	0.403	224	0.251	260	0.336	296	0.348
9	0.403	45	0.247	81	0.339	117	0.345	153	0.242	189	0.403	225	0.247	261	0.339	297	0.345
10	0.403	46	0.245	82	0.342	118	0.342	154	0.245	190	0.403	226	0.245	262	0.342	298	0.342
11	0.403	47	0.242	83	0.345	119	0.339	155	0.247	191	0.403	227	0.242	263	0.345	299	0.339
12	0.403	48	0.241	84	0.348	120	0.336	156	0.251	192	0.403	228	0.241	264	0.348	300	0.336
13	0.401	49	0.240	85	0.350	121	0.333	157	0.254	193	0.401	229	0.240	265	0.350	301	0.333
14	0.400	50	0.239	86	0.353	122	0.330	158	0.258	194	0.400	230	0.239	266	0.353	302	0.330
15	0.398	51	0.239	87	0.355	123	0.326	159	0.263	195	0.398	231	0.239	267	0.355	303	0.326
16	0.396	52	0.239	88	0.357	124	0.322	160	0.268	196	0.396	232	0.239	268	0.357	304	0.322
17	0.393	53	0.240	89	0.359	125	0.319	161	0.273	197	0.393	233	0.240	269	0.359	305	0.319
18	0.390	54	0.241	90	0.361	126	0.315	162	0.278	198	0.390	234	0.241	270	0.361	306	0.315
19	0.386	55	0.243	91	0.362	127	0.311	163	0.284	199	0.386	235	0.243	271	0.362	307	0.311
20	0.382	56	0.245	92	0.364	128	0.307	164	0.290	200	0.382	236	0.245	272	0.364	308	0.307
21	0.378	57	0.248	93	0.365	129	0.302	165	0.296	201	0.378	237	0.248	273	0.365	309	0.302
22	0.373	58	0.251	94	0.366	130	0.298	166	0.302	202	0.373	238	0.251	274	0.366	310	0.298
23	0.368	59	0.254	95	0.367	131	0.294	167	0.309	203	0.368	239	0.254	275	0.367	311	0.294
24	0.363	60	0.257	96	0.368	132	0.290	168	0.315	204	0.363	240	0.257	276	0.368	312	0.290
25	0.358	61	0.261	97	0.368	133	0.285	169	0.322	205	0.358	241	0.261	277	0.368	313	0.285
26	0.352	62	0.265	98	0.368	134	0.281	170	0.328	206	0.352	242	0.265	278	0.368	314	0.281
27	0.346	63	0.269	99	0.369	135	0.277	171	0.334	207	0.346	243	0.269	279	0.369	315	0.277
28	0.340	64	0.273	100	0.369	136	0.273	172	0.340	208	0.340	244	0.273	280	0.369	316	0.273
29	0.334	65	0.277	101	0.369	137	0.269	173	0.346	209	0.334	245	0.277	281	0.369	317	0.269
30	0.328	66	0.281	102	0.368	138	0.265	174	0.352	210	0.328	246	0.281	282	0.368	318	0.265
31	0.322	67	0.285	103	0.368	139	0.261	175	0.358	211	0.322	247	0.285	283	0.368	319	0.261
32	0.315	68	0.290	104	0.368	140	0.257	176	0.363	212	0.315	248	0.290	284	0.368	320	0.257
33	0.309	69	0.294	105	0.367	141	0.254	177	0.368	213	0.309	249	0.294	285	0.367	321	0.254
34	0.302	70	0.298	106	0.366	142	0.251	178	0.373	214	0.302	250	0.298	286	0.366	322	0.251
35	0.296	71	0.302	107	0.365	143	0.248	179	0.378	215	0.296	251	0.302	287	0.365	323	0.248

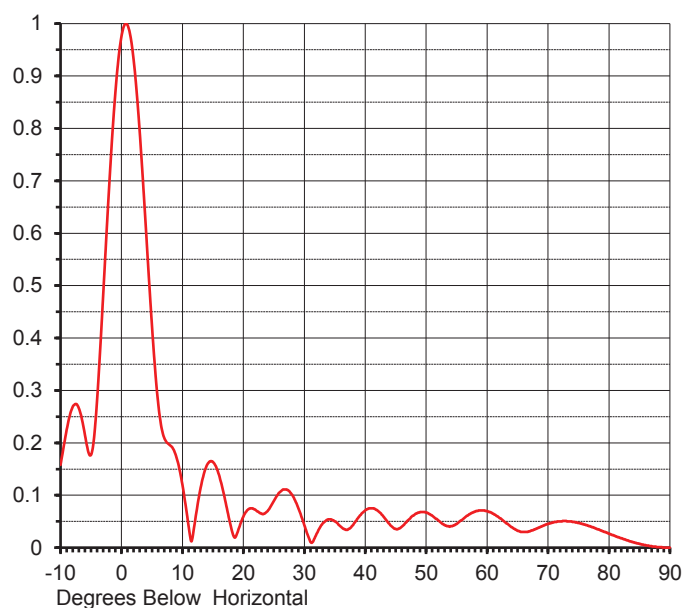
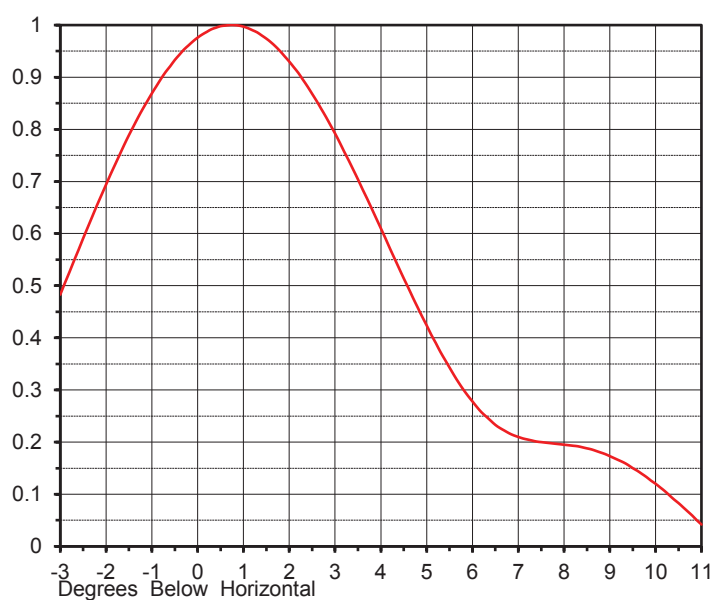
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ELEVATION PATTERN

Proposal No. **C-70281**
 Date **22-Feb-17**
 Call Letters **WSVN 9**
 Frequency **189 MHz**
 Antenna Type **THV-10A9/VP P200**

RMS Directivity at Main Lobe **10.00 (10.00 dB)**
 RMS Directivity at Horizontal **9.50 (9.78 dB)**
Calculated

Beam Tilt **0.75 deg**
 Drawing Number **10V100075**



Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.158	10.0	0.120	30.0	0.043	50.0	0.067	70.0	0.045
-9.0	0.225	11.0	0.042	31.0	0.011	51.0	0.061	71.0	0.049
-8.0	0.269	12.0	0.045	32.0	0.026	52.0	0.052	72.0	0.050
-7.0	0.266	13.0	0.115	33.0	0.046	53.0	0.043	73.0	0.051
-6.0	0.215	14.0	0.157	34.0	0.054	54.0	0.041	74.0	0.049
-5.0	0.177	15.0	0.164	35.0	0.050	55.0	0.045	75.0	0.047
-4.0	0.283	16.0	0.139	36.0	0.040	56.0	0.054	76.0	0.044
-3.0	0.483	17.0	0.091	37.0	0.034	57.0	0.063	77.0	0.040
-2.0	0.694	18.0	0.038	38.0	0.043	58.0	0.069	78.0	0.036
-1.0	0.869	19.0	0.028	39.0	0.059	59.0	0.071	79.0	0.031
0.0	0.976	20.0	0.059	40.0	0.071	60.0	0.070	80.0	0.027
1.0	0.997	21.0	0.074	41.0	0.075	61.0	0.065	81.0	0.022
2.0	0.930	22.0	0.072	42.0	0.071	62.0	0.057	82.0	0.018
3.0	0.792	23.0	0.065	43.0	0.059	63.0	0.048	83.0	0.014
4.0	0.610	24.0	0.070	44.0	0.045	64.0	0.039	84.0	0.010
5.0	0.424	25.0	0.089	45.0	0.036	65.0	0.032	85.0	0.007
6.0	0.278	26.0	0.106	46.0	0.040	66.0	0.030	86.0	0.005
7.0	0.210	27.0	0.111	47.0	0.052	67.0	0.031	87.0	0.003
8.0	0.195	28.0	0.101	48.0	0.062	68.0	0.036	88.0	0.001
9.0	0.173	29.0	0.076	49.0	0.068	69.0	0.041	89.0	0.000
								90.0	0.000

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