

## Alloy and Carbon Steel Weights and Formulas

### THEORETICAL WEIGHT TABLES ALLOY AND CARBON STEEL WEIGHT FORMULAS

Shape	Pounds per Foot
Round	$D^2 \times 2.67$
Hexagon	$D^2 \times 2.945$
Square	$D^2 \times 3.4$
Flat	Thickness (in.) x Width (in.) x 3.4

### WEIGHTS OF ALLOY AND CARBON BAR STEEL Per Linear Foot

Sizes In Inches	Round	Square	Octagon	Hexagon	Size In Inches	Round	Square	Octagon	Hexagon
1/16	.010	.013	.011	.012	11/16	1.262	1.607	1.333	1.392
5/64	.017	.022	.018	.019	45/64	1.320	1.681	1.394	1.456
3/32	.023	.029	.024	.025	23/32	1.380	1.756	1.487	1.521
7/64	.031	.039	.033	.034	47/64	1.440	1.834	1.521	1.588
1/8	.042	.053	.044	.046	3/4	1.502	1.913	1.586	1.656
9/64	.053	.067	.056	.058	25/32	1.630	2.075	1.721	1.797
5/32	.065	.083	.069	.072	13/16	1.763	2.245	1.862	1.944
11/64	.079	.100	.083	.087	27/32	1.901	2.421	2.008	2.096
3/16	.094	.120	.099	.104	7/8	2.045	2.603	2.159	2.254
13/64	.110	.140	.116	.121	29/32	2.193	2.792	2.316	2.418
7/32	.128	.163	.135	.141	15/16	2.347	2.988	2.479	2.588
15/64	.147	.187	.155	.162	31/32	2.506	3.191	2.646	2.763
1/4	.167	.213	.176	.184	1	2.670	3.400	2.820	2.945
17/64	.188	.240	.199	.207	1-1/16	3.015	3.838	3.183	3.324
9/32	.211	.269	.223	.233	1-1/8	3.380	4.303	3.569	3.727
19/64	.235	.300	.248	.259	1-3/16	3.766	4.795	3.977	4.152
5/16	.261	.332	.275	.288	1-1/4	4.172	5.313	4.407	4.601
21/64	.288	.360	.304	.318	1-5/16	4.600	5.857	4.858	5.072
11/32	.316	.402	.334	.348	1-3/8	5.049	6.428	5.332	5.567
23/64	.345	.439	.364	.381	1-7/16	5.518	7.026	5.827	6.085
3/8	.376	.478	.397	.414	1-1/2	6.008	7.650	6.345	6.625
25/64	.408	.519	.431	.450	1-9/16	6.519	8.301	6.885	7.189
13/32	.441	.561	.466	.486	1-5/8	7.051	8.978	7.446	7.775
27/64	.475	.605	.502	.524	1-11/16	7.604	9.682	8.030	8.385
7/16	.511	.651	.540	.564	1-3/4	8.178	10.41	8.634	9.018
29/64	.548	.698	.579	.604	1-13/16	8.773	11.17	9.265	9.673
15/32	.587	.747	.620	.647	1-7/8	9.388	11.95	9.911	10.35
31/64	.627	.798	.662	.692	1-15/16	10.02	12.76	10.58	11.05
1/2	.668	.850	.705	.736	2	10.68	13.60	11.28	11.78
33/64	.710	.904	.750	.783	2-1/16	11.36	14.46	11.99	12.53

17/32	.754	.960	.796	.831	2-1/8	12.06	15.35	12.73	13.30
35/64	.799	1.017	.844	.881	2-3/16	12.78	16.27	13.49	14.09
9/16	.845	1.076	.892	.932	2-1/4	13.52	17.21	14.27	14.91
37/64	.893	1.136	.943	.985	2-5/16	14.28	18.18	15.08	15.75
19/32	.941	1.199	.994	1.038	2-3/8	15.06	19.18	15.91	16.61
39/64	.992	1.263	1.048	1.094	2-7/16	15.87	20.20	16.75	17.49
5/8	1.043	1.328	1.102	1.150	2-1/2	16.69	21.25	17.62	18.40
41/64	1.096	1.395	1.207	1.209	2-9/16	17.53	22.33	18.52	19.34
21/32	1.150	1.464	1.214	1.268	2-5/8	18.40	23.43	19.43	20.29
43/64	1.205	1.535	1.272	1.329	2-11/16	19.29	24.56	20.37	21.27

Size In Inches	Round	Square	Octagon	Hexagon	Size In Inches	Round	Square	Octagon
2-3/4	20.19	25.71	21.33	22.27	6	96.13	122.4	101.5
2-3/16	21.12	26.90	22.31	23.29	6-1/16	98.15	125.0	103.6
2-7/8	22.07	28.10	23.31	24.34	6-1/8	100.2	127.6	105.8
2-5/16	23.04	29.34	24.33	25.41	6-3/16	102.2	130.2	108.0
3	24.03	30.60	25.38	26.50	6-1/4	104.3	132.8	110.2
3-1/16	25.05	31.89	26.45	27.62	6-5/16	106.4	135.5	112.4
3-1/8	26.08	33.20	27.54	28.76	6-3/8	108.5	138.2	114.6
3-3/16	27.13	34.55	28.65	29.92	6-7/16	110.7	140.9	116.9
3-1/4	28.21	35.91	29.79		6-1/2	112.8	143.7	119.1
3-5/16	29.30	37.21	30.94		6-9/16	115.0	146.4	121.4
3-3/8	30.42	38.73	32.12		6-5/8	117.2	149.2	123.8
3-7/16	31.55	40.18	33.32		6-11/16	119.4	152.1	126.1
3-1/2	32.71	41.6	34.54		6-3/4	121.7	154.9	128.5
3-9/16	33.90	43.15	35.79		6-13/16	123.9	157.8	130.9
3-5/8	35.09	44.68	37.07		6-7/8	126.2	160.7	133.3
3-1/16	36.31	46.23	38.34		6-15/16	128.5	163.6	135.7
3-3/4	37.55	47.81	39.65		7	130.9	166.6	138.2
3-3/16	38.81	49.42	40.99		7-1/16	133.2	169.6	140.7
3-7/8	40.10	51.05	42.34		7-1/8	135.6	172.6	143.2
3-5/16	41.40	52.71	43.72		7-3/16	138.0	175.6	145.7
4	42.73	54.40	45.12		7-1/4	140.4	178.7	148.2
4-1/16	44.07	56.11	46.54		7-5/16	142.8	181.8	150.8
4-1/8	45.44	57.85	47.98		7-3/8	145.2	184.9	153.4
4-3/16	46.83	59.62	49.45		7-7/16	147.7	188.1	156.0
4-1/4	48.23	61.41	50.93		7-1/2	150.2	191.3	158.6
4-5/16	49.66	63.23	52.44		7-5/8	155.3	197.7	164.0
4-3/8	51.11	65.08	53.98		7-3/4	160.4	204.2	169.4
4-7/16	52.58	66.95	55.53		7-7/8	165.6	210.9	174.9
4-1/2	54.08	68.85	57.10		8	170.9	217.6	180.5
4-9/16	55.59	70.78	58.70		8-1/4	181.8	230.9	192.0
4-5/8	57.12	72.73	60.32		8-1/2	192.9	245.7	203.8
4-1/16	58.68	74.71	61.96		8-3/4	204.4	259.6	215.8
4-3/4	60.25	76.71	63.63		1	216.3	275.4	228.4
4-3/16	61.85	78.75	65.32		10	267.0	340.0	282.0

4-7/8	63.46	80.80	67.02		11	323.1	411.4	341.2
4-5/16	65.10	82.89	68.75		12	384.4	489.6	406.1
5	66.76	85.00	70.50		13	451	575	476
5-1/16	68.44	87.14	72.27		14	523	666	552
5-1/8	70.14	89.30	74.07		15	601	765	634
5-3/16	71.86	91.50	75.89		16	684	871	721
5-1/4	73.60	93.71	77.72		17	772	982	814
5-5/16	75.36	95.96	79.59		18	865	1102	912
5-3/8	77.15	98.23	81.47		19	964	1227	1017
5-7/16	78.95	100.5	83.38		20	1068	1360	1127
5-1/2	80.78	102.9	85.30		21	1177	1499	1242
5-9/16	82.62	105.2	87.25		22	1292	1645	1363
5-5/8	84.49	107.6	89.23		23	1412	1798	1490
5-1/16	86.38	110.0	91.22		24	1538	1958	1622
5-3/4	88.29	112.4	93.23		25	1669	2125	1760
5-3/16	90.22	114.9	95.27		26	1805	2298	1904
5-7/8	92.17	117.4	97.33		27	1946	2478	2053
5-5/16	94.14	119.9	99.41		28	2093	2665	2208