

Charts for Calculating Board Feet

4/4 Board Foot Chart (1" rough – 7/8 and thinner finished)

	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"	15"	16"
1'	.08	0.16	0.25	0.33	0.41	0.50	0.58	0.66	0.75	0.83	0.91	1.00	1.08	1.16	1.25	1.33
2'	.17	0.33	0.50	0.66	0.83	1.00	1.16	1.33	1.50	1.66	1.83	2.00	2.16	2.33	2.50	2.66
3'	.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00
4'	.33	0.66	1.00	1.33	1.66	2.00	2.33	2.66	3.00	3.33	3.66	4.00	4.33	4.66	5.00	5.33
5'	.41	0.83	1.25	1.66	2.08	2.50	2.91	3.33	3.75	4.16	4.58	5.00	5.41	5.83	6.25	6.66
6'	.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00
7'	.58	1.16	1.75	2.33	2.91	3.50	4.08	4.66	5.25	5.83	6.41	7.00	7.58	8.16	8.75	9.33
8'	.66	1.33	2.00	2.66	3.33	4.00	4.66	5.33	6.00	6.66	7.33	8.00	8.66	9.33	10.00	10.66
9'	.75	1.50	2.25	3.00	3.75	4.50	5.25	6.00	6.75	7.50	8.25	9.00	9.75	10.50	11.25	12.00
10'	.83	1.66	2.50	3.33	4.16	5.00	5.83	6.66	7.50	8.33	9.16	10.00	10.83	11.66	12.50	13.33
11'	.91	1.83	2.75	3.66	4.58	5.50	6.41	7.33	8.25	9.16	10.08	11.00	11.91	12.83	13.75	14.66
12'	1.0	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00
13'	1.08	2.16	3.25	4.33	5.41	6.50	7.58	8.66	9.75	10.83	11.91	13.00	14.08	15.16	16.25	17.33
14'	1.16	2.33	3.50	4.66	5.83	7.00	8.16	9.33	10.50	11.66	12.83	14.00	15.16	16.33	17.50	18.66
15'	1.25	2.50	3.75	5.00	6.25	7.50	8.75	10.00	11.25	12.50	13.75	15.00	16.25	17.50	18.75	20.00
16'	1.33	2.66	4.00	5.33	6.66	8.00	9.33	10.66	12.00	13.33	14.66	16.00	17.33	18.66	20.00	21.33

5/4 Board Foot Chart (Double for 10/4) (1 1/4" rough – 1" finished)(2 1/2" rough – 2 1/4" finished)

	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"	15"	16"
1'	0.10	0.20	0.31	0.41	0.52	0.62	0.72	0.83	0.93	1.04	1.14	1.25	1.35	1.45	1.56	1.66
2'	0.20	0.41	0.62	0.83	1.04	1.25	1.45	1.66	1.87	2.08	2.29	2.50	2.70	2.91	3.12	3.33
3'	0.31	0.62	0.93	1.25	1.56	1.87	2.18	2.50	2.81	3.12	3.43	3.75	4.06	4.37	4.68	5.00
4'	0.41	0.83	1.25	1.66	2.08	2.50	2.91	3.33	3.75	4.16	4.58	5.00	5.41	5.83	6.25	6.66
5'	0.52	1.04	1.56	2.08	2.60	3.12	3.64	4.16	4.68	5.20	5.72	6.25	6.77	7.29	7.81	8.33
6'	0.62	1.25	1.87	2.50	3.12	3.75	4.37	5.00	5.62	6.25	6.87	7.50	8.12	8.75	9.37	10.00
7'	0.72	1.45	2.18	2.91	3.64	4.37	5.10	5.83	6.56	7.29	8.02	8.75	9.47	10.20	10.93	11.66
8'	0.83	1.66	2.50	3.33	4.16	5.00	5.83	6.66	7.50	8.33	9.16	10.00	10.83	11.66	12.50	13.33
9'	0.93	1.87	2.81	3.75	4.68	5.62	6.56	7.50	8.43	9.37	10.31	11.25	12.18	13.12	14.06	15.00
10'	1.04	2.08	3.12	4.16	5.20	6.25	7.29	8.33	9.37	10.41	11.45	12.50	13.54	14.58	15.62	16.66
11'	1.14	2.29	3.43	4.58	5.72	6.87	8.02	9.16	10.31	11.45	12.60	13.75	14.89	16.04	17.18	18.33
12'	1.25	2.50	3.75	5.00	6.25	7.50	8.75	10.00	11.25	12.50	13.75	15.00	16.25	17.50	18.75	20.00
13'	1.35	2.70	4.06	5.41	6.77	8.12	9.47	10.83	12.18	13.54	14.89	16.25	17.60	18.95	20.31	21.66
14'	1.45	2.91	4.37	5.83	7.29	8.75	10.20	11.66	13.12	14.58	16.04	17.50	18.95	20.41	21.87	23.33
15'	1.56	3.12	4.68	6.25	7.81	9.37	10.93	12.50	14.06	15.62	17.18	18.75	20.31	21.87	23.43	25.00
16'	1.66	3.33	5.00	6.66	8.33	10.00	11.66	13.33	15.00	16.66	18.33	20.00	21.66	23.33	25.00	26.66

6/4 Board Foot Chart (Double for 12/4) (1 1/2" rough – 1 1/4" finished) (3" rough – 2 1/2" finished)

	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"	15"	16"
1'	0.12	0.25	0.37	0.50	0.62	0.75	0.87	1.00	1.12	1.25	1.37	1.50	1.62	1.75	1.87	2.00
2'	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00
3'	0.37	0.75	1.12	1.50	1.87	2.25	2.62	3.00	3.37	3.75	4.12	4.50	4.87	5.25	5.62	6.00
4'	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00
5'	0.62	1.25	1.87	2.50	3.12	3.75	4.37	5.00	5.62	6.25	6.87	7.50	8.12	8.75	9.37	10.00
6'	0.75	1.50	2.25	3.00	3.75	4.50	5.25	6.00	6.75	7.50	8.25	9.00	9.75	10.50	11.25	12.00
7'	0.87	1.75	2.62	3.50	4.37	5.25	6.12	7.00	7.87	8.75	9.62	10.50	11.37	12.25	13.12	14.00
8'	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00
9'	1.12	2.25	3.37	4.50	5.62	6.75	7.87	9.00	10.12	11.25	12.37	13.50	14.62	15.75	16.87	18.00
10'	1.25	2.50	3.75	5.00	6.25	7.50	8.75	10.00	11.25	12.50	13.75	15.00	16.25	17.50	18.75	20.00
11'	1.37	2.75	4.12	5.50	6.87	8.25	9.62	11.00	12.37	13.75	15.12	16.50	17.87	19.25	20.62	22.00
12'	1.50	3.00	4.50	6.00	7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	19.50	21.00	22.50	24.00
13'	1.62	3.25	4.87	6.50	8.12	9.75	11.37	13.00	14.62	16.25	17.87	19.50	21.12	22.75	24.37	26.00
14'	1.75	3.50	5.25	7.00	8.75	10.50	12.25	14.00	15.75	17.50	19.25	21.00	22.75	24.50	26.25	28.00
15'	1.87	3.75	5.62	7.50	9.37	11.25	13.12	15.00	16.87	18.75	20.62	22.50	24.37	26.25	28.12	30.00
16'	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00	32.00

8/4 Board Foot Chart (2" rough – 1¾" finished)

	1"	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"	12"	13"	14"	15"	16"
1'	0.16	0.32	0.50	0.66	0.82	1.00	1.16	1.33	1.50	1.66	1.83	2.00	2.16	2.33	2.50	2.66
2'	0.34	0.66	1.0	1.32	1.66	2.00	2.32	2.66	3.00	3.33	3.66	4.00	4.33	4.66	5.00	5.33
3'	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.00	7.50	8.00
4'	0.66	1.32	1.00	2.66	3.33	4.00	4.66	5.3.3	6.00	6.66	7.33	8.00	8.66	9.33	10.00	10.66
5'	0.82	1.66	1.25	3.32	4.16	5.00	5.83	6.66	7.50	8.33	9.16	10.00	10.83	11.66	12.50	13.33
6'	1.00	2.0	1.50	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00
7'	1.16	2.32	1.75	4.66	5.83	7.00	8.16	9.33	10.50	11.66	12.83	14.00	15.16	16.33	17.50	18.66
8'	1.32	2.66	2.00	5.32	6.66	8.00	9.33	10.66	12.00	13.33	14.66	16.00	17.33	18.66	20.00	21.33
9'	1.5	3.0	2.25	6.00	7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00	19.50	21.00	22.50	24.00
10'	1.66	3.32	2.50	6.66	8.32	10.00	11.66	13.33	15.00	16.66	18.32	20.00	21.66	23.33	25.00	26.66
11'	1.82	3.66	2.75	7.32	9.16	11.00	12.82	14.66	16.50	18.33	20.16	22.00	23.83	25.66	27.50	29.33
12'	2.0	4.0	3.00	8.0	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00	28.00	30.00	32.00
13'	2.16	4.32	3.25	8.66	10.82	13.00	15.16	17.33	19.50	21.66	23.83	26.00	28.16	30.33	32.50	34.66
14'	2.32	4.66	3.50	9.32	11.66	14.00	16.33	18.66	21.00	23.33	25.66	28.00	30.33	32.66	35.00	37.33
15'	2.50	5.0	3.75	10.00	12.50	15.00	17.50	20.00	22.50	25.00	27.50	30.00	33.50	35.00	37.50	40.00
16'	2.66	5.32	4.00	10.66	13.33	16.00	18.66	21.33	24.00	26.66	29.33	32.00	34.66	37.33	40.00	42.66

Grades

Hardwood lumber grades as defined by the U.S. National Hardwood Lumber Association (in descending order of quality) are Firsts, Seconds, No. 1 Common, No. 2A Common, No. 2B Common, Sound Wormy, No. 3A Common, and No. 3B Common. Some of the above grades are rarely used commercially and others are typically combined. For example, Firsts and Seconds are usually combined into one grade: "FAS", No. 1 Common and Selects are grouped as No. 1 Common and Better, and No. 2A Common and No. 2B Common may be combined as No. 2 Common. The grade of Sound Wormy is rarely used commercially.

- **Firsts and Seconds (FAS)** – The best and most expensive grade, suitable for applications where clear, wide boards are required. In a lot of boards graded FAS 20 to 40 percent of the boards must be Firsts (actual percentage depends on the species). Boards must be at least 6" wide and from 8' to 16' long; In a lot of boards 30 percent of the boards can be shorter than 11', and only half of those boards can be 8' or 9' in length. FAS grading is based on the poorest side of the board. Yields 83-1/3 percent clear face cuttings.
- **1 Face (1F)** – The 1F grade is almost always grouped together with the FAS grade. The 1F grade is obtained by grading both faces of the board. The best face must meet the requirements of an FAS grade, while the poorer face must meet the grade requirements of a #1 Common grade.
- **Selects** –Face side is FAS, back side is No. 1 Common. Boards are 4" and wider, 6' and longer. Yields 83-1/3 percent clear face cuttings. A cost effective substitute for FAS when only one good face is needed. The select grade is essentially the same as the 1F grade, except for the minimum board size. Select grades minimum board size after kiln drying is 3-½" wide by 6' long.
- **No. 1 Common** –Boards are 3" and wider, 4' and longer. Yields 66-2/3 percent clear face cuttings. Provides good value, especially if small pieces can be used.
- **No. 2A & 2B Common** –Boards are 3" and wider, 4' and longer. Yields 50 percent clear face cuttings. Suitable for some paneling and flooring applications.
- **Sound Wormy** –Same requirements as No. 1 Common and better but wormholes, limited sound knots, and other imperfections allowed. Not commonly available.
- **No. 3A Common** –Boards are 3" and wider, 4' and longer. Yields 33-1/3 percent clear face cuttings. Economical choice for pallets, fencing, and crates.
- **No. 3B Common** –Boards are 3" wide, 4' and longer. Yields 25 percent clear face cuttings. Same applications as 3A Common. FAS, 1F, Selects, and No. 1 Common are the top grades available in the retail market place. The remaining grades - 2A, 2B, 3A, and 3B rarely reach the retail market.