

PARR

L U M B E R

**Building Trades
Facts & Figures
Pocket guide**

TABLE OF CONTENTS

Board Footage In Standard Units of Lumber Various Lengths . . .	1
Plywood Square Footage Table	1
To Convert To Board Footage	1
Board Footage Conversion	1&7
Lumber Board Footage Table	2
Minimum Dressed Sizes	2
Standard Knotty Grades Western Red Cedar	3
Standard Clear Grades Western Red Cedar	4
Estimating Decks	4
Coverage Estimator	5
(Shiplap, T&G, S4S, Paneling Patterns, Bevel Siding)	
Recommended Minimum Stapling Schedule for Plywood	5
Coverage Estimator (Clear Bevel Siding, Paneling)	6
Drywall Needs	6
Drywall Finishing	6
Drywall Weights	6
Slabs	6
General Work	6
Ready Mix Products	7
Figuring Concrete Job Needs	7
Siding, Overhang and Subfloor	7
Rafter Lengths	8
Lumber Weights	8
Fence Components	8
Plywood Thickness and Weights	8
Rebar Weights	9
Mill Plate Steel	9
Roofing	9
Hardware Cloth	9
Electrical	9
Motor Horsepower	10
Flat Washers and Nuts	10
Nail and Screw Data	10-12
Square Measure	12
Linear Measure	12
Liquid Measure	12
Diameter and Circumference	13
Capacity of a Round Container	13
Water and Water Pressure Weight	13
Areas or Capacity of Shapes	13
To Lay Out a Square Area or Forms	13
Converting Fractions to a Decimal	14
Metric Conversion Table	14
Abbreviations of Terms	15-16
Term Definitions	17-20

Board Footage in Standard Units of Lumber Various Lengths:

Size*	Length						
(Pieces per Unit)	8'	10'	12'	14'	16'	18'	20'
	Board Feet						
2x4 (208)	1,109	1,387	1,664	1,941	2,219	2,496	2,773
2x6 (128)	1,024	1,280	1,536	1,792	2,048	2,304	2,560
2x8 (96)	1,024	1,280	1,536	1,792	2,048	2,304	2,560
2x10 (80)	1,067	1,333	1,600	1,867	2,134	2,400	2,933
2x12 (64)	1,024	1,280	1,536	1,792	2,048	2,304	2,560

* Nominal Sizes

Plywood Square Footage Tables:

Panel Length	60"	72"	84"	96"	108"	120"	132"	144"
Panel 36"	15	18	21	24	27	30	33	36
Width 48"	20	24	28	32	36	40	44	48
60"	25	30	35	40	45	50	55	60

To Convert To Board Footage:

Multiply the lineal by

Board Size	Multiplier	Board Size	Multiplier
1 x 2	.1667	5/4 x 2	.2083
1 x 3	.2500	5/4 x 3	.3125
1 x 4	.3333	5/4 x 4	.4167
1 x 5	.4167	5/4 x 6	.6250
1 x 6	.5000	5/4 x 8	.8333
1 x 8	.6667	5/4 x 10	1.0417
1 x 10	.8333	5/4 x 12	1.2500
1 x 12	1.0000		
2 x 2	.3333	4 x 4	1.3333
2 x 3	.5000	4 x 6	2.0000
2 x 4	.6667	4 x 8	2.6667
2 x 6	1.0000	4 x 10	3.3333
2 x 8	1.3333	4 x 12	4.0000
2 x 10	1.6667	4 x 14	4.6667
2 x 12	2.0000	4 x 16	5.3333

Board Footage Conversion:

Thickness x width ÷ 12 = bd. ft. per lin. ft.
 (i.e.: 2x10 = 20, 20 ÷ 12 = 1.667 bd. ft. per lin. of 2x10.)
 Thickness x width x length ÷ 12 = bd. ft. per piece.
 (i.e.: 2x8 12' long = 2x8x12 = 192 ÷ 12 = 16 bd. ft.)

Board Footage Table:

Length*6' Size*	8'	10'	12'	14'	16'	18'	20'	22'	24'	26'	
2x2	2	2 ² / ₃	3 ¹ / ₃	4	4 ² / ₃	5 ¹ / ₃	6	6 ² / ₃	7 ¹ / ₃	8	8 ² / ₃
2 x3	3	4	5	6	7	8	9	10	11	12	13
2x4	4	5 ¹ / ₃	6 ² / ₃	8	9 ¹ / ₃	10 ² / ₃	12	13 ¹ / ₃	14 ² / ₃	16	17 ¹ / ₃
2x6	6	8	10	12	14	16	8	20	22	24	26
2x8	8	10 ² / ₃	13 ¹ / ₃	16	18 ² / ₃	21 ¹ / ₃	24	26 ² / ₃	29 ¹ / ₃	32	34 ¹ / ₃
2x10	10	13 ¹ / ₃	16 ² / ₃	20	23 ¹ / ₃	26 ² / ₃	30	33 ¹ / ₃	36 ² / ₃	40	43 ¹ / ₃
2x12	12	16	20	24	28	32	36	40	44	48	52
1x2	1	1 ¹ / ₃	1 ² / ₃	2	2 ¹ / ₃	2 ² / ₃	3	3 ¹ / ₃	3 ² / ₃	4	4 ¹ / ₃
1x3	1 ¹ / ₂	2	2 ¹ / ₂	3	3 ¹ / ₂	4	4 ¹ / ₂	5	5 ¹ / ₂	6	6 ¹ / ₂
1x4	2	2 ² / ₃	3 ¹ / ₃	4	4 ² / ₃	5 ¹ / ₃	6	6 ² / ₃	7 ¹ / ₃	8	8 ² / ₃
1x5	2 ¹ / ₂	3 ¹ / ₃	4	5	5 ⁵ / ₆	6 ² / ₃	7 ¹ / ₂	8 ¹ / ₃	9 ¹ / ₆	10	10 ⁵ / ₆
1x6	3	4	5 ¹ / ₃	6	7	8	9	10	11	12	13
1x8	4	5 ¹ / ₃	6 ² / ₃	8	9 ¹ / ₃	10 ² / ₃	12	13 ¹ / ₃	14 ² / ₃	16	17 ¹ / ₃
1x10	5	6 ² / ₃	8 ¹ / ₃	10	11 ² / ₃	13 ¹ / ₃	15	16 ² / ₃	18 ¹ / ₃	20	21 ² / ₃
1x12	6	8	10	14	16	18	20	22	24	26	

*Nominal

Minimum Dressed Sizes:

Dimension	Nominal Size	Actual Size		Metric Equivalent (to nearest whole mm)	
		Dry	Green	Dry	Green
2x	2x2	1 ¹ / ₂ x 1 ¹ / ₂	1 ⁹ / ₁₆ x 1 ⁹ / ₁₆	38x38	40x40
	2x3	1 ¹ / ₂ x 2 ¹ / ₂	1 ⁹ / ₁₆ x 2 ⁹ / ₁₆	38x64	40x65
	2x4	1 ¹ / ₂ x 3 ¹ / ₂	1 ⁹ / ₁₆ x 3 ⁹ / ₁₆	38x89	40x90
	2x6	1 ¹ / ₂ x 5 ¹ / ₂	1 ⁹ / ₁₆ x 5 ⁵ / ₈	38x140	40x143
	2x8	1 ¹ / ₂ x 7 ¹ / ₄	1 ⁹ / ₁₆ x 7 ¹ / ₂	38x184	40x191
	2x10	1 ¹ / ₂ x 9 ¹ / ₄	1 ⁹ / ₁₆ x 9 ¹ / ₂	38x235	40x241
	2x12	1 ¹ / ₂ x 11 ¹ / ₄	1 ⁹ / ₁₆ x 11 ¹ / ₂	38x286	40x292
	3x4 etc.*	2 ¹ / ₂ x 3 ¹ / ₂	2 ⁹ / ₁₆ x 3 ⁹ / ₁₆	64x89	65x90
	4x4 etc.*	3 ¹ / ₂ x 3 ¹ / ₂	3 ⁹ / ₁₆ x 3 ⁹ / ₁₆	89x89	90x90
	Boards & Finish	1x2	3 ⁴ / ₄ x 1 ¹ / ₂	2 ⁵ / ₃₂ x 1 ⁹ / ₁₆	19x38
1x3		3 ⁴ / ₄ x 2 ¹ / ₂	2 ⁵ / ₃₂ x 2 ⁹ / ₁₆	19x64	20x65
1x4		3 ⁴ / ₄ x 3 ¹ / ₂	2 ⁵ / ₃₂ x 3 ⁹ / ₁₆	19x89	20x90
1x5		3 ⁴ / ₄ x 4 ¹ / ₂	2 ⁵ / ₃₂ x 4 ⁵ / ₈	19x114	20x117
1x6		3 ⁴ / ₄ x 5 ¹ / ₂	2 ⁵ / ₃₂ x 5 ⁵ / ₈	19x140	20x143
1x8		3 ⁴ / ₄ x 7 ¹ / ₄	2 ⁵ / ₃₂ x 7 ¹ / ₂	19x184	20x191
1x10		3 ⁴ / ₄ x 9 ¹ / ₄	2 ⁵ / ₃₂ x 9 ¹ / ₂	19x235	20x241
1x12		3 ⁴ / ₄ x 11 ¹ / ₄	2 ⁵ / ₃₂ x 11 ¹ / ₂	19x286	20x292
5/4x2 etc.*		1x1 ¹ / ₂	1 ¹ / ₃₂ x 1 ⁹ / ₁₆	25x38	26x40
6/4x4 etc.*		1 ¹ / ₄ x1 ¹ / ₂	1 ⁹ / ₃₂ x 1 ⁹ / ₁₆	32x38	33x40

* other widths same as above.

Note: Metric sizes shown are merely equivalents, rounded to the nearest whole millimeter. They are not official sizes for use in any conversion to metric system.

Standard Knotty Grades Western Red Cedar:

Product	Grade	Description
Bevel Siding	Select Knotty	For fine knotty appearance.
	Quality Knotty	Permits more pronounced characteristics and has occasional cutouts in longer pieces.
Channel/ Paneling/ Boards	Select Knotty	For fine knotty appearance.
	Quality Knotty	Permits larger and more numerous characteristics and has occasional cutouts.
Boards/ Commons/ Fencing	Select Merchantable	Has fine appearance and includes knots and minor markings.
	Construction	Limited characteristics allowed to assure high degree of serviceability.
	Standard	Allows more characteristics than construction.
	Utility	Includes larger and more numerous markings and knots; often yields shorter pieces of higher grades.
Radius Edge Decking	Proprietary	Check with manufacturer for sizes.
Dimension/ Timbers		For structural uses.

Standard Clear Grades Western Red Cedar:

Product	Grade	Description
Bevel Siding (kiln dried)	Clear VG (vertical grain)	Free of knots and imperfections for use where the highest quality appearance is desired.
	A Grade	Includes some mixed grain and minor growth defects.
	B Grade	Includes mixed grain, limited defects and occasional cutouts in longer pieces.
	Rustic	Similar to A Grade, but graded from sawn face.
	C Grade	Admits larger and more numerous defects than A or B Grades.
Finish/ Paneling (May be specified in combinations such as B & Btr)	Clear	Finest appearances with clear face, few minor defects.
	A Grade	Recommended for fine appearance. May include minor imperfections, knots or growth defects
	B Grade	Permits somewhat larger and more frequent defects, but may have short length of fine appearance.

Estimating Decks:

Converting Sq. Ftg. to Lineal Ftg. including waste and cutting allowance.

$$2 \times 2 \text{ (sq. ftg.)} \times 7.9998 = \text{Lineal Ftg.}$$

$$2 \times 4 \text{ (sq. ftg.)} \times 3.45 = \text{Lineal Ftg.}$$

$$2 \times 6 \text{ (sq. ftg.)} \times 2.5 = \text{Lineal Ftg.}$$

$$2 \times 8 \text{ (sq. ftg.)} \times 1.60 = \text{Lineal Ftg.}$$

Coverage Estimator:

The following estimator provides factors for determining the exact amount of material needed for the five basic types of wood paneling and siding. Multiply square footage to be covered by factor (length x width x factor.)

	Nominal Size	Area Factor
Shiplap	1x6	1.17
	1x8	1.16
	1x10	1.13
	1x12	1.10
Tongue and Groove	1x4	1.28
	1x6	1.17
	1x8	1.16
	1x10	1.13
	1x12	1.10
S4S	1x4	1.14
	1x6	1.09
	1x8	1.10
	1x10	1.08
	1x12	1.07
Paneling Patterns	1x6	1.19
	1x8	1.19
	1x10	1.14
	1x12	1.12
Bevel Siding	1x4	1.60
	1x6	1.33
	1x8	1.28
	1x10	1.21
	1x12	1.17

Note: Allowance for trim and waste should be added.

Recommended Minimum Stapling Schedule for Plywood:

All values are for 16 gauge galvanized wire staples having a minimum crown width of 3/8".

Plywood Thickness (in.)	Staple Leg Length (in.)	Spacing Around Entire Perimeter of Sheets (in.)	Spacing at Intermediate Members (in.)
Plywood wall sheathing without diagonal bracing			
5/16	1-1/4	4	8
3/8	1-3/8	4	8
1/2	1-1/2	4	8
Plywood roof sheathing			
5/16	1-1/4	4	8
3/8	1-3/8	4	8
1/2	1-1/2	4	8
Plywood subfloors			
1/2	1-5/8	4	7
5/8	1-5/8	2-1/2	4
Plywood underlayment			
1/4*	7/8	3	6 each way
3/8	1-1/8	3	6 each way
1/2	1-5/8	3	6 each way
5/8	1-5/8	3	

Asphalt shingles to plywood staples to have crown width of 3/4" min.

5/16 and thicker 3/4 According to shingle manufacturer

* 18-gauge staples with 3/16" crown may be used for 1/4" underlayment

Coverage Estimates:

Clear Bevel Siding

Dimensions In Inches

Nominal Size	Butt Thickness	Actual Width	*Qty. Req.to Cover 1,000 Sq.Ft. of Wall Area (in surface measure)
1/2x4	15/32	3-1/2	1600
1/2x5	15/32	4-1/2	1429
1/2x6	15/32	5-1/2	1333
1/2x8	15/32	7-1/2	1231
5/8x10	9/16	9-1/2	1176
3/4x8	3/4	7-1/2	1231
3/4x10	3/4	9-1/2	1176
3/4x12	3/4	11-1/2	1143

*Allow small additional footage for cutting and fitting—usually 10%.
FHA recommended lap: 1" on all sides.

Paneling

Dimensions In Inches

Nominal Size	Butt Thickness	Actual Width	*Qty. Req.to Cover 1,000 Sq.Ft. of Wall Area (in surface measure)
1x4	3/4	3-1/2	1231
1x5	3/4	4-1/2	1177
1x6	3/4	5-1/2	1143
1x8	3/4	7-1/2	1104
1x10	3/4	9-1/2	1084
1/2x4	7/16	3-1/2	1231
1/2x5	7/16	4-1/2	1177
1/2x6	7/16	5-1/2	1143
1/2x8	7/16	7-1/4	1104

*Allow small additional footage for cutting and fitting.

Drywall Needs:

Sq. ft. of floor x 3.5 = approx. footage of gypsum needed.

Drywall Finishing:

1,000 sq. ft. of surface will take: 370' of joint tape, three 50# ctns. of premix compound for taping only. For texture only, use five to six ctns.

Drywall Weights:

1/2" regular (per sq. ft.) = 1.8 lb.

1/2" grn. bd. (per sq. ft.) = 1.85 lb.

5/8" fire stop (per sq. ft.) = 2.4 lb.

Slabs: 80 sq. ft. to a depth of 4" requires 1 cu. yard of concrete. 54 sq. ft. to a depth of 6" requires 1 cu. yard of concrete.

General work - 1 shovel of cement to 5 shovels of sand/gravel combo.

Ready Mix Products:

Mortar - 75# lays approx. 56 common bricks.

Stucco - 50# covers approx. 8 sq. ft. to a depth of 5/8".

Grout - 80# covers approx. 15 sq. ft. to a depth of 1/2".

Concrete - 40 sacks of 90# are the equivalent of approx. 1 cu. yard.

Concrete - 60 sacks of 60# are the equivalent of approx. 1 cu. yard.

Sand or Gravel - approx. 150 shovels = 1 cu. yard.

Figuring Concrete Job Needs:

Approximate Number of Bags To Use

Dimension In Feet:		3" Deep		4" Deep	
Width	Length	60 lbs.	90 lbs.	60 lbs.	90 lbs.
1	1	1/3	1/2	2/3	1/2
1	2	1	3/4	1-1/3	1
1	3	1-1/2	1-1/4	2	1-1/2
2	2	2	1-1/2	2-2/3	2
2	3	3	2-1/4	4	3
2	4	4	3	5-1/3	4
2	5	5	3-3/4	6-2/3	5
2	6	6	4-1/2	8	6
2	7	7	5-1/4	9-1/3	7
2	8	8	6	10-2/3	8
2	9	9	6-3/4	12	9
2	10	10	7-1/2	13-1/3	10
3	3	4-1/2	3-1/3	6	4-1/2
3	5	7-1/2	5-2/3	10	7-1/2
3	7	10-1/2	8	14	10-1/2

Dimensions in Square Feet:

25	12-1/2	9-1/2	16-2/3	12-1/2
30	15	11-1/2	20	15
40	20	15	27	20
50	25	19	33-1/3	25

Note: For pours 2" deep use 1/2 of the 4" column. For pours 6" deep use twice the amount shown in the 3" column.

Siding, Overhang and Subfloor:

1x6 V-rustic or t&g* - sq. ft. to cover x 1.23 = board ft. needed.

Board ft. of 1 x 6 x 2 = lin ft. needed.

1x8 V-rustic or t&g* - sq. ft. to cover x 1.23 board ft. needed.

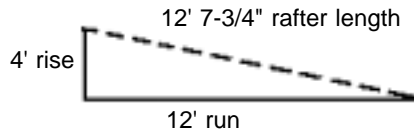
Board ft. of 1 x 8 x 1.5 = lin.ft. needed.

2 x 6 t&g* - sq. ft. to cover x 2.46 = bd. or lin. needed.

* Waste included.

Rafter Lengths:

Example - Building width is 24'. Pitch is 4" drop per ft. The ridge is in the middle so figure 1/2 the building width is 12'. 4" drop per ft. x 12' = 4' rise. Width squared + rise squared = rafter length squared. $12' \times 12' = 144'$ & $4' \times 4' = 16$. So, $144 + 16 = 160$. What number times itself = 160? If you have a calculator that gives square root use that, if not, start by multiplying any number above 12' by itself until you can come up with 160. (12.65×12.65). Now, you have $12' + .65'$, $.65' \times 12" = 7.8"$. Round 7.8" to 7-3/4". Answer . . . 12' 7-3/4" from the center of the ridge to the outside of the plate. Deduct 1/2 the thickness of the ridge board. This gives you the exact length from the ridge cut to the outside of the seat cut. **Note:** Don't forget to add the overhang for the overall length.

**Lumber Weights:**

Green fir weighs approx. 2.5 to 3 lbs. per bd. ft.

Dry fir weighs approx. 2.0 lbs. per bd. ft.

Green redwood weighs between 2.5 to 4 lbs. per bd. ft.

Dry redwood and pine weigh approx. 1.8 lbs. per bd. ft.

Note: Green lumber shrinks rapidly, especially during summer months.

Fence Components:

For 100' of fence you will need:

14 4x4 post on 7' 8" centers.

7 sacks of 90# dry mix concrete.

6 2x4 16' top rail.

16 2x4 8' bal. of top and bottom rail and bottom rail supports.

107 1x12 (11-1/4" wide) or 157 1x8 (7-5/8" wide.)

1 lb. of 16d and 7 lbs. of 8d hd galv box nails.

Note: Add 1 extra post for each walk gate.

Plywood Thickness and Weights:

Sanded		<u>Nominal Thickness</u>			
1/4	3/8	1/2	5/8	3/4	1-1/8
		<u>Actual Thickness</u>			
1/4	11/32	15/32	19/32	23/32	1-1/8
<u>Approximate weight per 4x8 sheet</u>					
22.0	28.5	40.6	48	60.8	84.5

Rebar Weights:

<u>Dia.</u>	<u>Weight per ft.</u>	<u>Weight per 20' bar</u>
1/4"	.167	3.34
3/8"	.376	7.52
1/2"	.668	13.36
5/8"	1.043	20.86
3/4"	1.502	30.04
7/8"	2.044	40.88
1"	2.67	53.40

Mill Plate Steel:

<u>Thickness</u>	<u>Weight per sq. ft.</u>
3/16"	7.65
1/4"	10.20
5/16"	12.75
3/8"	15.30
1/2"	20.40
5/8"	25.50
3/4"	30.60
7/8"	35.70
1"	40.80

Roofing:

<u>Felts</u>	<u>Roll Sizes</u>	<u>Approx Sq. Feet</u>
Type 15 (4 sq)	36"x144'	300 sq ft
Type 30 (2 sq)	36"x72'	200 sq ft
Type 30 (shake)	18"x120'	100 sq ft
Mineral surface	36"x108'	100 sq ft

	<u>Shingle size</u>	<u>Pcs/sq</u>	<u>Bdl/sq</u>
20 yr shingles	13 ¹ / ₄ "x39 ³ / ₈ "	65	3

Hardware Cloth: Weights per lin. ft.

	27ga	32ga	19ga
Mesh =	<u>1/8</u>	<u>1/4</u>	<u>1/2</u>
24" wide	.64'	.96'	1.28'
36" wide	.47'	.81'	.95'
48" wide	.48'	.87'	.96'

Electrical:

Amperes multiplied by volts = watts.

Example - a 10 amp motor running on 115 volts,

10 x 115 = 1,150 watts.

Watts divided by volts = amps.

Motor Horsepower:

HP	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5
Voltage					Amps draw				
115	6	7	10	14	16	20	24	34	56
230	3	3.5	5	7	8	10	12	17	28
Distance from breaker to motor w/3% voltage drop									
Wire Sz.	115 volts								
#14	140	110	90	60					
#12	220	170	140	100	80				
#10	350	260	220	160	130				
#8	660	420	350	250	200				
#6	890	660	560	400	320				
Wire Sz.	230 volts								
#14					140	110			
#12	For motors up to				220	170			
#10	1 HP multiply the				350	270	190		
#8	above feet by 4				560	430	310	190	
#6					900	690	480	290	

Flat Washers and Nuts:

Size	Washers		Nuts	
	per lb		per lb	
1/4	165		136	
5/16	94		98	
3/8	67		62	
1/2	26		30	
5/8	15		15	
3/4	10		10	

Nail and Screw Data:

Common Nails

Size	Length inches	Gauge No.	Approx No. per lb
2d	1	15	876
3d	1-1/4	14	568
4d	1-1/2	12-1/2	316
5d	1-3/4	12-1/2	271
6d	2	11-1/2	181
7d	2-1/4	11-1/2	161
8d	2-1/2	10-1/4	106
10d	3	9	69
12d	3-1/4	9	63
16d	3-1/2	8	49
20d	4	6	31
30d	4-1/2	5	24
40d	5	4	18
50d	5-1/2	3	14
60d	6	2	11

Finish Nails

Size	Length inches	Gauge No.	Approx No. per lb
3d	1-1/4	15-1/2	807
4d	1-1/2	15	584
5d	1-3/4	15	500
6d	2	13	309
8d	2-1/2	12-1/2	189
10d	3	11-1/2	128
12d	3-1/4	11-1/2	113
16d	3-1/2	11	90
20d	4	10	62

Spikes

Size	Length inches	Gauge No.	Approx No. per lb
7	7	5/16	6
8	8	3/8	4
9	9	3/8	3-1/2
10	10	3/8	3
12	12	3/8	2

H.D. Galv Box Nails

Size	Length inches	Gauge No.	Approx No. per lb
3d	1-1/4	15	615
4d	1-1/2	14	453
5d	1-3/4	14	389
6d	2	12-1/2	225
7d	2-1/4	12-1/2	200
8d	2-1/2	11-1/2	136
10d	3	10-1/2	90
12d	3-1/4	10	76
16d	3-1/2	10	69
20d	4	9	50

Green Vinyl Sinkers

Size	Length inches	Gauge No.	Approx No. per lb
8d	2-3/8	11-1/2	153
16d	3-1/4	9	64

Duplex Nails

Size	Length inches	Gauge No.	Approx No. per lb
6d	1-3/4	11-1/2	150
8d	2-1/4	10-1/4	88
10d	2-3/4	8	62
12d	3	8	44
16d	3-1/2	6	28

Roofing Nails

Size	Length inches	Gauge No.	Approx No. per lb
	1/2	11	534
	5/8	11	436
	3/4	11	340
	7/8	11	300
	1	11	267
	1-1/4	11	220
	1-1/2	11	187
	1-3/4	11	167
	2	11	142
	2-1/2	11	116

Construction Screw

Size	Length inches	Gauge No.	Approx No. per lb
	1	6	373
	1-1/4	11	220
	1-1/2	11	187
	1-3/4	11	167
	2	11	142
	2-1/2	11	116

Square Measure:

144 sq. inches = 1 sq. ft.

9 sq. ft. = 1 sq. yard

30-1/4 sq. yds = 1 sq. rod

160 sq. rods = 1 acre

4,840 sq. yd. = 1 acre

43,560 sq. ft. = 1 acre

640 acres = 1 sq. mile

An acre is equal to a square whose sides are 208.71' each.

Linear Measure:

12 inches = 1 foot

3 feet = 1 yard

5-1/2 yards = 1 rod

1 rod = 16-1/2 feet

320 rods = 1 mile

1 mile = 5,280 feet

Liquid Measure:

1 pint = 16 ounces

2 pints = 1 quart

8 pints = 1 gallon

1 gallon = 231 cu. inches

1 cubic foot = 7.48 gallons

Diameter and Circumference:

To find the circumference of a circle, multiply the diameter by 3.1416.

To find the diameter of a circle, multiply the circumference by .31831.

Capacity of a Round Container:

Diameter in inches or feet squared x .7854 = the "area" of a circle.

Area x length or height = cubic ft. or inches.

Cu. ft. x 7.4805195 = gallons. Cu. in. x .004329 = gallons.

1 cu. ft. = 1,728 cu. inches.

7.48 gallons = 1 cu. ft. 1 gallon = 231 cu. inches.

Doubling the diameter of a pipe increases its capacity four times.

Water and Water Pressure Weight:

Water weighs 8-1/3 lb. per gallon.

Multiply the depth of a body of water or a container in feet by .434 = pounds per square inch.

Areas or Capacity of Shapes:

Triangle area = base x 1/2 of the height.

Cone cu. inches or feet - square the base diameter and multiply by .7854. This gives the base area then multiply by 1/3 the height.

Cube = width x length x height.

Cubic inches or feet of a ball - multiply the cube of the diameter by .5236.

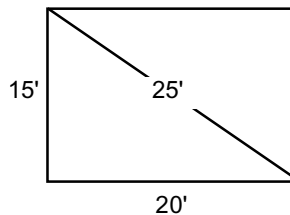
Side of square x 1.128 = the diameter of a circle with equal area.

To Lay Out a Square Area or Forms:

The Pythagorean Theorem 3-4-5 concerns a 90° triangle. If one leg of the triangle is 3' long and another leg of the triangle is 4' long then the distance between the two legs is 5'.

Lay out strings on the batter boards at 90° angles. If the distance between 3' on one side and 4' on the other does not measure 5 feet, adjust the string until it does measure 5'.

Use any multiples of 3'-4'-5'. (i.e. 15'-20'-25')



Converting Fractions to a Decimal

<u>Fraction</u>	<u>Dec. Equiv.</u>	<u>Fraction</u>	<u>Dec. Equiv.</u>
1/64	.0156	5/16	.3125
1/32	.0312	21/64	.3281
3/64	.0469	11/32	.3438
1/16	.0625	23/64	.3594
5/64	.0781	3/8	.3750
3/32	.0938	25/64	.3906
7/64	.1094	13/32	.4063
1/8	.1250	7/16	.4375
9/64	.1406	15/32	.4688
5/32	.1563	1/2	.5000
11/64	.1719	9/16	.5625
3/16	.1875	5/8	.6250
13/16	.2031	11/16	.6875
7/32	.2188	3/4	.7500
15/64	.2344	13/16	.8125
1/4	.2500	7/8	.8750
17/64	.2656	15/16	.9375
9/32	.2813	1	1.0000
19/64	.2969		

Metric Conversion Table

<u>When You Know</u>	<u>Multiply By</u>	<u>To Find</u>
Inches	25.4	Millimeters
Millimeters	.03937	Inches
Feet	.3048	Meters
Meters	3.280	Feet
Cubic Feet	.02832	Cubic Meters
Cubic Meters	35.315	Cubic Feet
Board Feet (lumber)	.00236	Cubic Meters
Cubic Meters (lumber)	424	Board Feet
Board Feet (logs)	.00453	Cubic Meters
Cubic Meters (logs)	221	Board Feet
Square Ft. (3/8 basis)	.00089	Cubic Meters
Cubic Meters	1,130	Square Ft. (3/8 basis)

Abbreviations of Terms:

AA - Veneer grades on the face and back of sanded plywood

AB - Veneer grades on the face (A) and back (B) of sanded plywood, or a combination of veneer grades

AC - Veneer grades on the face (A) and back (C) of sanded plywood

AD - Veneer grades on the face (A) and back (D) of sanded plywood

B&BTR - B Grade and Better

Bd Ft - Board Foot or Feet

CD - Veneer grades on face (C) and back (D) of unsanded plywood

CDX - CD plywood with exterior (X) glueline

CLF - Hundred Lineal Feet

Clr - Clear

Com, Cmn - Common

CWT - Hundred Weight

Econ - Economy

EE - Eased Edges

EG - Edge Glued, or Exterior Glued, or Edge Grain

Ext - Exterior

FOHC - Free Of Heart Center

Grn - Green

Hem - Hemlock

HF - Hem-Fir

KD - Kiln Dried

Lam - Laminate or Laminated

Lin - Lineal or Linear

M - Thousand

MBF - Thousand Board Feet

MDF - Medium-Density Fiberboard

MDO - Medium-Density Overlay

OC - On Center

PB - Particleboard
PBU - Particleboard Underlayment
P&T - Plug and Touch
P&TS - Plug and Touch Sanded
RC - Red Cedar
Rdm - Random
Reman - Remanufacture
RL - Random Length
Rsn - Resawn
RW - Random Width
RW &L - Random Width and Length
RWRL - Random Width, Random Length
S1E - Surfaced One Edge
S2E - Surfaced Two Edges
S1S - Surfaced One Side
S2S - Surfaced Two Sides
S4S - Surfaced Four Sides
S-Dry - Surface Dry
Sel - Select
S/L - Shiplap
SP - Sugar Pine
Std - Standard
Std&Btr - Standard & Better
STK - Select Tight Knot
SYP - Southern Yellow Pine
UL - Underlayment
Util - Utility
Util&Btr - Utility & Better
VG - Vertical Grade
WRC - Western Red Cedar

Terms Definitions:

And Better - Usually abbreviated "&Btr", indicates that lumber so graded contains an unspecified percentage of pieces that are of a higher grade than the lowest acceptable grade.

Appearance Grade - A grade of framing lumber intended primarily for exposed use in housing and light construction where fine appearance is required; sound, tight knots are permitted.

Blow - A separation of a portion of veneers in a plywood panel, caused by a steam pocket that develops during the press process.

Board Foot - The basic unit of measurement for lumber. One board foot is equal to a 1-inch board 12 inches in width and 12 inches in length. Thus, a 10-foot long, 1-inch thick and 12-inch wide board would contain 10 board feet, as would a 10-foot 2x6. When calculating board feet, nominal sizes are assumed.

Bright - Unstained, fresh material, recently milled, free of discoloration.

Check - A lengthwise separation of the wood, normally occurring across or through the rings of annual growth and usually the result of seasoning.

Clear - Free or practically free of all blemishes, characteristics, or defects.

Common - Lumber that is suitable for general construction and utility purposes.

Dry - Seasoned, usually to a moisture content of 19% or less.

Economy - The lowest recognized grade in lumber. Economy permits serious defects in the lumber, including large knots and holes, unsound wood, splits, wane and others.

Fingerjoint - A method of joining two pieces of lumber end-to-end by sawing into the end of each piece a set of projecting "fingers" that interlock when the two pieces are pushed together, forming a strong glue joint.

Free of Heart Center (FOHC) - Lumber sawn to exclude the pith or heart center of a log.

Glue Laminated (Glue Lam) - A process in which individual pieces of lumber or veneer are bonded together with an adhesive to make a single piece with the grain of each running parallel to the grain of each of the other pieces.

Hardwood - A general term referring to any of a variety of broad leaved, deciduous trees, and the wood from those trees. The term has nothing to do with the actual hardness of the wood; some hardwoods are softer than certain softwood species.

Kiln Dried - Lumber that has been seasoned in a kiln to a predetermined moisture content, normally 19% or less.

Ply - A single layer or sheet of veneer. One complete layer of veneer in a sheet of plywood.

Pressure Treating - A process of impregnating lumber or other wood products with various chemicals, such as preservatives and fire retardants, by forcing the chemicals into the structure of the wood using high pressure.

Reman - Remanufacture or remanufacturing; a process of converting a common product to a more specialized or higher grade product by further manufacturing.

Ruff Sawn - A designation for plywood paneling or siding which has been saw-textured to provide a decorative, rough sawn appearance.

Sanded - Plywood panels which have been processed through a machine sander to obtain a smooth surface on the outer plies; usually one side carries an A or B face.

Select - A high quality piece of lumber graded for appearance.

Select Tite Knot (STK) - A grade term often used for Cedar lumber. Lumber graded "STK" is selected from the mill run because of tight knots in each piece.

Softwood - A general term referring to any of a variety of trees having narrow, needlelike or scalelike leaves, generally coniferous, and the wood from such trees. The term has nothing to do with the actual softness of the wood; some softwoods are harder than certain hardwood species.

Standard and Better (Std&Btr) - Lumber containing a mixture of grades, the lowest of which is the Standard grade of light framing; the "and better" signifies that a portion of the lumber is of higher grade or grades. While Std&Btr is fully suitable for general construction purposes, the proportion of higher grades included is a factor in determining market value.

Stud Grade - Lumber of this grade has the strength and stiffness values that make it suitable for use in load bearing walls.

Tally - A numerical breakdown of the various lengths and/or sizes in a load of lumber. The price of a random length load is generally dependent on the tally, with those loads having a high proportion of the desired lengths bringing the higher price.

Utility - A grade of softwood lumber used when a combination of strength and economy is desired. It is suitable for many uses in construction, but lacks the strength of Standard, the next highest light framing grade, and may not be allowed for certain applications where high strength is required.

Utility and Better (Util&Btr) - A mixture of light framing lumber grades with the lowest being Utility. The "and Better" signifies that some percentage of the mixture is of a higher grade than Utility (but not necessarily of the highest grade).

Veneer - Wood peeled, sawn or sliced in a given, constant thickness and used in the production of plywood.

Vertical grain (VG) - Lumber that is sawn at approximately right angles to the annual growth rings so that the rings form an angle of 45 degrees or more with the surface of the piece.

Wane - Bark or lack of wood from any cause on the edge or corner of a piece of lumber.

Warp - Any variation from a true or plane surface, including bow, crook, cup or any combination of these.

White Speck - A fungus that develops in a living tree. It does not develop after the tree has been harvested. Causes small white honeycombed areas in the wood.

PARR
L U M B E R

The information in this booklet was taken from different manufacturers brochures and is for information only. It is intended as a guide for estimates only. Parr Lumber is not liable for any errors or misrepresentation.