

THREE BASIC UNITS OF MEASURE ARE USED FOR LUMBER:

1. **BOARD MEASURE** - is the term to indicate that the board foot is the unit of measurement for most lumber items. A board foot is defined as a piece one inch thick (nominal) by one foot wide (nominal) by one foot long (actual) or its equivalent. For instance a 2 x 6 also equals one board foot for each foot of length.

Board footage is calculated by multiplying the nominal thickness in inches (T) by the nominal width in inches (W) by the actual length in feet (L) and dividing by 12. The formula is: $\frac{T \times W \times L}{12} = \text{Board ft.}$

Where: **T** = nominal thickness in inches
W = nominal width in inches
L = length in feet

2. **SURFACE MEASURE** - is the square feet on the surface of a piece of lumber. Surface measure is calculated without regard to thickness of the piece, i.e. 2 x 12 board, one foot long equals **one square foot**. The formula is: $\frac{W \times L}{12} = \text{Surface Measure}$
3. **LINEAL MEASURE** - is the total **length** in feet of a board, regardless of its thickness or width, i.e. a 2 x 14 one foot long is one lineal foot.

To calculate the board footage for sizes and lengths other than those given in the table:

- A. To calculate the **board feet per lineal foot** of an uncommon size: $\frac{T \times W}{12} = \text{Board feet per lineal foot}$

Example: A lineal foot of 3 x 5 = 1.25 bf.

- B. To calculate the total board feet in an uncommon length of a particular size:

- 1.) Use the board footage formula or
- 2.) Use the board feet per lineal foot (either from your calculation, i.e. 1.25 bf. for a 3 x 5, or from column 3 in the table times the length).

Examples: 17' of 3 x 5 = 1.25 bf. x 17 = 21.25 bf.
17' of 3 x 6 = 1.5 bf. x 17 = 25.5 bf.

Note: For multiple pieces, multiply the board feet in one piece times the number of pieces (as in problem 2 opposite.)

USING THE HEADINGS
EXPLANATION OF TABLE HEADINGS

LINEAL FEET PER BOARD FOOT	NOMINAL SIZE	BOARD FEET PER LINEAL FOOT	BOARD FEET (rounded to the nearest 100th)						
			6'	8'	10'	12'	14'	16'	18'

LINEAL FEET PER BOARD FOOT - the lineal feet, in a given size piece, need to equal one board foot.

NOMINAL SIZE - is the standard size designation for lumber, used for convenience.

BOARD FEET PER LINEAL FOOT - the number of board feet per one foot of length in a given size.

BOARD FEET - the columns in this section give board footages for corresponding lengths and sizes. Lengths are given from 6' - 20' in 2' increments. Sizes are read from the NOMINAL SIZES column in the middle of the table.

Sample Problems

1. How to use the **tabulated values for lengths** given in the table.

Problem: How many board feet (bf.) in 8, 2 x 4's, 12' long?

Solution: Find 2 x 4 nominal size on the chart. Read across the column, under the 12' heading and find 8 bf.

8 bf. x 8 pieces = 64 bf.

2. How to find the **total board footage for multiples of uncommon lengths** of standard sizes.

Problem: How many bf. are in 10, 4 x 8's 20' long?

Solution: Find the board feet per lineal foot (column for 4 x 8; it's 2.6667. Multiply times 20' in length, times 10 pieces.

2.6667 x 20 x 10 = 533.33 bf.

3. How to **convert price per 1000 bf. to price per lineal foot.**

Example: \$225.00/1000 bf. for 2 x 8's

Problem: What is the price per lineal foot?

Solution: Find the lineal foot per board foot for 2 x 8's in the far left column of the table; its 750.

\$225/1000 bf. = .225

.225 x 1.3333 = \$.30 per lineal foot

4. How to **convert price per 1000 bf. to price per piece.**

Example: \$255.00/1000 bf. for 2 x 12's

Problem: What is the price for 10' of 2 x 12'?

Solution: Find bf. for 10' of 2 x 12 in the table; its 20 bf.

\$255/1000 bf. = .255

20 bf. x .255 = \$ 5.10 (price for 10' of 2x12)