Name:_____ [redacted]:_____/200

Board Feet Worksheet 1

10pts per question

Find the board feet for the following pieces of lumber.

Formula: ***Length" x Width" x Thickness" ÷ 144***

Watch Symbols change everything to Inches

1. How many board feet in piece of Oak that is 1" thick 6" wide and 8' long? _____
2. How many board feet in a piece of Oak that is 1" thick 8" wide and 12' long?_____
3. How many board feet in piece of Oak that is 1" thick 1' wide and 8' long? _____
4. How many board feet in piece of Oak that is 1" thick 4" wide and 72" long? _____
5. How many board feet in piece of Alder that is 1" thick 3 " wide and 14' long?_____
6. How many board feet in piece of Cherry that is 1" thick 4.5" wide and 72" long_____
7. How many board feet in piece of Oak that is 1" thick ½ " wide and 12' long?_____
8. How many board feet in piece of Hickory that is 1" thick 12" wide and 5' long?_____
9. How many board feet in piece of Alder that is 1" thick 1.5' wide and 30" long?_____
10. How many board feet in piece of Oak that is 1" thick 18" wide and 12" long?_____

Now calculate how much each from the above problem will cost board will cost.

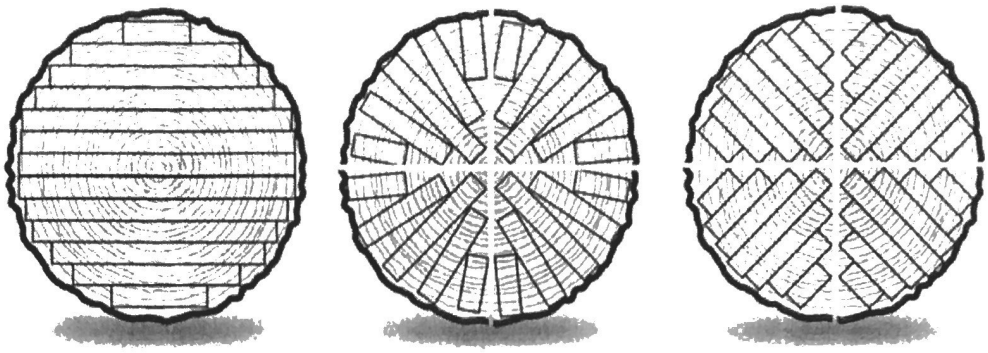
Formula: Cost x Board Feet

Wood Prices:

Oak $3.25 per BF Alder $1.75 per BF

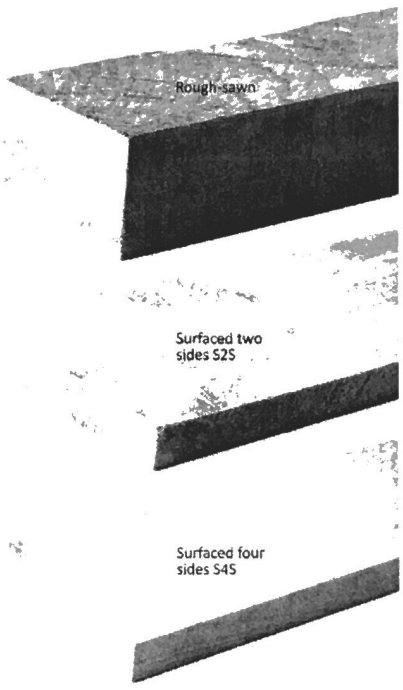
Hickory $4.25 per BF Cherry $6.55 per BF

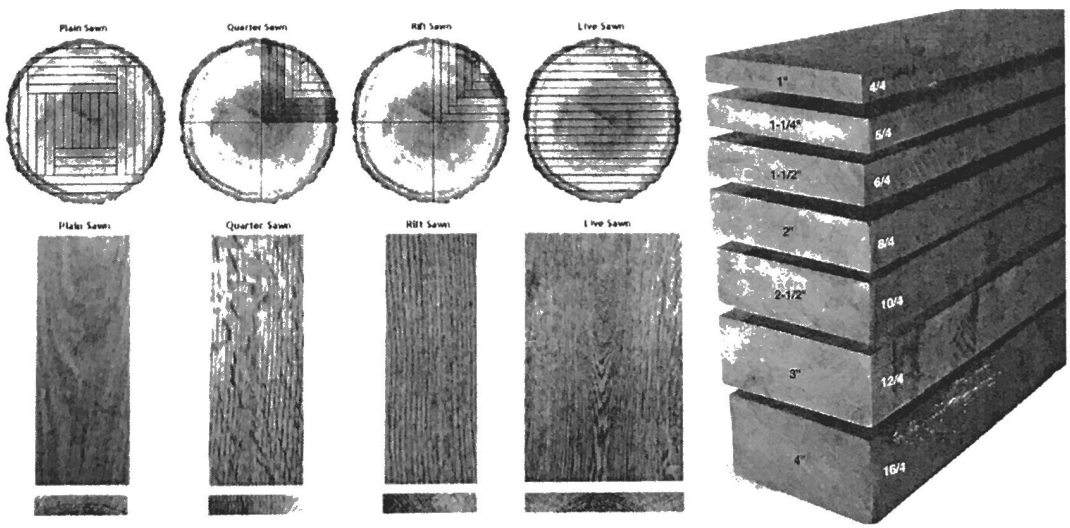
11. How much would the board from question 1 cost $_____
12. How much would the board from question 2 cost $_____
13. How much would the board from question 3 cost $_____
14. How much would the board from question 4 cost $_____
15. How much would the board from question 5 cost $_____
16. How much would the board from question 6 cost $_____
17. How much would the board from question 7 cost $_____
18. How much would the board from question 8 cost $_____
19. How much would the board from question 9 cost $_____
20. How much would the board from question 10 cost $_____



Flat Sawn | Rift Sawn | Quarter Sawn

Lumber Milling Options





BOARD FOOT CHEAT SHEET

1 Board Foot = 144 Cubic Inches (rough sawn)

FYI: surfaced lumber reduces thickness, but board footage is always calculated from the original rough thickness

WOODWORKERS Source

4/4

& thin stock under 1" (also equals square footage)

	4"	5"	6"	7"	8"	9"	10"	11"	12"
48"	1.33	1.67	2.00	2.33	2.67	3.00	3.33	3.67	4.00
60"	1.67	2.08	2.50	2.92	3.33	3.75	4.17	4.58	5.00
72"	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00
96"	2.67	3.33	4.00	4.67	5.33	6.00	6.67	7.33	8.00
120"	3.33	4.17	5.00	5.83	6.67	7.50	8.33	9.17	10.00
144"	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00

5/4

	4"	5"	6"	7"	8"	9"	10"	11"	12"
48"	1.67	2.08	2.50	2.92	3.33	3.75	4.17	4.58	5.00
60"	2.08	2.60	3.13	3.65	4.17	4.69	5.21	5.73	6.25
72"	2.50	3.13	3.75	4.38	5.00	5.63	6.25	6.88	7.50
96"	3.33	4.17	5.00	5.83	6.67	7.50	8.33	9.17	10.00
120"	4.17	5.21	6.25	7.29	8.33	9.38	10.42	11.46	12.50
144"	5.00	6.25	7.50	8.75	10.00	11.25	12.50	13.75	15.00

6/4

	4"	5"	6"	7"	8"	9"	10"	11"	12"
48"	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00
60"	2.50	3.13	3.75	4.38	5.00	5.63	6.25	6.88	7.50
72"	3.00	3.75	4.50	5.25	6.00	6.75	7.50	8.25	9.00
96"	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00
120"	5.00	6.25	7.50	8.75	10.00	11.25	12.50	13.75	15.00
144"	6.00	7.50	9.00	10.50	12.00	13.50	15.00	16.50	18.00

8/4

	4"	5"	6"	7"	8"	9"	10"	11"	12"
48"	2.67	3.33	4.00	4.67	5.33	6.00	6.67	7.33	8.00
60"	3.33	4.17	5.00	5.83	6.67	7.50	8.33	9.17	10.00
72"	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00	12.00
96"	5.33	6.67	8.00	9.33	10.67	12.00	13.33	14.67	16.00
120"	6.67	8.33	10.00	11.67	13.33	15.00	16.67	18.33	20.00
144"	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00

3 Ways to Calculate Board Footage

T" x W" x L" ÷ 144 = Bd. Ft.
(all dimensions in inches)

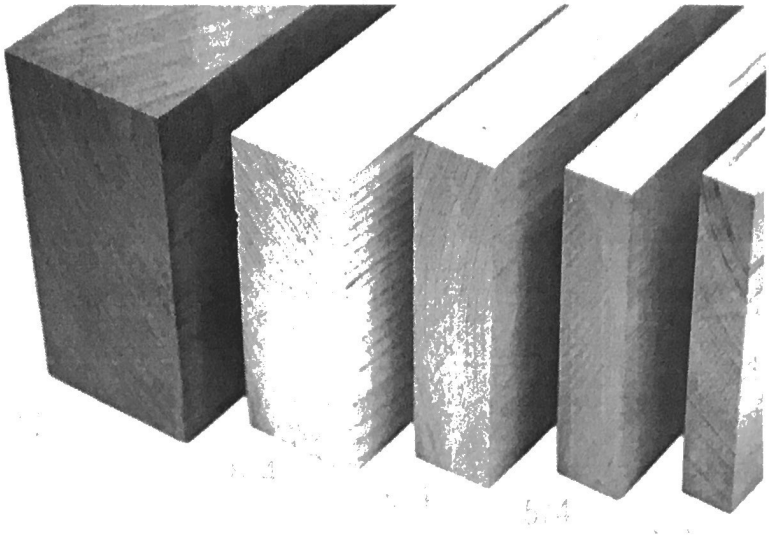
T "x W" x L' ÷ 12 = Bd. Ft.
(length in feet)

T" x Sq. Feet = Bd Ft.
(square footage times [illegible])

WHAT DOES 4/4, 6/4, 8/4 MEAN?

This fraction represents an approximation of the rough (RGH) sawn thickness of lumber.

	Rough Sawn	*Surfaced 2 Sides*
4/4	≈ 1"	13/16"
5/4	≈ 1"	1-1/16"
6/4	≈ 1"	1-5/16"

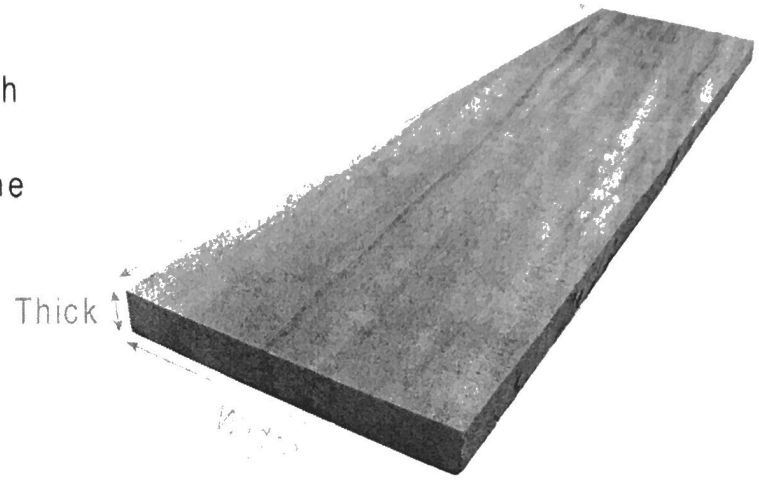


HOW TO MEASURE LUMBER

Widths = nearest quarter of an inch
Lengths = nearest whole inch
Thickness = don't measure, use the rough thickness name

Examples

4/4 x 6.75" x 98" = 4.59 Bd. Ft.



WHY BOARD FEET?

Since hardwoods are sold in random widths and lengths, measuring the volume of wood is the fair way. Conversely, dimensioned lumber and wood is sold by the piece or by the lineal foot.

WHY RANDOM WIDTHS AND LENGTHS?

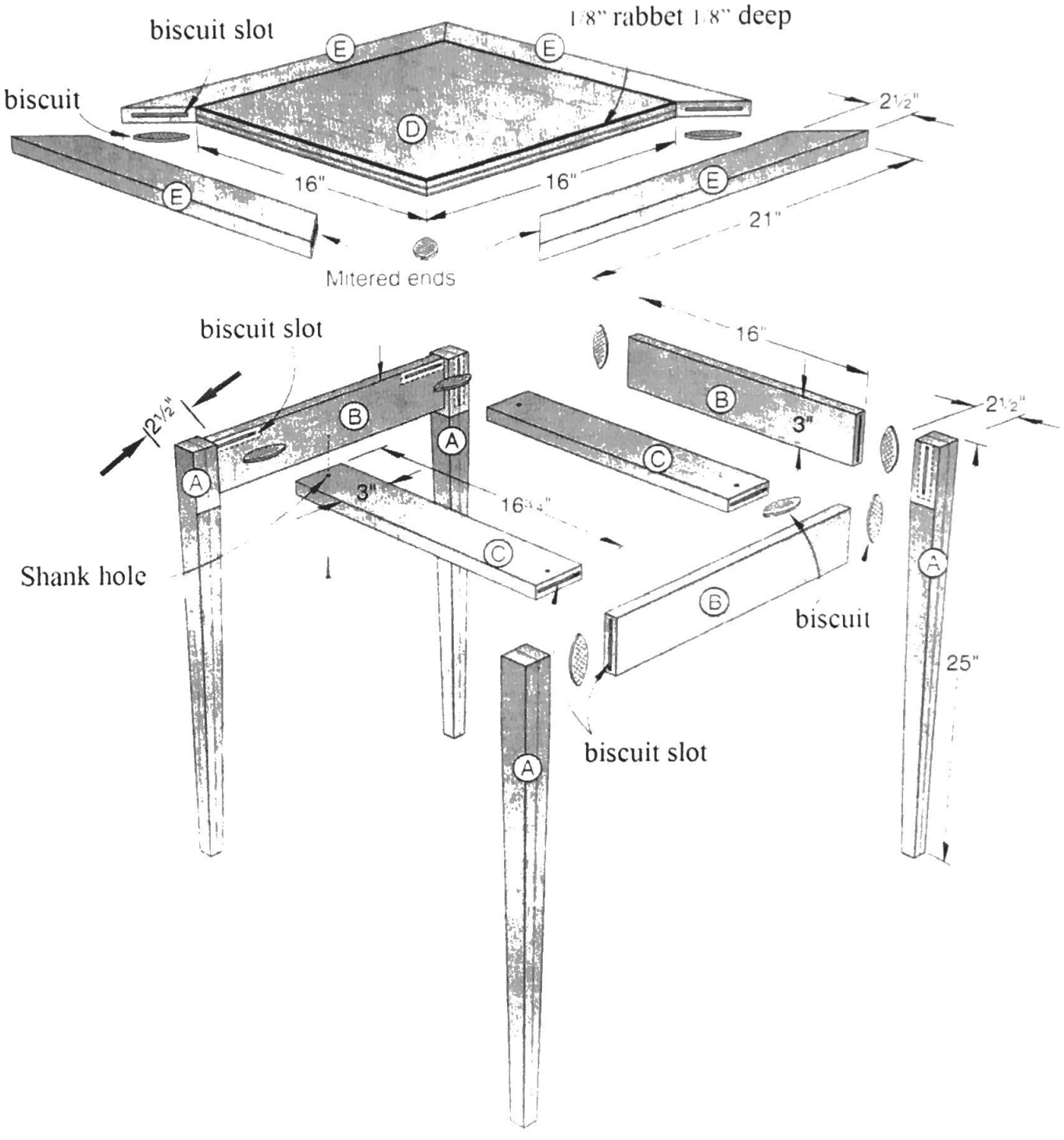
Because it hasn't been processed into any particular size yet.
Trees are round and irregular. To maximize the amount of useable wood that com es out of a log, sawmills cut logs into boards for the most yield. The result is a variety of widths and lengths. You do the cutting, gluing, shaping and crafting the parts for your project.

The process looks something like this:
Trees > Logs > Raw Lumber > Manufactured Sizes > Final Project

Figuring Board Feet 4

■ Points

You need to figure out how many board feet are needed for each piece, and how many board feet would be needed to build the entire project. Answer the following question.



Name: _____

Figuring Board Worksheet 4

10 pts per question

You need to figure out how many board feet are needed for each piece. Answer the following question. Each pieces is solid lumber. All stock is 1" thick unless plans specify. Round all answers to two decimal places.

1. Fill in the measurements for part A? _____" Long X _____" Wide X _____" Thick
   ~ Look at all 4 legs to find all of the dimensions (sizes) needed.

2. How many Board Feet are in one Part A ? _____ Board Feet

3. How many Board Feet are needed for all 4 of Part A ? _____ Board Feet
   ~ use you answer from above to calculate this question

4. How many Board Feet are Needed for one Part B? _____ Board Feet

5. How many Board Feet are needed for all 3 of Part B ? _____ Board Feet
   ~ use you answer from above to calculate this question

6. How many Board Feet are Needed for one Part C? _____ Board Feet

7. How many Board Feet are needed for 2 of Part C ? _____ Board Feet
   ~ use you answer from above to calculate this question

8. How many Board Feet are needed for Part D ? _____ Board Feet
   Figure part D as solid lumber

9. How many Board Feet are needed for all 4 of Part E? _____ Board Feet

10. How many Board Feet are needed for the entire project ? _____ Board Feet
    ~ Round **up** to the Nearest whole Board Feet

11. If Solid Oak is $2.55 a Board Foot. How much would it cost to build this project?
    ~ use you answer from above to calculate this question

    $ _____

12. How many liner inches of 2-1/2" wood is needed for this project _____ feet