

Log Scaling – Doyle Rule

In addition to the Ontario Log Rule there are a number of other scaling rules used in Ontario to measure saw logs. In southwestern Ontario the Doyle Rule (DLR) is often used by saw mills and woodlot owners to measure logs. Here is a brief discussion on the Doyle Rule.

Comparing the Ontario Rule and Doyle Rule

If you compare scaled volumes using the Ontario Rule and the Doyle Rule, you will see the following differences:

For logs with a diameter of less than 22 inches, when measured inside the bark and at the small end of the log, the volume calculation of the Ontario Rule is higher. For example, the volume of a log measuring 16 feet in length and 16 inches in diameter would be 162 board feet (fbm) using the Ontario Rule. The same log measured using the Doyle Rule would yield 144 fbm.

After 22 inches, the Doyle Rule calculates a higher volume. For example, the volume of a log measuring 16 feet in length and 25 inches in diameter would be 418 fbm when measured using the Ontario Rule and 441 fbm when measured using the Doyle Rule.

Table 1: Doyle Log Rule

Diameter Small End (inches)	Log Length (feet)				
	8	10	12	14	16
6	2	2.5	3	3.5	4
7	4.5	5.6	6.8	7.9	9
8	8	10	12	14	16
9	12	16	19	22	25
10	18	22	27	31	36
11	24	31	37	43	49
12	32	40	48	56	64
13	40	51	61	71	81
14	50	63	75	88	100
15	60	76	91	106	121
16	72	90	108	126	144
17	84	106	127	148	169
18	98	123	147	172	196
19	112	141	169	197	225
20	128	160	192	224	256
21	144	181	217	253	289
22	162	203	243	284	324
23	180	226	271	316	361
24	200	250	300	350	400
25	220	276	331	386	441
26	242	303	363	424	484
27	264	331	397	463	529
28	288	360	432	504	576
29	312	391	469	547	625
30	338	423	507	592	676
31	364	456	547	638	729
32	392	490	588	686	784
33	420	526	631	736	841
34	450	563	675	788	900
35	480	601	721	841	961

Table 1 provides the volumes in board feet (fbm) for a series of logs by length and diameter.

Rule of thumb – to calculate the volume of a 16-foot log in board feet using the Doyle Rule, simply subtract 4 inches from the diameter (small end) and square the remainder. For example, a

14-inch diameter top by 16 feet equals 100 board feet ($14 - 4 = 10^2 = 100$ fbm). Remember that all diameter measurements are taken from the small end of the log and inside the bark.

Recommended Reading

Log Rules and Other Useful Information (28 pages) published by the Northeastern Loggers' Association provides general information on log scaling – interior defects, exterior or side defects, various volumes tables (Doyle, International and Scribner), and other roundwood conversion tables. It is available from the Forest Shop by calling (613) 233-4283, for \$5.95 (plus taxes).

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