


Span Tables for New Structures & Additions
of Conventional Light-Frame Construction
Based on 2001 California Building Code

Species and Grade	Nominal Size	Spacing (in)	Table 23-IV-J-1	Table 23-IV-J-3	Table 23-IV-R-5	Table 23-IV-R-5	Table 23-IV-R-5	Table 23-IV-R-11
			Dead Load = 10 psf	Dead Load = 5 psf	Dead Load = 12 psf	Dead Load = 20 psf	Dead Load = 12 psf	Dead Load = 20 psf
			Live Load = 40 psf	Live Load = 10 psf	Live Load = 20 psf	Live Load = 20 psf	Live Load = 20 psf	Live Load = 20 psf
			LL Deflection ≤ L/360	LL Deflection ≤ L/240	LL Deflection ≤ L/240	LL Deflection ≤ L/240	LL Deflection ≤ L/180	LL Deflection ≤ L/180
		Roof Rafter Maximum Span (feet - inches)						
		Floor Joist Maximum Span (feet - inches)	Ceiling Joist Maximum Span (feet - inches)	Ceiling Attached to Rafters		Ceiling Not Attached to Rafters		
				Composition Roofing	Concrete Tile	Composition Roofing	Concrete Tile	
				Wood Shingles Asphalt Shingles	≤ 1000 lbs per Square	Wood Shingles Asphalt Shingles	≤ 1000 lbs per Square	
Douglas Fir -Larch No. 2	2 x 4	12	N/A	12 - 5	9 - 10	9 - 10	10 - 10	9 - 10
		16		11 - 3	8 - 11	8 - 6	9 - 6	8 - 6
		24		9 - 10	7 - 9	6 - 11	7 - 9	6 - 11
	2 x 6	12	10 - 9	19 - 6	15 - 6	14 - 4	16 - 1	14 - 4
		16	9 - 9	17 - 8	13 - 11	12 - 5	13 - 11	12 - 5
		24	8 - 1	14 - 10	11 - 4	10 - 2	11 - 4	10 - 2
	2 x 8	12	14 - 2	25 - 8	20 - 4	18 - 2	20 - 4	18 - 2
		16	12 - 7	23 - 0	17 - 7	15 - 9	17 - 7	15 - 9
		24	10 - 3	18 - 9	14 - 4	12 - 10	14 - 4	12 - 10
	2 x 10	12	17 - 9	Note a	24 - 10	22 - 3	24 - 10	22 - 3
		16	15 - 5	Note a	21 - 6	19 - 3	21 - 6	19 - 3
		24	12 - 7	22 - 11	17 - 7	15 - 8	17 - 7	15 - 8
	2 x 12	12	20 - 7	N/A	Note a	25 - 9	Note a	25 - 9
		16	17 - 10		24 - 11	22 - 4	24 - 11	22 - 4
		24	14 - 7		20 - 4	18 - 3	20 - 4	18 - 3

Check sources for availability of lumber in lengths greater than 20 feet.

a. Span exceeds 26 feet in length.

	Building Division		
	Span Tables for Floor Joists, Ceiling Joists & Roof Rafters		
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