

Span Tables for New Structures & Additions
of Conventional Light-Frame Construction
Based on 2013 California Building Code

Species and Grade	Nominal Size	Spacing (in)	Table 2308.8(2) Dead Load = 10 psf Live Load = 40 psf LL Deflection ≤ L/360	Table 2308.10.2(1) Dead Load = 5 psf Live Load = 10 psf LL Deflection ≤ L/240	Dead Load = 12 psf Live Load = 20 psf LL Deflection ≤ L/240	Table 2308.10.3(2) Dead Load = 20 psf Live Load = 20 psf LL Deflection ≤ L/240	Dead Load = 12 psf Live Load = 20 psf LL Deflection ≤ L/180	Table 2308.10.3(1) Dead Load = 20 psf Live Load = 20 psf 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 Wood Shingles Asphalt Shingles	Concrete Tile ≤ 1000 lbs per Square	Composition Roofing Wood Shingles Asphalt Shingles	Concrete Tile ≤ 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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