

Roof
Pitch

$\frac{12}{5}$

Rafter, supporting
drywall ceiling
tables RV-1
or RV-2

rafter, high slope tables RH-1
or RH-2 (If pitch were 3/12
or less you would use tables
RL-1 or RL-2)

$\frac{1}{2}$ " gypsum
wallboard, typical

Ceiling joist, tables CJ-1
or CJ-2

Floor joist, tables J-1
or J-2

13' 6"

Span for floor joists
and rafters

13' 6"

Span for floor joists,
ceiling joists and rafters

All spans are figured from the inside face of bearing to the
inside face of bearing. Rafter spans are figured on the
horizontal span, rather than the length of the rafter

These tables cannot be used for truss design

FLOOR JOIST SPAN TABLES, DOUGLAS FIR/ LARCH

#2 DF/L, 40 LB LIVE LOAD, 10 LB DEAD LOAD (BASED ON 94 UBC)		#1 DF/L, 40 LB LIVE LOAD, 10 LB DEAD LOAD (BASED ON 94 UBC)	
	SPAN		SPAN
2X4 12" ON CENTER	6'10"	2X4 12" ON CENTER	7'
2X4 16" ON CENTER	6'2"	2X4 16" ON CENTER	6'4"
2X4 24" ON CENTER	5'5"	2X4 24" ON CENTER	5'7"
2X6 12" ON CENTER	10'9"	2X6 12" ON CENTER	10'11"
2X6 16" ON CENTER	9'9"	2X6 16" ON CENTER	9'11"
2X6 19.2" ON CENTER	9'	2X6 19.2" ON CENTER	9'4"
2X6 24" ON CENTER	8'2"	2X6 24" ON CENTER	8'6"
2X8 12" ON CENTER	14'2"	2X8 12" ON CENTER	14'5"
2X8 16" ON CENTER	12'7"	2X8 16" ON CENTER	13'1"
2X8 19.2" ON CENTER	11'3"	2X8 19.2" ON CENTER	11'10"
2X8 24" ON CENTER	10'2"	2X8 24" ON CENTER	11'3"
2X10 12" ON CENTER	17'8"	2X10 12" ON CENTER	18'5"
2X10 16" ON CENTER	15'3"	2X10 16" ON CENTER	16'5"
2X10 19.2" ON CENTER	14'	2X10 19.2" ON CENTER	14'9"
2X10 24" ON CENTER	12'3"	2X10 24" ON CENTER	13'4"
2X12 12" ON CENTER	20'6"	2X12 12" ON CENTER	21'11"
2X12 16" ON CENTER	17'7"	2X12 16" ON CENTER	19'1"
2X12 19.2" ON CENTER	16'	2X12 19.2" ON CENTER	17'
2X12 24" ON CENTER	14'4"	2X12 24" ON CENTER	15'4"

TABLE J - 1

BASED ON THE 1994 UBC, AND THE WWPA LUMBER SPAN COMPUTER

FLOOR JOIST SPAN TABLE, SPRUCE - PINE - FIR (WHITE WOODS)

#1 OR #2 S-P-F (WHITE WOOD), 40 LB LIVE LOAD, 10 LB DEAD LOAD (BASED ON 94 UBC)		
2X4 12" ON CENTER	8'1"	
2X4 16" ON CENTER	5'7"	
2X4 24" ON CENTER	4'10"	
2X6 12" ON CENTER	10'3"	
2X6 16" ON CENTER	9'4"	
2X6 19.2" ON CENTER	8'9"	
2X6 24" ON CENTER	7'11"	
2X8 12" ON CENTER	13'6"	
2X8 16" ON CENTER	12'3"	
2X8 19.2" ON CENTER	11'	
2X8 24" ON CENTER	10'2"	
2X10 12" ON CENTER	17'3"	
2X10 16" ON CENTER	15'3"	
2X10 19.2" ON CENTER	14'	
2X10 24" ON CENTER	12'3"	
2X12 12" ON CENTER	20'6"	
2X12 16" ON CENTER	17'7"	
2X12 19.2" ON CENTER	16'	
2X12 24" ON CENTER	14'4"	

TABLE J - 2 BASED ON THE 1994 UBC, AND THE WWPA LUMBER SPAN COMPUTER

CEILING JOIST SPAN TABLES, DOUGLAS FIR/ LARCH

#2 DF/L, 10 LB LIVE LOAD, 5 LB DEAD LOAD (BASED ON 94 UBC) (Limited, or no attic storage)		#2DF/L, 20 LB LIVE LOAD, 10 LB DEAD LOAD (BASED ON 94 UBC) (Storage, up to 20 lb. per sq. ft.)	
	SPAN		SPAN
2X4 12" ON CENTER	12'5"	2X4 12" ON CENTER	9'10"
2X4 16" ON CENTER	11'3"	2X4 16" ON CENTER	8'9"
2X4 24" ON CENTER	9'10"	2X4 24" ON CENTER	7'1"
2X6 12" ON CENTER	19'6"	2X6 12" ON CENTER	14'9"
2X6 16" ON CENTER	17'8"	2X6 16" ON CENTER	12'9"
2X6 24" ON CENTER	14'9"	2X6 24" ON CENTER	10'6"
2X8 12" ON CENTER	25'8"	2X8 12" ON CENTER	18'6"
2X8 16" ON CENTER	22'10"	2X8 16" ON CENTER	15'10"
2X8 24" ON CENTER	18'6"	2X8 24" ON CENTER	12'10"
2X10 12" ON CENTER	26' +	2X10 12" ON CENTER	22'3"
2X10 16" ON CENTER	26' +	2X10 16" ON CENTER	19'6"
2X10 24" ON CENTER	22'3"	2X10 24" ON CENTER	16'3"

CEILING JOIST SPAN TABLES, SPRUCE - PINE - FIR

#1 OR #2 S - P - F, 10 LB LIVE LOAD, 5 LB DEAD LOAD (BASED ON 94 UBC) (Limited, or no attic storage)		#1 OR #2 S - P - F, 20 LB LIVE LOAD, 10 LB DEAD LOAD (BASED ON 94 UBC) (Storage, up to 20 lb. per sq. ft.)	
	SPAN		SPAN
2X4 12" ON CENTER	11'10"	2X4 12" ON CENTER	9'5"
2X4 16" ON CENTER	10'9"	2X4 16" ON CENTER	8'7"
2X4 24" ON CENTER	9'5"	2X4 24" ON CENTER	7'1"
2X6 12" ON CENTER	18'8"	2X6 12" ON CENTER	14'9"
2X6 16" ON CENTER	16'11"	2X6 16" ON CENTER	12'9"
2X6 24" ON CENTER	14'9"	2X6 24" ON CENTER	10'6"
2X8 12" ON CENTER	24'7"	2X8 12" ON CENTER	18'6"
2X8 16" ON CENTER	22'4"	2X8 16" ON CENTER	15'10"
2X8 24" ON CENTER	18'6"	2X8 24" ON CENTER	12'10"
2X10 12" ON CENTER	26' +	2X10 12" ON CENTER	22'3"
2X10 16" ON CENTER	26' +	2X10 16" ON CENTER	19'6"
2X10 24" ON CENTER	22'3"	2X10 24" ON CENTER	16'3"

DOUGLAS FIR / LARCH RAFTER SPAN TABLES, 40 LB SNOW LOAD, 15 LB DEAD LOAD (VAULT CEILING,
ANY PITCH, SUPPORTING DRYWALL CEILING)

#2 DF/L, 40 LB SNOW LOAD, 15 LB DEAD LOAD		#1 DF/L, 40 LB SNOW LOAD, 15 LB DEAD LOAD	
	SPAN		SPAN
2X4 12" ON CENTER	7'9"	2X4 12" ON CENTER	7'11"
2X4 16" ON CENTER	6'11"	2X4 16" ON CENTER	7'3"
2X4 24" ON CENTER	5'8"	2X4 24" ON CENTER	6'4"
2X6 12" ON CENTER	11'9"	2X6 12" ON CENTER	12'6"
2X6 16" ON CENTER	10'2"	2X6 16" ON CENTER	10'10"
2X6 24" ON CENTER	8'3"	2X6 24" ON CENTER	8'10"
2X8 12" ON CENTER	14'10"	2X8 12" ON CENTER	15'10"
2X8 16" ON CENTER	12'10"	2X8 16" ON CENTER	13'9"
2X8 24" ON CENTER	10'6"	2X8 24" ON CENTER	11'3"
2X10 12" ON CENTER	18'3"	2X10 12" ON CENTER	19'5"
2X10 16" ON CENTER	15'9"	2X10 16" ON CENTER	16'10"
2X10 24" ON CENTER	12'10"	2X10 24" ON CENTER	13'9"
2X12 12" ON CENTER	21'1"	2X12 12" ON CENTER	22'3"
2X12 16" ON CENTER	18'3"	2X12 16" ON CENTER	19'6"
2X12 24" ON CENTER	14'11"	2X12 24" ON CENTER	15'11"

SPRUCE - PINE - FIR RAFTER SPAN TABLES, 40 LB SNOW LOAD, 15 POUND DEAD LOAD (VAULT
CEILING, ANY PITCH, SUPPORTING DRYWALL CEILING)

#2 S-P-F (WHITE WOOD), 40 LB SNOW LOAD, 15 LB DEAD LOAD		#1 S-P-F (WHITE WOOD), 40 LB SNOW LOAD, 15 LB DEAD LOAD	
	SPAN		SPAN
2X4 12" ON CENTER	6'11"	2X4 12" ON CENTER	7'1"
2X4 16" ON CENTER	6'3"	2X4 16" ON CENTER	6'5"
2X4 24" ON CENTER	5'4"	2X4 24" ON CENTER	5'7"
2X6 12" ON CENTER	10'10"	2X6 12" ON CENTER	11'2"
2X6 16" ON CENTER	9'5"	2X6 16" ON CENTER	10'
2X6 24" ON CENTER	7'8"	2X6 24" ON CENTER	8'2"
2X8 12" ON CENTER	13'9"	2X8 12" ON CENTER	14'7"
2X8 16" ON CENTER	11'10"	2X8 16" ON CENTER	12'8"
2X8 24" ON CENTER	9'9"	2X8 24" ON CENTER	10'4"
2X10 12" ON CENTER	16'8"	2X10 12" ON CENTER	17'9"
2X10 16" ON CENTER	14'7"	2X10 16" ON CENTER	15'6"
2X10 24" ON CENTER	11'10"	2X10 24" ON CENTER	12'8"
2X12 12" ON CENTER	19'6"	2X12 12" ON CENTER	20'9"
2X12 16" ON CENTER	16'10"	2X12 16" ON CENTER	18'
2X12 24" ON CENTER	13'10"	2X12 24" ON CENTER	14'9"

DOUGLAS FIR / LARCH RAFTER SPAN TABLES, 40 LB SNOW LOAD, 10 LB DEAD LOAD (LOW SLOPE
 RAFTERS, 3 IN 12 AND LESS, NO FINISHED CEILING)

#2 DF/L, 40 LB SNOW LOAD, 10 LB DEAD LOAD		#1 DF/L, 40 LB SNOW LOAD, 10 LB DEAD LOAD	
	SPAN		SPAN
2X4 12" ON CENTER	7'9"	2X4 12" ON CENTER	8'
2X4 16" ON CENTER	7'2"	2X4 16" ON CENTER	7'3"
2X4 24" ON CENTER	5'10"	2X4 24" ON CENTER	6'3"
2X6 12" ON CENTER	12'3"	2X6 12" ON CENTER	12'6"
2X6 16" ON CENTER	10'8"	2X6 16" ON CENTER	11'5"
2X6 24" ON CENTER	8'9"	2X6 24" ON CENTER	9'3"
2X8 12" ON CENTER	15'7"	2X8 12" ON CENTER	16'6"
2X8 16" ON CENTER	13'6"	2X8 16" ON CENTER	14'5"
2X8 24" ON CENTER	11'	2X8 24" ON CENTER	11'10"
2X10 12" ON CENTER	19'	2X10 12" ON CENTER	20'5"
2X10 16" ON CENTER	16'6"	2X10 16" ON CENTER	17'7"
2X10 24" ON CENTER	13'6"	2X10 24" ON CENTER	14'5"
2X12 12" ON CENTER	22'2"	2X12 12" ON CENTER	23'7"
2X12 16" ON CENTER	19'1"	2X12 16" ON CENTER	20'5"
2X12 24" ON CENTER	15'8"	2X12 24" ON CENTER	16'9"

SPRUCE - PINE - FIR RAFTER SPAN TABLES, 40 LB SNOW LOAD, 10 LB DEAD LOAD (LOW SLOPE
 RAFTERS, 3 IN 12 AND LESS, NO FINISHED CEILING)

#2 S-P-F (WHITE WOOD), 40 LB SNOW LOAD, 10 LB DEAD LOAD		#1 S-P-F (WHITE WOOD), 40 LB SNOW LOAD, 10 LB DEAD LOAD	
	SPAN		SPAN
2X4 12" ON CENTER	6'11"	2X4 12" ON CENTER	7'1"
2X4 16" ON CENTER	6'3"	2X4 16" ON CENTER	6'5"
2X4 24" ON CENTER	5'5"	2X4 24" ON CENTER	5'8"
2X6 12" ON CENTER	10'10"	2X6 12" ON CENTER	11'2"
2X6 16" ON CENTER	9'10"	2X6 16" ON CENTER	10'1"
2X6 24" ON CENTER	8'1"	2X6 24" ON CENTER	8'7"
2X8 12" ON CENTER	14'3"	2X8 12" ON CENTER	14'8"
2X8 16" ON CENTER	12'6"	2X8 16" ON CENTER	13'4"
2X8 24" ON CENTER	10'2"	2X8 24" ON CENTER	10'10"
2X10 12" ON CENTER	17'7"	2X10 12" ON CENTER	18'9"
2X10 16" ON CENTER	15'3"	2X10 16" ON CENTER	16'3"
2X10 24" ON CENTER	12'6"	2X10 24" ON CENTER	13'3"
2X12 12" ON CENTER	20'5"	2X12 12" ON CENTER	21'9"
2X12 16" ON CENTER	17'8"	2X12 16" ON CENTER	18'10"
2X12 24" ON CENTER	14'6"	2X12 24" ON CENTER	15'5"

DOUGLAS FIR / LARCH RAFTER SPAN TABLES, 40 LB SNOW LOAD, 10 LB DEAD LOAD (HIGH SLOPE
 RAFTERS, GREATER THAN 3 IN 12, NO FINISHED CEILING, LIGHT ROOF COVERING)

#2 DF/L, 40 LB SNOW LOAD, 10 LB DEAD LOAD		#1 DF/L, 40 LB SNOW LOAD, 10 LB DEAD LOAD	
	SPAN		SPAN
2X4 12" ON CENTER	7'7"	2X4 12" ON CENTER	7'9"
2X4 16" ON CENTER	7'3"	2X4 16" ON CENTER	7'7"
2X4 24" ON CENTER	5'11"	2X4 24" ON CENTER	6'4"
2X6 12" ON CENTER	12'4"	2X6 12" ON CENTER	13'1"
2X6 16" ON CENTER	10'8"	2X6 16" ON CENTER	11'4"
2X6 24" ON CENTER	8'8"	2X6 24" ON CENTER	9'4"
2X8 12" ON CENTER	15'6"	2X8 12" ON CENTER	16'8"
2X8 16" ON CENTER	13'6"	2X8 16" ON CENTER	14'6"
2X8 24" ON CENTER	11'	2X8 24" ON CENTER	11'9"
2X10 12" ON CENTER	19'	2X10 12" ON CENTER	20'5"
2X10 16" ON CENTER	16'6"	2X10 16" ON CENTER	17'7"
2X10 24" ON CENTER	13'6"	2X10 24" ON CENTER	14'5"
2X12 12" ON CENTER	22'1"	2X12 12" ON CENTER	23'7"
2X12 16" ON CENTER	19'1"	2X12 16" ON CENTER	20'6"
2X12 24" ON CENTER	15'9"	2X12 24" ON CENTER	16'9"

SPRUCE - PINE - FIR RAFTER SPAN TABLES, 40 LB SNOW LOAD, 10 LB DEAD LOAD (HIGH SLOPE
 RAFTERS, GREATER THAN 3 IN 12, NO FINISHED CEILING, LIGHT ROOF COVERING)

#2 S-P-F (WHITE WOOD), 40 LB SNOW LOAD, 10 LB DEAD LOAD		#1 S-P-F (WHITE WOOD), 40 LB SNOW LOAD, 10 LB DEAD LOAD	
	SPAN		SPAN
2X4 12" ON CENTER	7'7"	2X4 12" ON CENTER	7'9"
2X4 16" ON CENTER	6'9"	2X4 16" ON CENTER	7'3"
2X4 24" ON CENTER	5'6"	2X4 24" ON CENTER	5'10"
2X6 12" ON CENTER	11'5"	2X6 12" ON CENTER	12'2"
2X6 16" ON CENTER	9'10"	2X6 16" ON CENTER	10'6"
2X6 24" ON CENTER	8'1"	2X6 24" ON CENTER	8'7"
2X8 12" ON CENTER	14'5"	2X8 12" ON CENTER	15'4"
2X8 16" ON CENTER	12'6"	2X8 16" ON CENTER	13'4"
2X8 24" ON CENTER	10'2"	2X8 24" ON CENTER	10'10"
2X10 12" ON CENTER	17'7"	2X10 12" ON CENTER	18'9"
2X10 16" ON CENTER	15'3"	2X10 16" ON CENTER	16'3"
2X10 24" ON CENTER	12'5"	2X10 24" ON CENTER	13'3"
2X12 12" ON CENTER	20'5"	2X12 12" ON CENTER	21'9"
2X12 16" ON CENTER	17'8"	2X12 16" ON CENTER	18'11"
2X12 24" ON CENTER	14'6"	2X12 24" ON CENTER	15'5"

