

Roof Pitch Chart

Angles, slope percentages, and rafter factors from 0/12 through 24/12

BuildCalculatorsHQ

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Angle = $\text{atan}(\text{rise} / 12)$

Slope = $\text{rise} / 12 \times 100$

Rafter factor = $\text{sqrt}(12^2 + \text{rise}^2) / 12$

PITCH	ANGLE	SLOPE	RAFTER FACTOR
0/12	0.0 deg	0.0%	1.000
1/12	4.8 deg	8.3%	1.003
2/12	9.5 deg	16.7%	1.014
3/12	14.0 deg	25.0%	1.031
4/12	18.4 deg	33.3%	1.054
5/12	22.6 deg	41.7%	1.083
6/12	26.6 deg	50.0%	1.118
7/12	30.3 deg	58.3%	1.158
8/12	33.7 deg	66.7%	1.202
9/12	36.9 deg	75.0%	1.250
10/12	39.8 deg	83.3%	1.302
11/12	42.5 deg	91.7%	1.357
12/12	45.0 deg	100.0%	1.414
13/12	47.3 deg	108.3%	1.474
14/12	49.4 deg	116.7%	1.537
15/12	51.3 deg	125.0%	1.601
16/12	53.1 deg	133.3%	1.667
17/12	54.8 deg	141.7%	1.734
18/12	56.3 deg	150.0%	1.803
19/12	57.7 deg	158.3%	1.873
20/12	59.0 deg	166.7%	1.944
21/12	60.3 deg	175.0%	2.016
22/12	61.4 deg	183.3%	2.088
23/12	62.4 deg	191.7%	2.162
24/12	63.4 deg	200.0%	2.236

How to use the factor: multiply a simple horizontal run or projected plane area by the rafter factor to estimate geometric sloped length or area. Measure complex roof planes separately.

Important: this chart converts geometry only. It does not determine structural capacity, product suitability, drainage, fastening, fall protection, or code compliance.

Calculated from the formulas shown above and rounded for reference. Verify project measurements and current requirements before use.

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