Roof Pitches and Slopes

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Definitions:

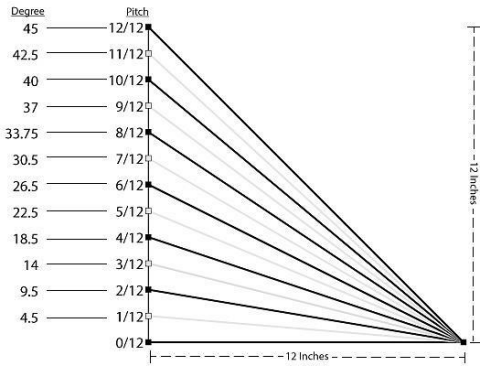
To calculate snow load on rooftops we use “**pitch**” and “**slope**” which are calculated using trigonometry.

Pitch

Roof **pitch** is an angle measured in inches or degrees and recorded like 12"/7" or 30.5°.

Pitch Measure = Rise Inches / Run Feet = Rise per foot as inches or degrees

In roof calculations, the denominator is always 12. Standard roof pitches are usually set between 4.5° and 45°.



Pitch example:

> Pitch 7:12 = 7" rise and 12" run
> Rise per square foot = 12"/7" or 30.5°

Slope

A roof **slope** is measured as a ratio. A roof that rises 7 inches for every 1 foot or 12 inches of run is said to have a “7 in 12” slope. For example, a “7 in 12” slope can be expressed as the ratio of 7:12.

Slope Ratio = Rise / Run = Rise per foot as a ratio

Slope example:

> Slope = 7" rise and 12" run
> Slope = 7:12