

Pitch & Angle Calculator — Quick Guide

What This Is

A single-page web app for converting between rise, run, angle, pitch, and grade. It runs entirely in your browser — there's nothing to install and no account to create. All calculations happen on-device, so no measurements or project data are ever sent anywhere.

What It's For

A slope can be described in several different, incompatible ways: as a rise-over-run ratio (like a roofing “6/12” pitch), as an angle in degrees, or as a percent grade. Converting between these by hand means reaching for a calculator and remembering which trig function applies — and it's easy to make a small arithmetic slip that throws off a cut list or a grading plan.

Why You'd Want to Use It

This app does that conversion instantly, so you don't have to do the trigonometry yourself or hunt down a reference chart. Measure an existing roof by holding a level 12” along the rafter and checking how much it rises, and the app reads back both the pitch and the exact angle. Framing to a target pitch, it tells you how tall to cut a given run. Sizing a wheelchair ramp, enter the target slope and the height to climb, and it tells you how much horizontal run you need. In each case you're solving the same underlying triangle — the app just lets you plug in whichever two measurements you already have.

What It Does

- **Solves for Rise, Run, or Angle.** Choose which one you want calculated, enter the other two, and the third updates instantly as you type.
- **Converts between inches and feet.** A single toggle switches the unit for Rise and Run without needing to re-enter either value.
- **Displays results in feet-and-inches.** When the unit is set to feet, a calculated Rise or Run shows as a proper reading — e.g. 8'-11 7/16" — rather than a raw decimal.
- **Shows pitch and grade equivalents.** Every result is displayed simultaneously as a roofing-style ratio (e.g. 6/12) and as a percent grade.
- **Draws a scale diagram.** A triangle updates live to match your numbers, with rise, run, and angle labeled directly on the drawing.
- **Includes reference tables.** Built-in charts cover common roof pitches, stair ratios, ADA ramp slopes, and drainage grades, for a quick sanity check against your result.

- **Includes a feet-inches converter.** Enter feet, inches, and a fraction, and one tap drops the decimal equivalent straight into Rise or Run — no manual conversion required.

How to Use It

1. Choose what to solve for — Rise, Run, or Angle — using the buttons at the top. The field you're solving for is disabled and fills in automatically.
2. Type your two known values into the remaining fields. There's nothing to clear first — the fields start empty.
3. (Optional) Use the IN / FT toggle to switch the unit for Rise and Run between inches and feet.
4. Read the calculated value, along with the pitch and grade equivalents and the scale diagram, which update as you type.
5. (Optional) Starting from a feet-and-inches or fractional-inch reading? Open the Feet-Inches Converter, enter the feet, inches, and fraction, and tap Put in Rise or Put in Run to fill the field for you.
6. (Optional) Open Reference Tables and switch between Roof Pitch, Stairs, Ramps, and Drainage to compare your result against common standards.

A Note on Entering Measurements

Rise and Run must be typed as decimal numbers in whichever unit is selected — 6.5, not 6 1/2"; 1.5, not 1'-6" — the fields can't take a typed fraction directly. If you're starting from a feet-and-inches or fractional-inch reading, use the built-in Feet-Inches Converter to get the decimal value without doing the math by hand. Once a result is calculated, though, it displays in proper feet-and-inches automatically whenever the FT unit is selected — the decimal requirement only applies to what you type in.