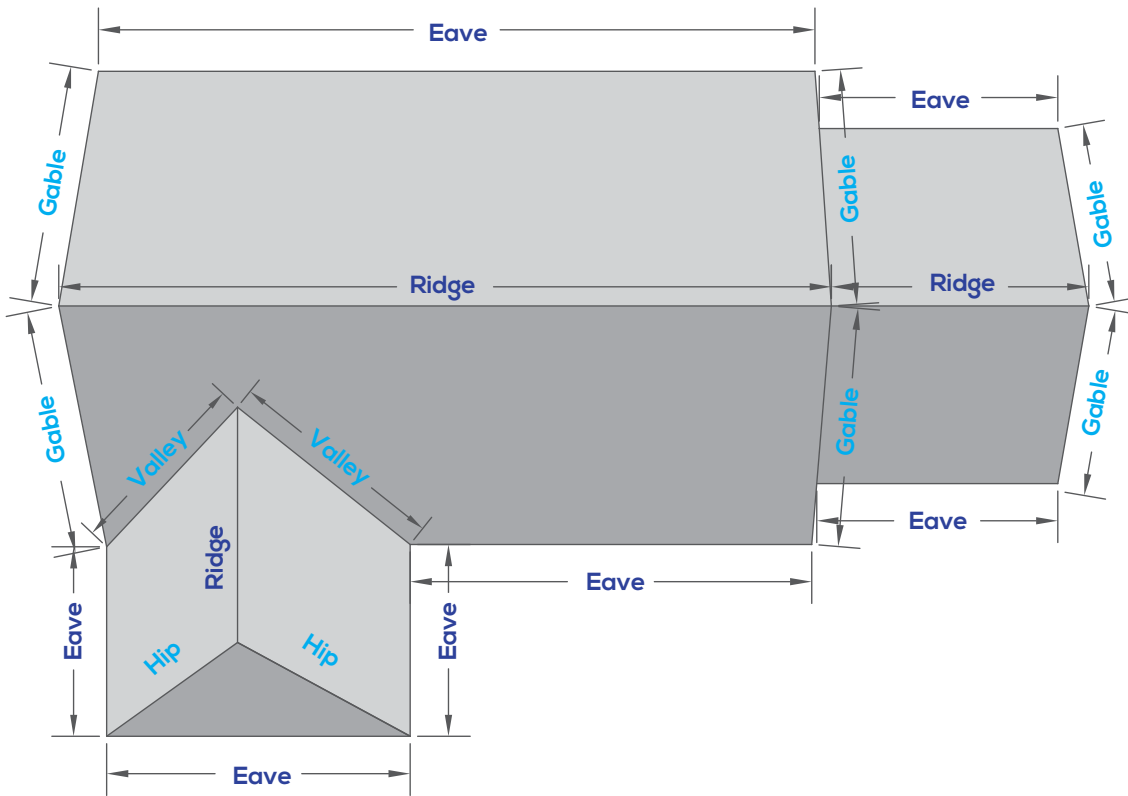


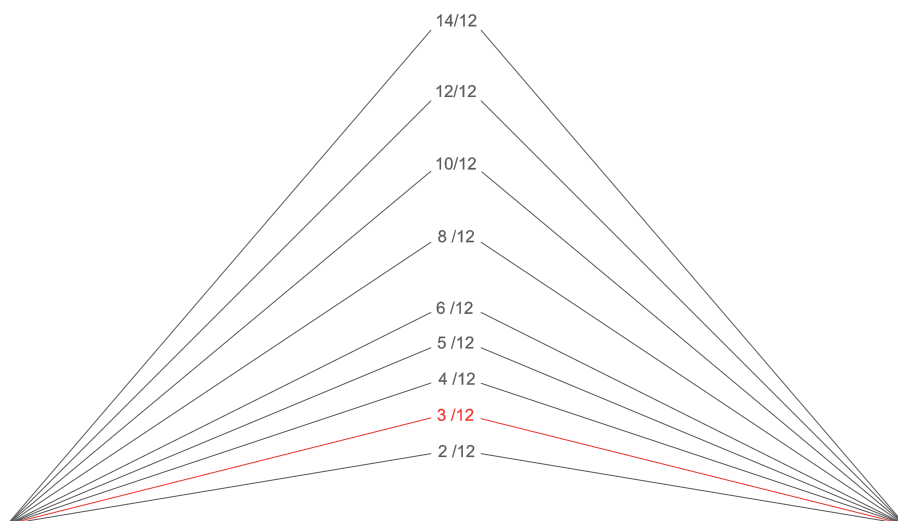
Terrabella Shake & Shingle Znap Estimation Sheet



1 Identify Flat and Sloped Dimensions

Every roof has **flat** and **sloped** measurements. The **flat** measurements are those that are parallel to the ground and remain unchanged with the roof's pitch, these include: most eaves and ridges. **Sloped** measurements refer to those that follow the roof's pitch such as valleys, gables and hips.

Most roof plans, like the one shown above, do not consider the augmentation of the dimension of **sloped** areas because of the pitch. In order to take this into account when estimating materials it is necessary to multiply the shown measurements by the factor corresponding to the pitch:



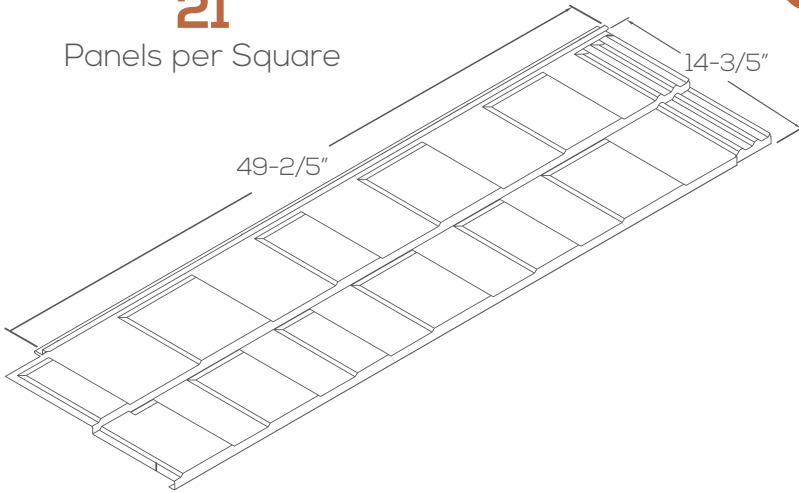
Roof Pitch	Multiplier
3/12 min	1.035
4/12	1.055
5/12	1.085
6/12	1.120
8/12	1.205
10/12	1.305
12/12	1.415
14/12	1.553

- Only use multiplier for **Sloped** dimensions.
- 3/12 is the minimum recommended pitch.
- Do not use multiplier if measurements were taken on site on an existing roof.

Terrabella Shake & Shingle Znap Estimation Sheet

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Panels per Square

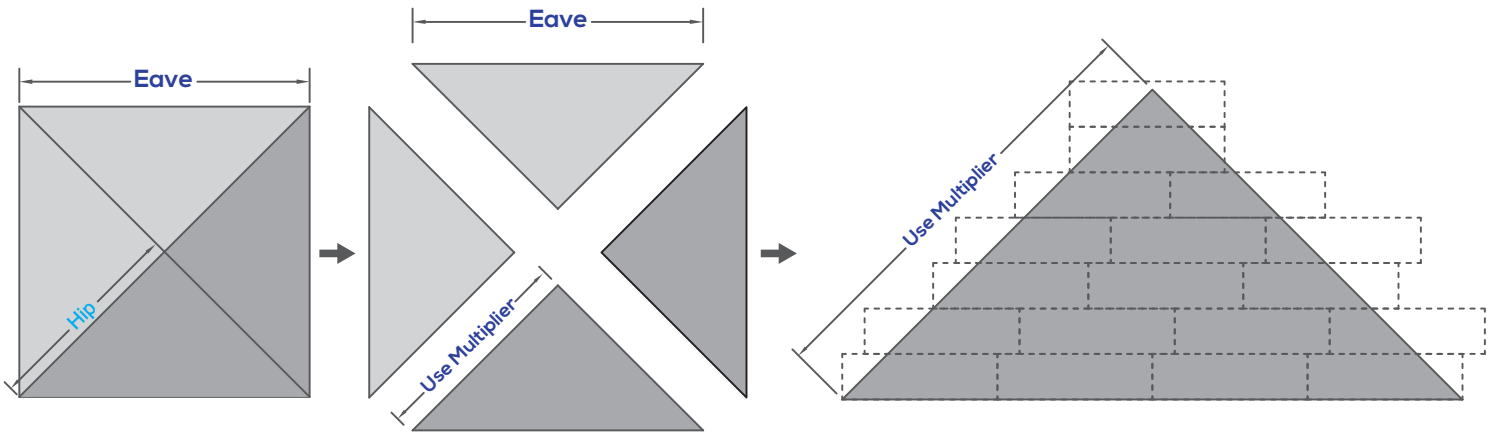


2 Panel Calculation

21 panels per square (100sqft) may be used to get a rough estimate of panels needed for a job.

Because every roof shape and design is different, it is not possible to include the amount of waste with the previous calculation.

The most exact way to do this is to separate a roof into sections and calculate the amount of panel rows and the number of panels per row, always rounding up to the nearest whole number:



3 Accessory and Trim Estimation

Using the measurements provided on the roofing plans after applying the corresponding multipliers, the amount of accessories can be obtained using the coverage lengths on the table below:

Accessory Name	Installed At	Coverage Length
Starter Clip with Drip Edge	Eave	7 ft - 10 in
Rake / Gable	Gable	3 ft - 10 in
Shake / Shingle Hip & Ridge	Hip + Ridge	1 ft - 2 in
Valley Channel	Valley	7 ft - 6 in
Valley Cap	Valley Channel	7 ft - 6 in
Roof - to - Wall Channel	Head - Wall + Hips (2)	7 ft - 6 in
Hip / Ridge end Cap	Hip + Ridge Termination	1 Unit
Touch-up Kit	Where Required	1 per 25 squares
1-1/2" Galvanized Hex Screws	Panels + Accessories	170 units per square