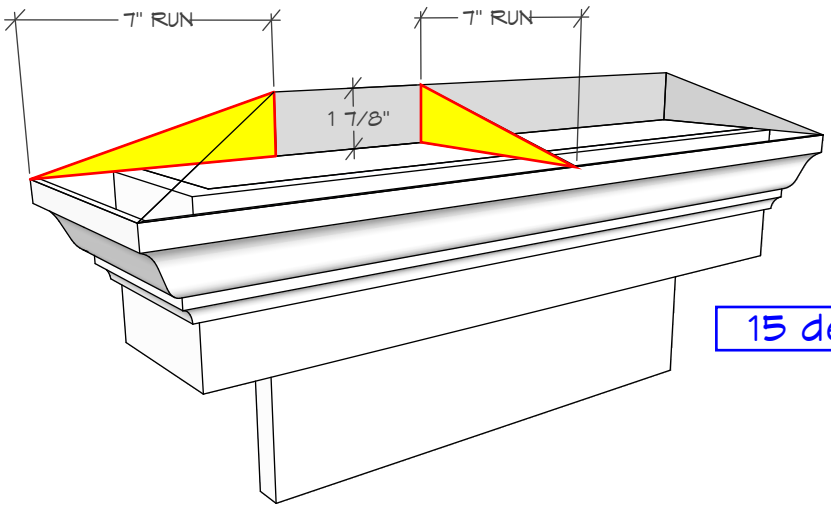
EAVE RETURN HIP ROOF KEYSTROKES



BuildCalc
version 2.1.6

15 degree Pitch

7 Inches Run → Run 7in ©

1 5 Pitch → Pitch 15.00° ©

Diag → Diagonal 7-1/4in ©

Rise → Rise 1-7/8in ©

Hip/V →

Access the full article here

REGULAR HIP SIDE

AT&T 10:33 PM 100%

Hip/Valley Function

Analysis Type

Regular | Irregular

Choose Regular Analysis Type

Input Parameters

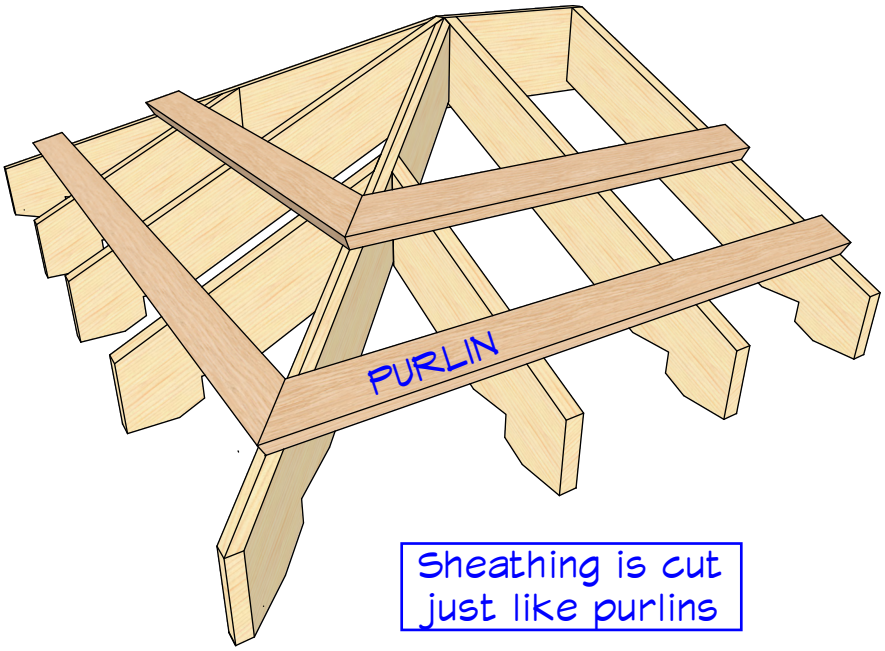
Rise:	1- 7/8in
Run:	7in
Pitch:	15.00°
Results For: (Miter Saw | Protractor)	

Choose Results for Miter Saw

Calculated Results

Hip/Valley Rafter Length	10- 1/16in
Plumb Cut	79.27°
Level Cut	10.73°
Cheek Cut - on Saw's Bevel Gauge	45.00°
Hip Backing Angle	10.55°
Dihedral Angle	158.91°
Plan Angle	45.00°
Hip/Valley Rafter Pitch	10.73°
Purlin Miter Angle	44.01°
Purlin Bevel Angle	10.55°
Sheathing Angle	45.99°
Total Hip/Valley Roof Area	50.72853in²

Done



Sheathing is cut just like purlins

Miter setting for sheathing

Bevel setting for sheathing

IRREGULAR HIP SIDE

AT&T 10:34 PM 100%

Hip/Valley Function

Analysis Type

Regular | Irregular

Choose Irregular Analysis Type

Input Parameters

Rise:	1- 7/8in
Major Run:	7in
Minor Run:	2- 13/16in
Major Pitch:	15.00°
Minor (Irregular) Pitch:	8in/12in
Results For:	Miter Saw | Protractor

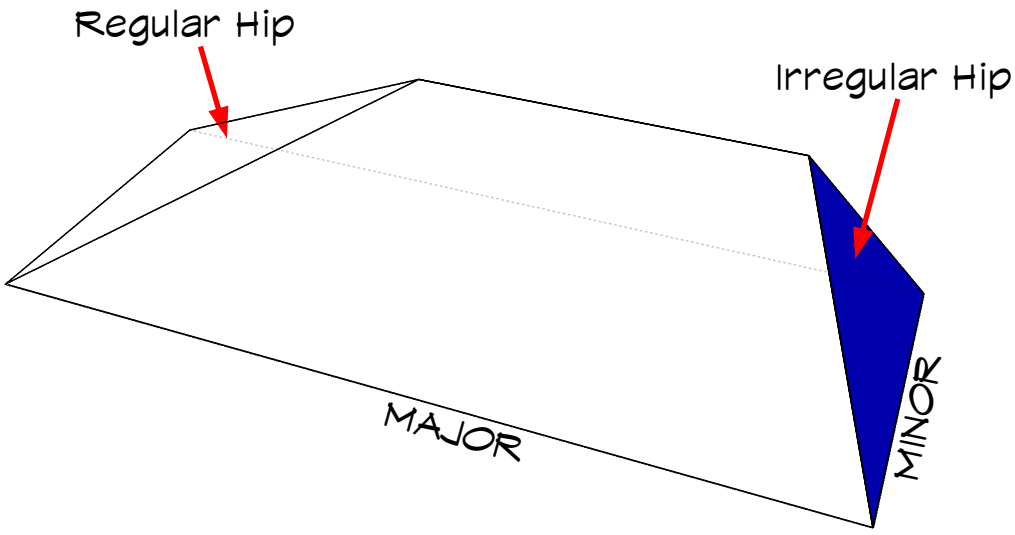
Enter the Minor (irrgular) pitch

Choose Results for Miter Saw

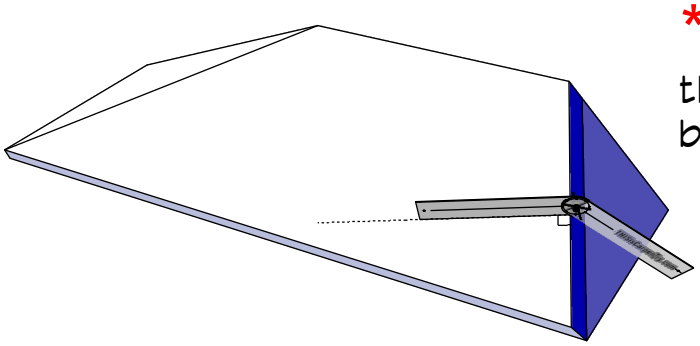
Calculated Results

Hip/Valley Rafter Length	7- 3/4in
Plumb Cut	76.04°
Level Cut	13.96°
Cheek Cut 1 - on Saw's Bevel Gauge	21.90°
Cheek Cut 2 - on Saw's Bevel Gauge	68.10°
Major Hip Backing Angle	5.54°
Minor Hip Backing Angle	30.98°
Dihedral Angle	143.48° *
Major Plan Angle	68.10°
Minor Plan Angle	21.90°
Hip/Valley Rafter Pitch	13.96°
Major Purlin Miter Angle	21.22°
Major Purlin Bevel Angle	5.54°
Minor Purlin Miter Angle	64.22°
Minor Purlin Bevel Angle	30.98°
Major Sheathing Angle	68.78°
Minor Sheathing Angle	25.78°
Major Roof Area	10.1945in²
Minor Roof Area	0.082186²
Total Hip/Valley Roof Area	0.152981ft²

Done



Miter setting for MAJOR purlin/sheathing on irregular hip side



* Dihedral angle is the change in plane between the roofs

143.48°
-90.00°
53.48° Bevel setting