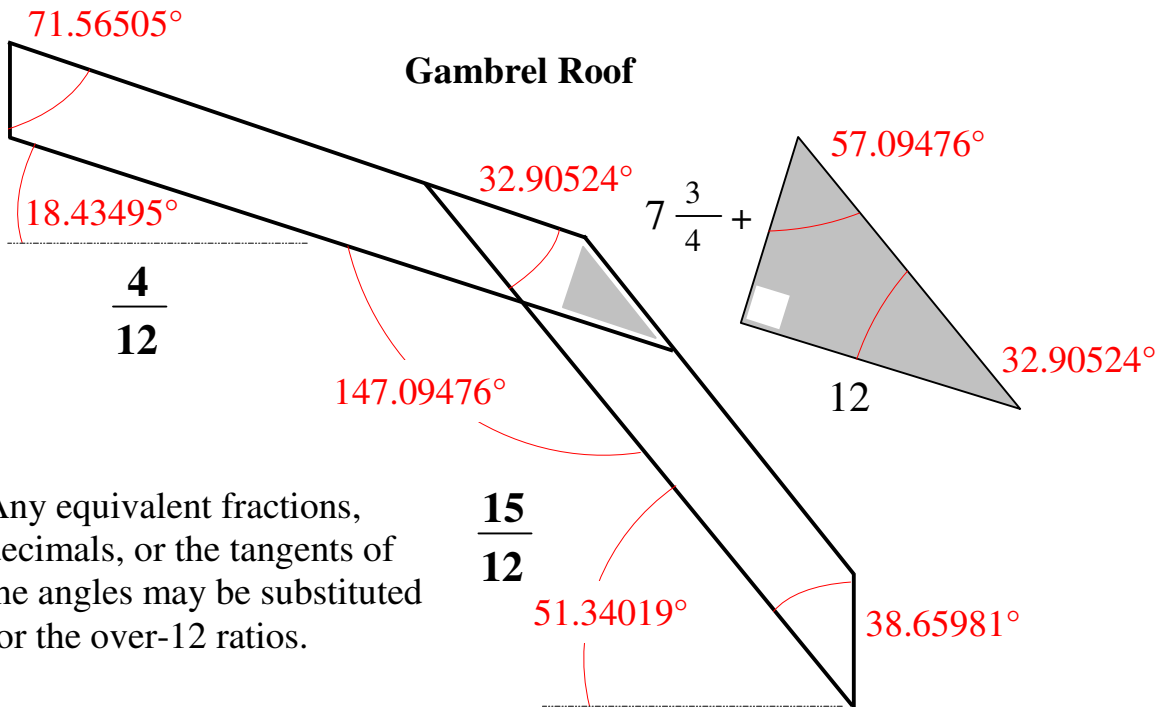


## Difference of Pitches Pitch and Angle between Intercepting Rafters



$$\text{Difference of Pitches} = \frac{\left[ \text{Pitch 1} - \text{Pitch 2} \right]}{1 + \left[ \text{Pitch 1} \times \text{Pitch 2} \right]}$$

Difference of Pitches:

$$\text{Pitch at Intercept} = \frac{\left( \frac{15}{12} - \frac{4}{12} \right)}{1 + \left( \frac{15}{12} \times \frac{4}{12} \right)} = \frac{11}{17} = \frac{7 \frac{3}{4}}{12}$$

Difference of Complementary Pitches:

$$\text{Pitch at Intercept} = \frac{\left( \frac{12}{4} - \frac{12}{15} \right)}{1 + \left( \frac{12}{4} \times \frac{12}{15} \right)} = \frac{11}{17} = \frac{7 \frac{3}{4}}{12}$$

$$\text{Angle between Intercepting Rafters} = \arctan \left( \frac{11}{17} \right) = 32.90524^\circ$$