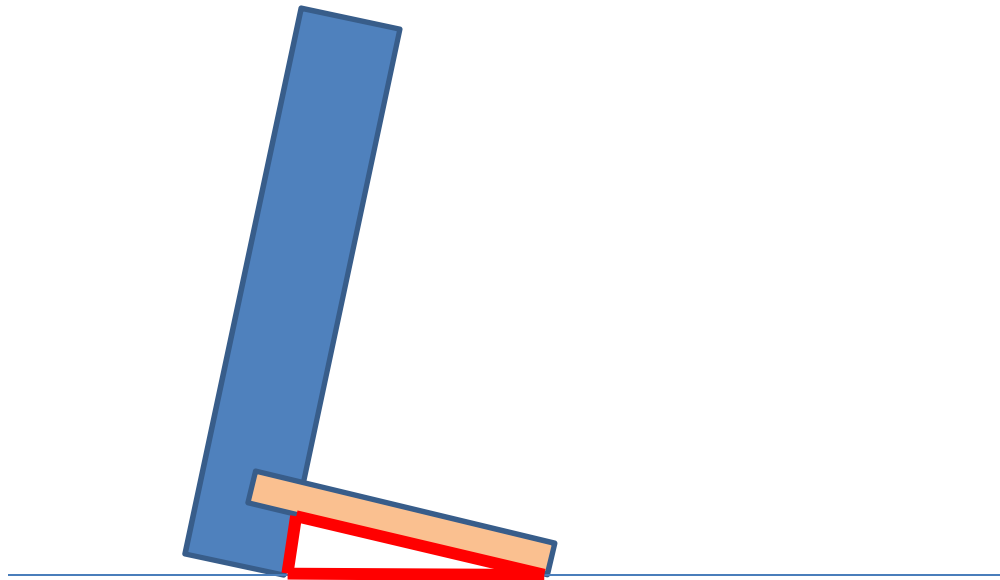


Basic Mathematics for the Simple Dowel Frame Foot  
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First a graphic side view of a frame (blue) and a dowel foot (tan)



The red triangle is the geometry we need. Define some variables:

A = desired acute angle of the foot and table and the lean angle of the frame. Recommending  $17^\circ$  but you can change it.

$K = \sin(A) = .2924$  (this is the  $\sin(17^\circ)$ , you can change if you want another angle.)

D = diameter of the dowel and diameter of the drilled hole at H2 from the edge of the bottom of the frame

L = the length of the dowel edge of the triangle. I suggest this needs to be at least around the amount the frame leans back which will be the frame height  $\times K$ . But too long and you can't set the frame back against the wall or desk edge.

H = the length of the frame side of the triangle

L2 = cut length of dowel

H2 = height of center of dowel

H3 = top edge location of the hole. This must be somewhat less than the side width of the frame in the back to avoid breaking out into the picture area.

So, here's the math:

$$H = K \times L$$

H2 = H + D/2 (this is the location of the hole center to be drilled 3/8" deep

$$H3 = H + D$$

L2 = L + 3/8" (adding the depth of the hole to the dowel extension.)

