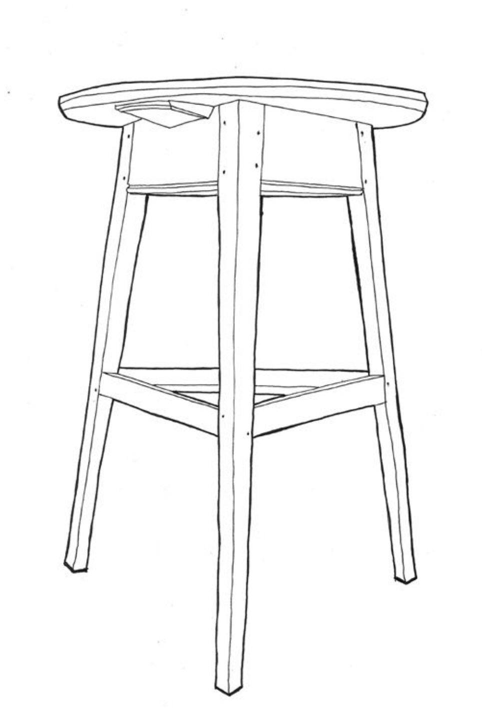
Cricket Tables

by Derek Jones



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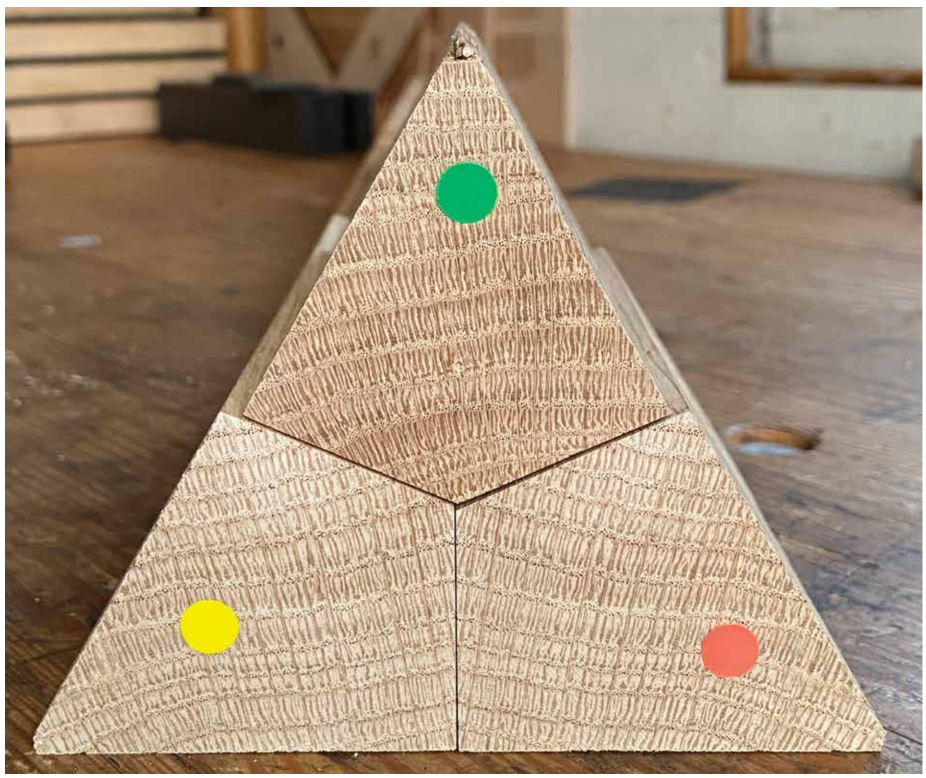
Geometry for 3 Legs

When I said I like maths I meant I like what it does. I'm glad it's there and there's no doubt that in the right hands it's a powerful tool, but given the choice I run a mile when things go beyond the basics. Fortunately, the heavy lifting was done a few thousand years ago. Thank you, Pythagoras, thank you Euclid. My relationship with maths started and ended in the first year of junior school under the tutelage of Mr. Daswani. He is the first maths teacher I remember and probably a good one but unfortunately, I was a lousy pupil. Where I did excel, however, was in the technical drawing class, which is where I first got acquainted with the 30/60/90 setsquare – a tool I use nearly every day some 40 years later.

The only "odd" numbers you have to consider when generating plans and jigs for making cricket tables are 30 and 60. I call them odd because they don't feature in casework that often, so they may take a bit of getting used to before you can harness their power and work with them efficiently. Throw in a 90 for good measure, and you have all the angles you need to start building cricket tables. Because of the relationship between these numbers and the way we're used to working, I've found them to be the best combination in terms of joinery, conversion of blanks into component parts and, to some extent, aesthetics.



Work on the six internal faces first until they come together without any gaps. Tackle the outer faces next.

There is a lot of variation in the geometry relating to legs and stretchers in period examples of framed tables, and after examining hundreds I still haven't found a good, solid practical reason for accepting any other combination. Right now it feels like unfinished business, and I suspect I'll have to make a lot more tables and mistakes before I can start to unravel those secrets. My hunch is that any maker choosing to work with angles other than these was forced into it because the blanks they had to work with weren't sufficient in size. Maybe the parts were riven and not sawn, making the process of harvesting components less predictable.

Before I get onto leg parts and how they can be oriented to accommodate mortises, we should first take a look at how the legs are positioned to sit on the three points that make up an equilateral triangle. Equilateral, from the late Latin word *aequilateralisl* means having all sides equal; and if you know your geometry you'll know that means the opposite angles that make up the triangle are also equal. You could also describe this triangle as being equiangular but nobody ever does. The angles in question are 60°, and if you accept that all the opposite angles of any triangle add up to 180° you'd be correct. More exciting and probably more useful at this point is knowing how to plot an equilateral triangle with basic tools in the workshop.

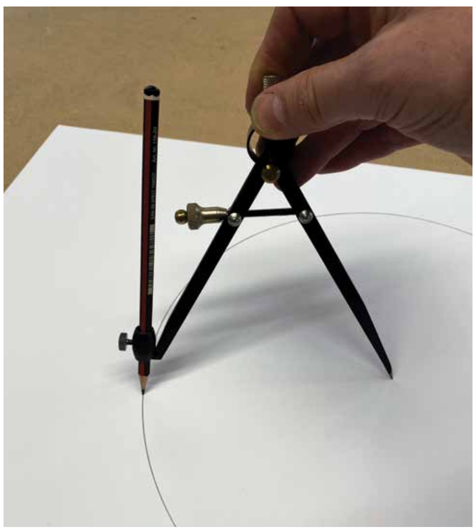
Step 1 - With a compass, draw a circle.

Step 2 – Without adjusting the compass, place one point anywhere on the edge of the circle and make a second mark on the edge of the circle with the pencil end.

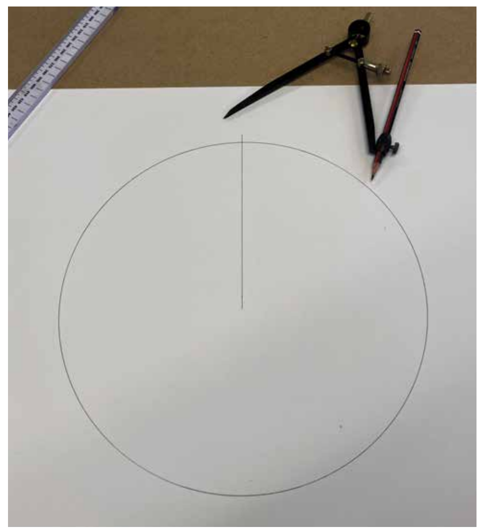
Step 3 – Reposition the compass with the point directly on the first pencil mark and repeat Step 2.

Step 4 – Repeat these steps four more times and you will arrive at the first point on the edge of the circle.

If you take a rule and connect the points in sequence you will create a perfect hexagon. If you connect every second point you will create an equilateral triangle or, as we will call it, leg positions. OK, these won't actually be your leg positions but

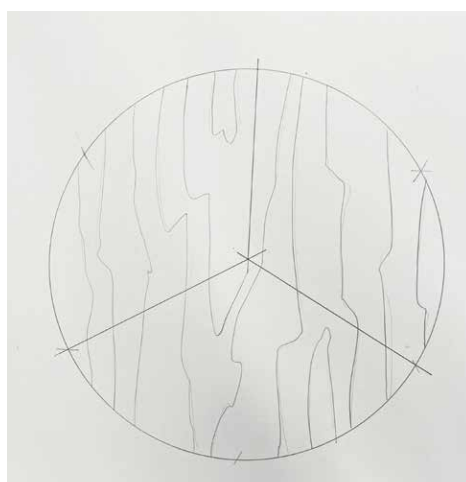


Draw a circle with dividers or a compass.

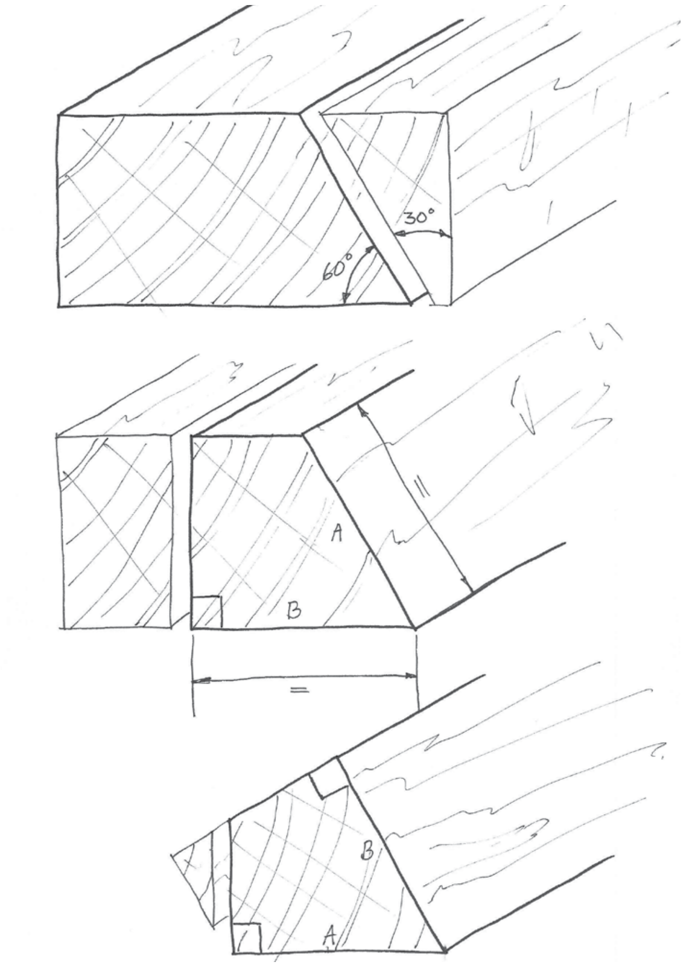


Draw a radial line from the center to anywhere on the circumference.

Without adjusting the dividers, step off marks around the circumference by walking the points from mark to mark.



From every second mark draw a radial line back toward the center. Your mortises will be drilled on these lines.



1. Make a rip cut at 30° close to the edge of the board. Label the sloping face 'A.'

2. Capture the dimension across the width of 'A.' Transfer the dimension along the bottom edge of the blank. Label this line 'B' and make a 90° rip cut through the length of the blank.

3. Flip the blank end over end so that 'A' is now flat on the table. Make a 90° rip cut along the length of the blank with the blade positioned in the waste area.

Note: Not all table saws and band saws are created equally. You may have to adapt the direction of tilt angle shown in these steps to suit your machine. Band saws offer a little more flexibility as their fence can be used, in most cases, on either side of the blade.

they will be the radial lines on which you will place your legs. The beauty in this sequence is that you don't need to know the numbers. For round-leg tables your mortises will be drilled on these lines. For triangular-shaped legs the outermost point of the leg and the innermost will be on this line. These radial lines are the first lines I mark on the underneath of the top and the last to be removed (sometimes), just before assembly.

Use a packer to lift the leg blank off the surface of the table. It will stop the sharp corner from creeping beneath the fence as you make the cut. It will also allow you to make micro test cuts before committing.

Go Easy

Frame joinery, whether it's for a table, a chair or a temple, relies on good geometry for it to function. Triangles are the strongest forms, but they don't exactly lend themselves to easy joinery when constructed out of wood. Part of the problem is that wood has a grain that, unlike most other building materials, not only dictates how separate parts should be connected but how they perform structurally. For the time being and for the projects that follow, I'm going to add simplicity of execution to that list as well.

One of the things I found most challenging when I first started making these tables was how to reconcile a new set of angles into a form of joinery that was already part of my repertoire. What I didn't want to do was start learning new tricks before I was comfortable with the form. Let's not forget there are several forms to explore and as many different splay angles as you can realistically play with.

The most sensible thing to do was incorporate mating faces that were on at least one shared plane; for the legs that meant the faces where the mortises should go. Fortunately, this face is at 90° to an adjacent one, making it all the more easier to work with.

The 30/60/90 triangle is all over this leg pattern when you get to know it. To convert rectangular stock into a suitable triangle you only need to work with one "odd" angle – 30°. On a table saw tilt the blade to 30°. On a band saw tilt the table by the same amount. The same rules apply if you're ripping by hand.

I harvest all my triangular legs from 2"-thick (50mm) stock that is always a generous 4" (102mm) in width. These boards are regular stock sizes and don't require any extra sawing at the mill. By the time the board has been made level and square on four sides, I'm left with something close to 1-3/4" (45mm) thick. I work in lengths that are just longer than the leg needs to be and I plan on getting a leg every 2" (plus the saw kerf) across the width of the board. If the boards are generous and the sawing goes well, the offcuts can be used to make cradles (see Chapter 7) though sheet material is a more reliable option.

Splay

Here's a confession: I've never actually measured the splay angle on a period example cricket table! Now this may seem like a bit of an oversight, but just as I'm not interested in any of the other numerical data, it's never crossed my mind. To do so would go against what I feel is the heart and soul of this particular strain of vernacular furniture. That's not to say I haven't been influenced by period examples; I'm just not out to try to reproduce them.

To me, the splay angle says more about the table's character than any other feature and should come from the maker. It's a snapshot of how they felt about it at that moment in time. Or it could just be governed by the length of the parts for stretchers. I've experienced both outcomes and neither has the edge.

In a quest to find the perfect splay angle, I tinkered around with models and maquettes. In hindsight, I probably devoted too much time to it because every variation – as long as it functions – has value.

My personal journey into splay angles started quite conservatively at 6° for both round and triangular legs. This upright and formal appearance has some practical advantages. On a triangular leg table there's slightly more space inside the frame at the top to accommodate buttons for attaching the two parts. And if you include a pot board down below, the area is certainly less crowded. It's not a game changer by any stretch, but worth considering. After several iterations, I'm currently working at 9°, which wasn't even an option on my original maquette. Who knows? Maybe one day I'll make it to double figures.

With regard to the structural integrity of a higher splay angle, I've yet to find an issue that exists within the regular/expected use of a table of these proportions. Fitting stretchers between the legs undoubtedly adds strength to the structure. The tables I have built, and the vast majority of period examples, all have the foot of the leg contained within the shadow of the top. Having them extend beyond would make them an easy target for clumsy footed folk. Accommodating a higher splay angle on an average height table (approximately 24") places the top of the legs closer to the centre of the top. As this reduces the contact area between any base structure and the top, there are questions to be asked about strength. Period examples of round-legged tables often feature thick blocks of wood beneath the top to accommodate the legs. While this goes some way to solving the problem it can affect the balance of the table by making them top-heavy. A frame base with wide splay legs will suffer similar problems, although the effects can be reduced if the two sections are attached using battens (see Chapter 2). Whatever angle you choose, know that it will work. The worst thing you can do is spend too much time worrying about it.

Work Where it Matters

On my first visit to America I was introduced to the phrase "the flyover states" – the vast area between the East and West coasts. With the inference that nothing interesting ever happens in the space between you could, with equal good humour, apply a similar logic to the design of triangular cricket table legs. With the critical points being the area where the rails and stretchers get mortised into the legs, everything in between is negotiable.

The most reliable and easiest way I've found to ensure a frame goes together as planned is to concentrate my efforts early on in the build to making sure these faces are coplanar. No matter how mismatched the faces are on the inside, they're not important. Get these right first and everything else is easy, including tapering.

The sequence for producing tapered legs starts by cutting the mortises at the top for the rails and at the bottom for the stretchers. The datum edge for gauging the mortises will be the outermost edges of the legs, and if you've done your shaping correctly they will be 90° to the mortise face. For consistency and ease I have found it better to begin the taper below the top rail. Having decided on a splay angle for the legs, it makes sense to preserve it so you can set the shoulders for the tenons from a bevel gauge. The shoulders on the stretchers will be marked individually and made to fit each location.

Gauge a line from the internal faces on the bottom of the leg for tapering.