Japanese V-Ruler/Angle Ruler or Measure

Used as one method of dividing for a C10 Division / Download PDF file of this page

Click here for ordering information for a VRuler from JTA

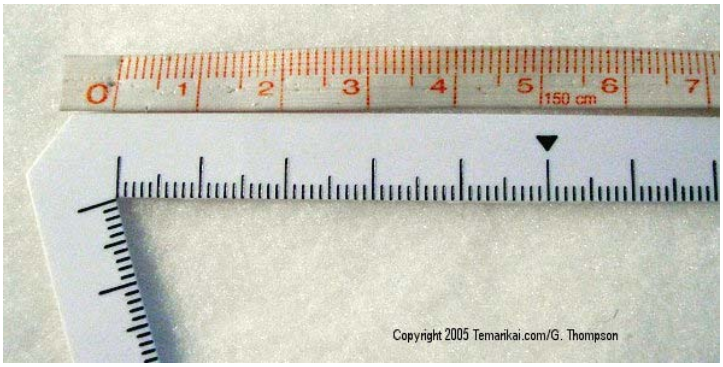
As Temarikai has grown, the amount of information about Japanese V-Rulers or Angle Rulers has also grown and expanded. While current information is now clear, the collected information from the early years remains on an original page. I continue to offer much appreciation to those who contributed early information. Here's a fresh start, which should make things a little more understandable. With a little practice you will find the VRuler method of marking a C10 very quick and efficient.

There are several methods taught in Japanese references for working a 10-Combination division. The most common method one using a dedicated measuring device for the C10, known as a V-Ruler. It is a flexible plastic device shaped like a V, with the inside of the V cut to the required angle of 72 degrees. Each leg has a metric "measuring tape" printed on it, hashed in MM and CM with an arrow on the 5cm (50mm) mark This little gadget is produced and sold only through the Japan Temari Association in Tokyo; the JTA graciously allows distribution through TemariKai at JTA cost (it's been requested by the JTA that no profit be made on them). Some crafters make their own (see info below) which is indeed possible with some cautions: be sure to use heavy enough card stock, or lamination afterward to insure that the angle of the V is solid and does not wobble (it should not pull apart or collapse in use). Using heat lamination rather than self-adhesive lamination will provide a somewhat similar "heft" to the original pieces from Japan and give better results, but they are still not quite up to the real thing.

Using a V-ruler eliminates the need for any other supplies other than pins and a tape measure when working a C-10, and is a quick, direct way to divide a mari to a C10. You need only know the circumference (distance around the outside of the ball at the largest point - the obi/equator) in cm. For those not comfortable with using metric units - trust us, you will want to for this division. Once the circumference in CM is known, you then determine the V-Ruler value for that measurement. It is an easy calculation but, a simple reference chart eliminates the need to calculate values for most standard mari sizes.

For reference, the formula is an easy three-step. For the non-math folks: divide the circumference (that you measured in cm) by 6, and remember that result (call it Result A). Divide the circumference by 100 and remember that result (call it Result B). Add Result A and Result B together, and you have the V-Ruler value you need for your mari. For the math folks, it's written as (circum/6)+(circum/100)=V-ruler value. This number, the V-Ruler Value, is the distance between the centers of the pentagons on a C10 divide, and each pin placed for a C10 marking will be this distance apart. Thus, each pin placement is a center of a pentagon. For those wanting to check things further, multiply the V-Ruler Value by 0.679, and you will get the length of the side of the pentagons (useful for when you are adjusting the marking threads into final placement before tacking the threads). (Thanks to Debi A. for this tidbit).

The method is much easier to see than to describe:

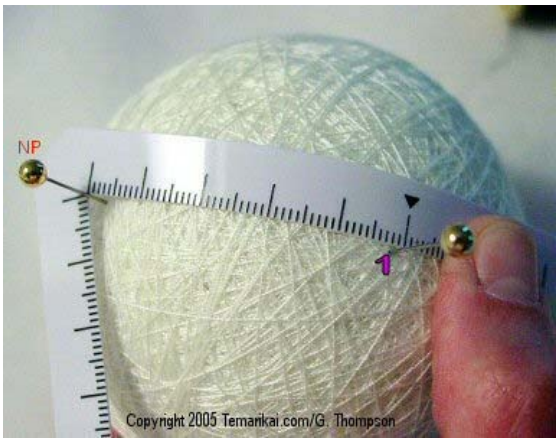


The VRuler compared to a regular metric measuring tape. Note the mm and cm hash marks and the bold triangle indicating the 5 cm mark.

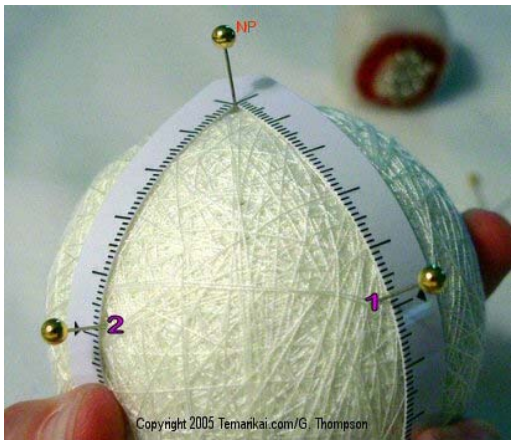
Measure the circumference (distance around the ball at the widest part) in cm. This is 27 cm.

Once the circumference is determined, use a VRuler reference chart (below) to determine the VRuler Value. Look up 27 and the VRuler Value is 4.8. Or, the standard calculation of (27/6)+(27/100)=4.77 That is: 27 divided by 6 equals 4.5 ; 27 divided by 100 =.27 ; 4.5 plus .27 equals 4.77 Round to the nearest tenth cm so 4.77 rounds to 4.8

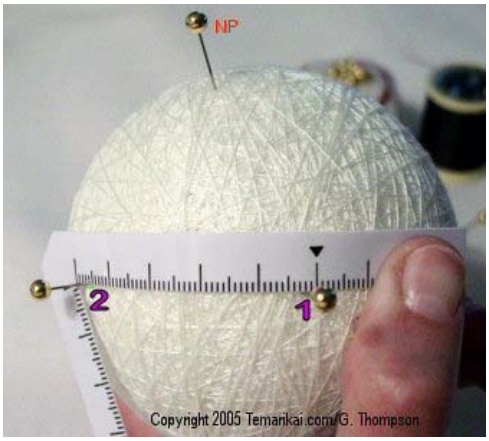
Therefore, for this mari the VRuler Value is 4.8



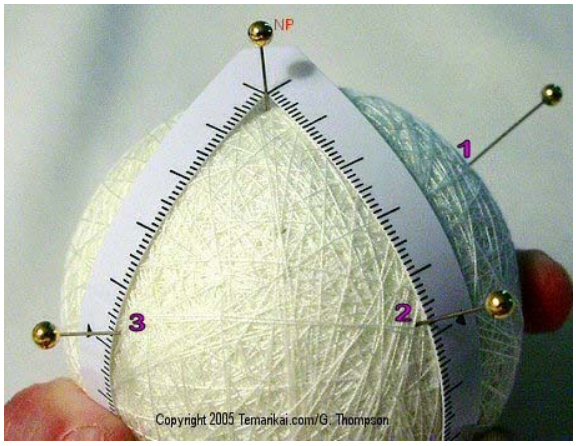
Choose any point to be the North Pole and place a pin. Hook the inside of the angle of the VRuler on the pin, flatten one leg of the ruler along the mari and place a pin (Pin 1) at the VRuler Value (here it is 4.8).



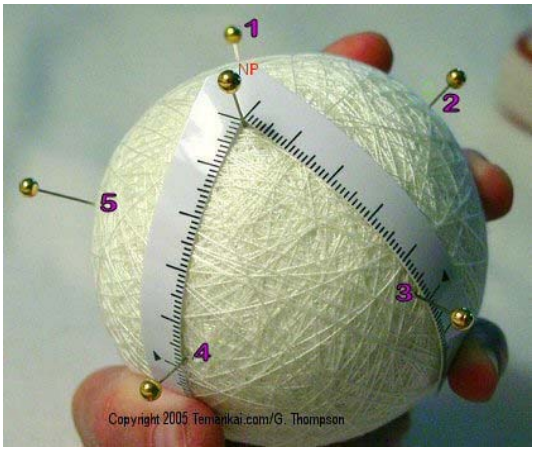
Flatten the opposite leg of the VRuler on the mari (without "stretching" or "closing" the angle), and place the second pin (Pin 2) at the VRuler Value on the second leg.



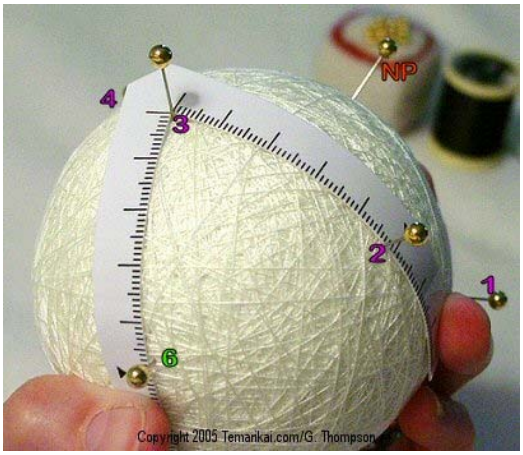
If you remove the VRuler from the NP pin and measure the distance between Pins 1 and 2, it should be the same VRuler Value. Remember VRV is the distance between the centers of the pentagons. Replace VRuler on NP.



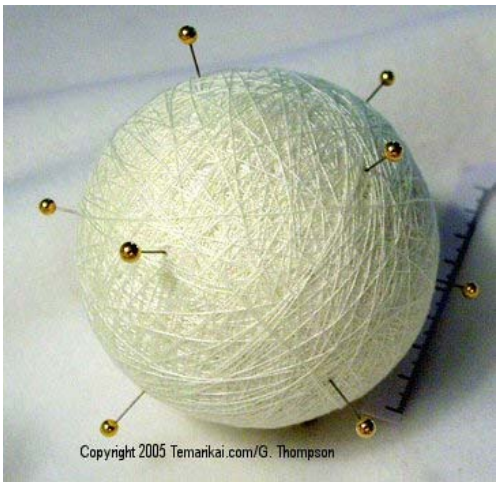
Pivot the VRuler around the NP pin and place the right leg against Pin 2. Flatten the ruler and place Pin 3 at the VRuler Value on the left leg.



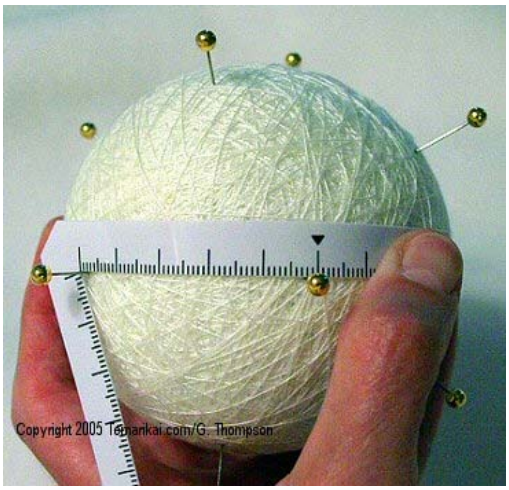
Continue pivoting the VRuler around the NP pin until you have placed five pins around the NP. You now have six pins all spaced the same from each other (VRuler Value).



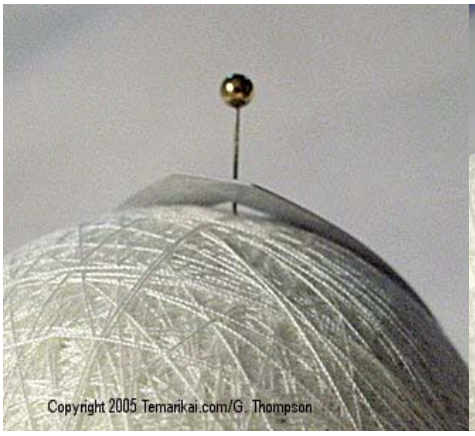
Remove the VRuler from the NP and "hook" it on any other pin, here Pin 3. Lay the right leg against Pin 2, flatten the left leg to place Pin 6 using the VRuler Value, just as you did for all the previous pins. Pivot around Pin 3 as though it was the NP and continue.

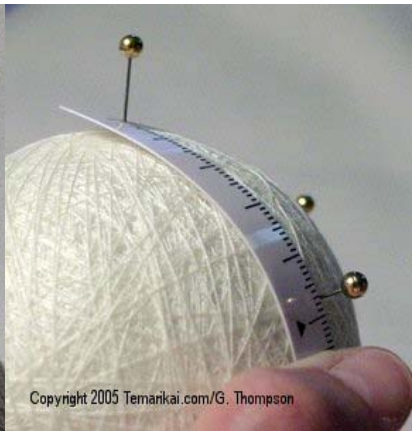


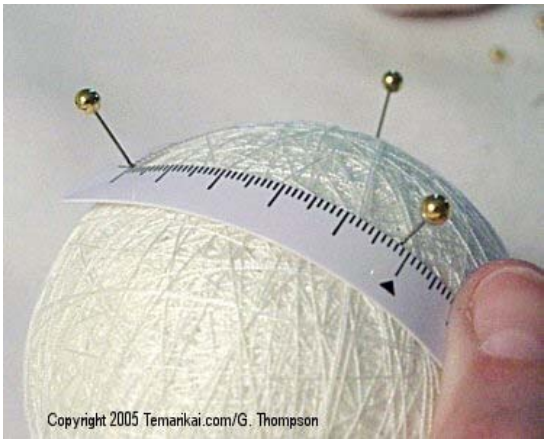
Repeat the process until you have placed 12 pins all the VRuler Value from each other. Move the VRuler to another pin when needed. Place 12 pins, all being the VRuler Value distance from each other.



Use the VRuler to check to be sure that each pin is the same distance from each other (VRuler Value). You can now wrap the marking threads as you usually do for a C10







If there is one "trick" in using the VRuler, it's the "flattening" of the legs.

Keep the corner of the angle tight against the pin, but notice that the tab behind the angle notch is allowed to ride up the pin a tad - when you hold down the legs of the ruler, allow this to happen.

Notice the flattening and curve of placement in the photos. A little practice will make this easy.

Temari C10 V-Ruler Concise Reference
Visit www.temarikai.com for additional information

Diam (inches)	Circum (cm)	V-Value (cm)	Diam (inches)	Circum (cm)	V-Value (cm)	Circum (cm)	V-Value (cm)
2.0	16.6	2.9		26	4.6	34	6.0
2.5	19.7	3.5		27	4.7	35	6.2
	20	3.5	3.5	28	4.9	36	6.4
	21	3.7		29	5.1	37	6.5
	22	3.9		30	5.3	38	6.7
	23	4.0		31	5.4	39	6.9
3.0	24	4.2	4.0	32	5.6	40	7.1
	25	4.4		33	5.8	41	7.2

V-Value = (Circumference ÷ 6) + (Circumference ÷ 100)

VRuler Value Reference Chart:

Click here to download/print a PDF File of VRuler Value Reference charts. While the VRuler technique only needs circumference values, Diameter values are included here for reference for American stitchers to relate in reference.

To make your own VRuler - use the PDF file download and remember to create your ruler using materials that will hold its shape - heavy card stock, laminating etc. Download PDF file with accurate angle ruler image - be sure to print at 100 percent image size - do not use the fit to page option. Thanks to Sue H. for the PDF file and info.

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