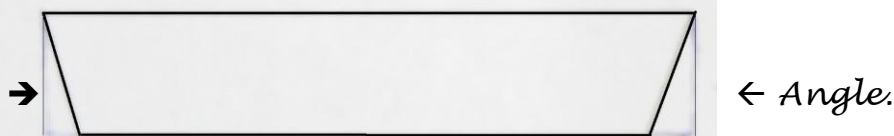


## Making a frame for a drum.

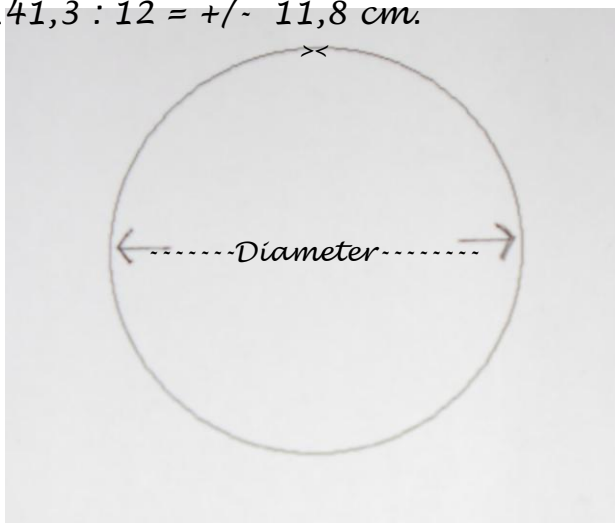
First you have to decide how many sides you want. The angle you need to use for the saw, depends on the number of sides you want. To calculate the angle you have the next calculation : 360 degrees divided by the number of sides and the result divided by two. For a twelve sided frame:  $360 : 12 = 30$ .  $30 : 2 = 15$  degrees. The saw has to be adjusted to 15 degrees for a 12 sided frame.

6 sides	30 degrees
7 sides	25,7 degrees
8 sides	22.5 degrees
9 sides	20 degrees
10 sides	18 degrees
11 sides	16,4 degrees
12 sides	15 degrees
13 sides	13,8 degrees

Both sides of the piece have to be cut of under that angle. Once you adjusted the saw in the right angle you only need to turn the wood to make the next cut.



The length of each piece depends on how big you want your drum and the number of sides. The calculation you use is: The diameter times Phi (  $\pi$  ) ( $\pi = +/- 3,14$ ) divided by the number of sides. So if you want a twelve sided drum with a diameter of 45 cm ( you can also use inches) it is  $45 \times 3.14 = 141,3$  cm divided by twelve  $141,3 : 12 = +/- 11,8$  cm.

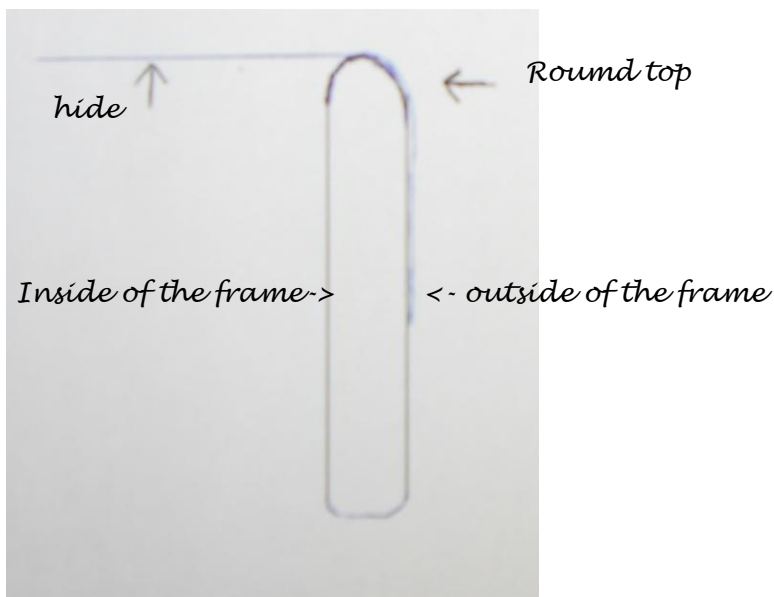


*When you made all the pieces you put them together with a lashing band to see if they make a circle and if there is not too much space in the corners.  
See pictures(A 24 sided drum that will have a 60 cm diameter.)*



If everything fits you loosen everything and start gluing all the pieces. Use a flat surface to put them together and a piece of paper underneath. Once you start to glue them together you have to finish it. When all the pieces are glued to a circle you tighten the lashing band a bit. There will be some time to adjust pieces when needed. When everything is in the right place you really tighten the lashing band. Before the glue starts to dry you clean the frame with water to remove the excess glue. Most important is the inside of the frame for it is difficult to sand and you keep seeing it. Use a good cellulose glue for wood. After the cleaning, lay the frame on a flat surface and see if everything is still in place and if the frame is round and not oval shaped. Let the frame dry till really dry!!!

When you did a good job all the pieces are at the same height. So the top and the bottom are flat. If there are little differences you sand them to a flat surface. The outside of the frame is sanded to remove the sharp corners. See drum flyer for a good photo. The side you will be using to lay the hide on you sand round. See drawing.



Drill holes if you want to lace the hide to the frame.

Use wood that is light and easy to work with. It will make a light drum and more easy to make a nice frame. Red cedar is a good choice.

Ask the shop to saw your boards to the right size. I use 22mm by 70 mm boards. Always take a little more length than needed.