

1. Get the following measurements of your barrel:

A. Outside

1. Vertical (Figure 1.A.1) – From the point where the barrel touches the table, around the outside of the barrel, to the top of the rim
2. Horizontal (Figure 1.A.2) – Around the widest part of the outside of the barrel
3. Base diameter (Figure 1.A.3) – Across the widest part of the outside of the base, but only the part that actually touches the table when sitting flat
4. Rim circumference (Figure 1.A.4) – Around the outside of the rim or opening of barrel

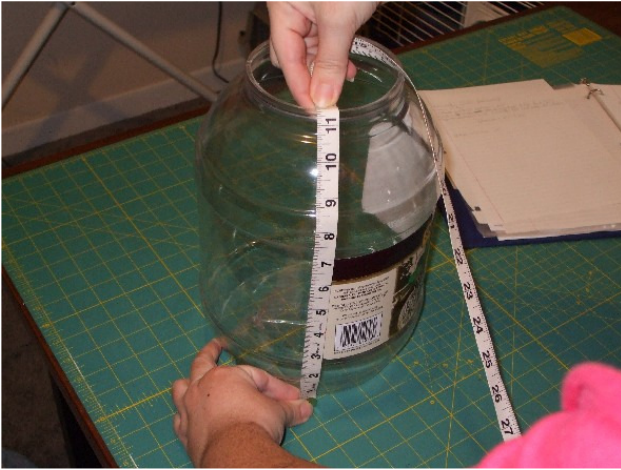


Figure 1.A.1



Figure 1.A.2



Figure 1.A.3



Figure 1.A.4

2. Measure and cut the different pieces for your barrel using the following calculations:

A. Outside cotton material (sides):

1. Take the vertical measurement and add 1 inch, take the horizontal measurement and add  $\frac{1}{2}$  inch. In this example, my vertical measurement was 11 inches and the horizontal measurement was 25 inches, so I will cut my cotton material at 12" x 25  $\frac{1}{2}$ ". I use small seams, so if you use larger seams you will want to cut your fabric at the horizontal measurement plus 1 inch.

B. Outside cotton material (bottom):

1. For this piece, you use the base measurement. You will then cut a square from your cotton material that is an inch wider than your base measurement. In this example, my base measurement was 6  $\frac{1}{2}$ " so I cut a square at 7" x 7".
2. Then you will fold that square in half twice (See Figures 2.B.2a & 2.B.2b)

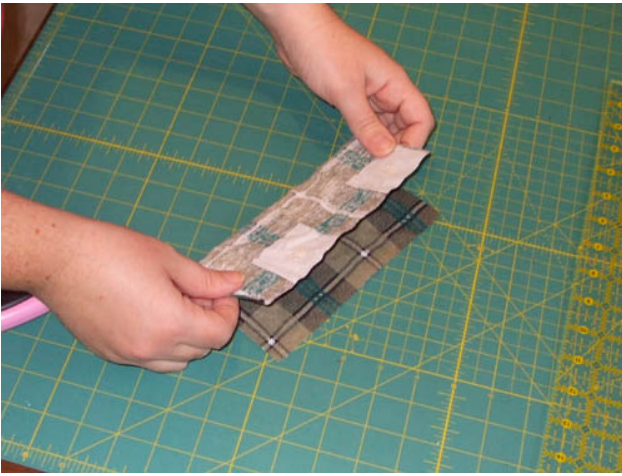


Figure 2.B.2a

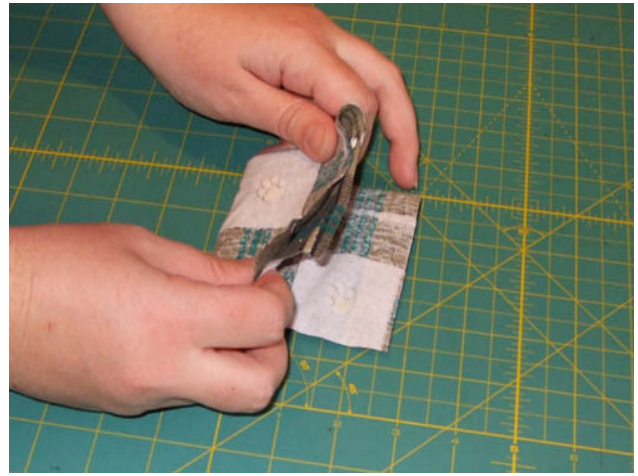


Figure 2.B.2b

3. Measuring from the center of the fabric where the fold is without fabric edges, calculate half of what you need. In this example I need a circle with the diameter of  $6\frac{3}{4}$ " (or 7" for larger seams) so I will divide that in half to get  $3\frac{3}{8}$ ". I will mark this measurement in an arc around the center point of the fabric to get my cut line (See Figure 2.B.3a & 2.B.3b, Figure 2.B.3c shows the markings)



Figure 2.B.3a



Figure 2.B.3b



Figure 2.B.3c



4. Carefully cut along your marks in an arc through all four layers of the material. (See Figure 2.B.4a & 2.B.4b, Figure 2.B.4c shows the finished circle)



Figure 2.B.4a



Figure 2.B.4b



Figure 2.B.4c

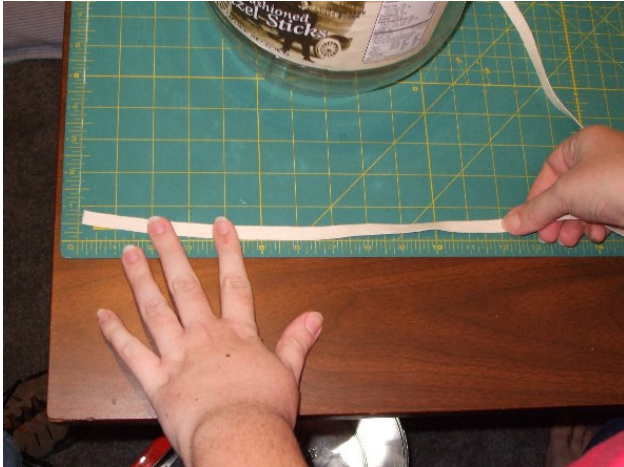
C. Inside fleece (sides):

1. You will use the same measurements for this piece as the outside cotton except you will add one more inch to the vertical measurement. For this example, my inside fleece was cut at 13" x 25 1/2".

D. Inside fleece (bottom):

1. This piece will be cut exactly the same way the outside cotton material was cut for the bottom or base of the barrel.

3. Using the Outside rim circumference, cut 2 lengths of  $\frac{3}{8}$  inch wide cotton elastic to 3 inches less than the circumference. One will be used for the outer cover, and one for the inner liner.



4. On the larger pieces of cotton and fleece, sew the longest edges over to make a slot for the elastic. Pin it and be sure that once it's stitched your elastic will slide through the opening.



5. Slide the elastic through the openings making sure to leave elastic sticking out either end for stitching. You can use pins to hold the ends in place and a safety pin to help you slide the elastic through.





6. With right sides of the fabric facing each other, sew the short sides together with a straight stitch or an E stitch. I prefer an E stitch or a ladder stitch as these will help to keep the fabric from fraying.



7. With the material still flipped with the wrong side out, pin the base to the cover. Put one pin through both pieces near the seam, then fold both pieces in half from that point and pin the other side. Then fold in half the other direction and pin both ends. Between each of these pins, you will put 2 more pins. You will have a little extra fabric as the barrels usually curve at the bottom, so neatly fold over the extra and pin it down to make pleats.





8. Using an E stitch (or straight stitch if you don't have an E stitch) sew around the outer edge where you have just pinned.



9. You should follow the above steps for the outer cover as well as the inner liner.  
10. You can flip the outer cover so the right side is out, but leave the inner liner so the wrong side is out.



11. Insert the fleece liner into the barrel and pull the elastic over the edge to keep it in place.



12. Slip on the outer cover to cover up the edge of the fleece and help hold it in place.



13. You can now let your ferrets enjoy their new barrel to play and sleep in.