## Martini Glass (or Birdbath)

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Begin with a rectangle of proportions $7 \times 3$. A rectangle $248 \mathrm{~mm} \times 106 \mathrm{~mm}$ yields a model 65 mm tall, with a 43 mm base diameter and a 68 mm top diameter. Although I designed the model for a dollar bill, I don't recommend using one, as the process is unpleasant, and the product is small and ugly.


1. Begin with white side up. Divide into $1 / 12$ ths with valley-creases. (After the $1 / 3$ lines, it's pretty easy.)

2. Soft valley-fold. Repeat at right end.

3. Mountain-fold all the way across the bottom. Unfold completely.

4. Valley-fold on same crease. Unfold.

5. Valley top edge to a little bit below the crease. Unfold.

6. Mountain on same crease. Unfold.

7. Add mountaincreases (see next step for technique).


8a. Technique: grab a pleat, swing bottom under until perpendicular, then spread bottom of pleat, pinching the mountain-fold.

9. Add more mountain-creases (see next step for technique).

7. Add mountaincreases, bisecting the little rectangles.


9a. Technique: similar to 8a.

## Martini Glass (continued)

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10. Add mountain and valley creases (see next 2 steps for technique).


10a. (other side!) Technique: grab a pleat...

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10b. ...and valley through both layers of the pleat, and unfold.

11. Back to white side. Extend middle mountain crease to bottom edge in sectors 4,7 , and 10.

12. Roll into a tube on the $1 / 12$ valley creases. Two segments will overlap (doesn't matter which are on top).

13. Pinch the middle region, using the $1 / 12$ creases and their bisectors. Keep the two overlapped sectors together as a single layer.

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14. Distribute the middle ridges cylindrically, then spread and flatten the base, while rounding the top into a 10 -sided cone. No new creases!

15. View from below. Form a septagon, using the extended mountain-creases in sectors 4, 7, and 10 to buckle three of the triangles.

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16. (Enlarged) Pleat each loose flap in thirds.

17. Tuck pleated flap into the pocket. Repeat with other two flaps. Some shifting needed.

18. Trim corners.

19. This is a single vertical ridge of the "stem", with attached section of base and bowl.

Using existing creases (from step 10), fold in half, but only until perpendicular. Note valley fold at base. Also note mountain folds at the top, which don't flatten.

Repeat all the way around the stem, keeping overlap together, and treating some edges two-at-a-time. Gradually tighten up the structure, bit-by-bit. Patience!

20. Top of the "bowl".

Flip over tiny rim.

21. Stretch pleats all the way around, adjust, flatten, sharpen.

22. Finished.

