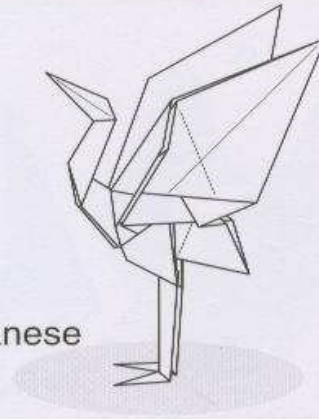


# Standing Crane

Theme: Technical folding

Fold using 6" (15 cm) origami paper. Thin washi (Japanese handmade paper) larger than 8" (20 cm) is better.



## Standing Crane and practical technical folding

The subject of the previous model, Three-headed Crane, is rather eccentric. Its basic structure can be applied to a two-legged crane by just flipping the front and the back. However, the middle flap would be too long for the tail of the crane. We only need five long flaps, which can be obtained by the crease pattern on the right. It is the crease pattern of Standing Crane. The thin lines define the composition of points, and the thick lines (black and gray) represent the creases. Note that mountain and valley creases are not shown.

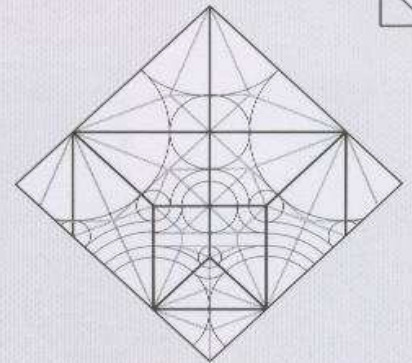
If you follow the thin lines, you can find river-like areas besides circles that correspond to flaps. Whereas a circle represents a branch, a river corresponds to a trunk that connects some branches. Compare the pattern with the tree figure on the right.

To understand the crease pattern, look at the areas surrounded by the thick black lines, or "molecules." Each area, except the two triangles at both ends that will be folded inside, will be folded so that all the sides are aligned, as the quadrangles discussed in Orizuru Transformation. Because of this special feature, called single-value by Toshiyuki Meguro or uniaxial by Robert Lang, we can easily combine many "molecules."

You may think that the trunk is too long for a structure of the crane. In fact, we can use a composition without rivers to obtain a tree without trunks. With such composition, however, it is difficult to arrange the angles of creases, and the flaps tend to have random shapes, even though they have desired lengths. Such a model is not likely to be easy to fold.

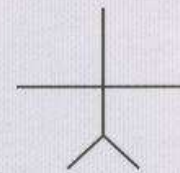
We can make an ordered structure with random angles by, for example, placing points on a grid. But arranging angles is one of the easiest ways to design clear and clean models. For this model, rather than taking care of the length of points, I arranged triangles and quadrangles with specific angles (such as those explained in Wild Boar), as if they are tiles, so that the entire crease pattern is flat-foldable. Actually, I came up with another pattern, which is shown on the right.

Just as Three-headed Crane can be folded from a hexagon, this model can be folded from a pentagon shown on the right, with one right-angled corner and four 67.5° corners.



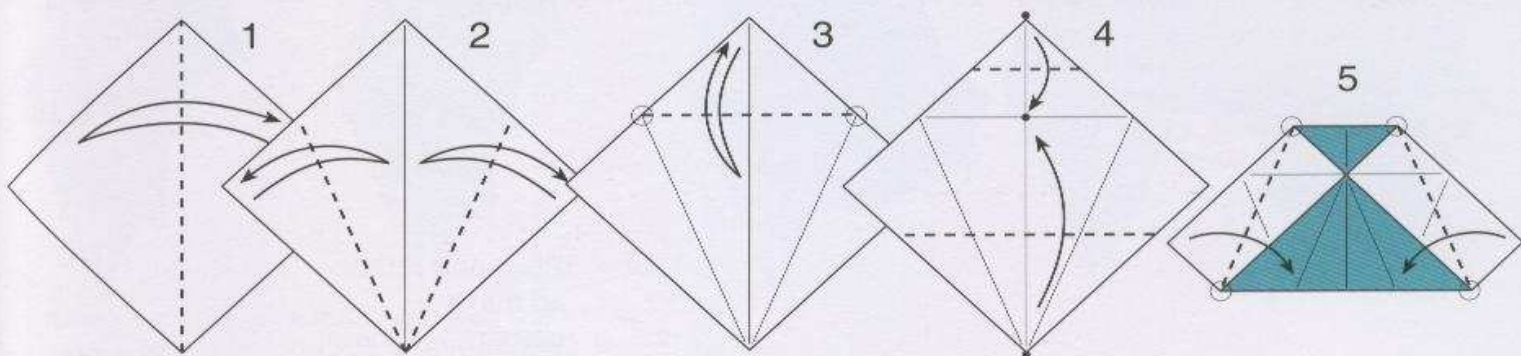
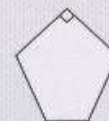
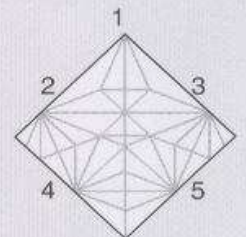
Composition of points and creases.

Circles represent flaps, and areas surrounded by thick black lines are "molecules."

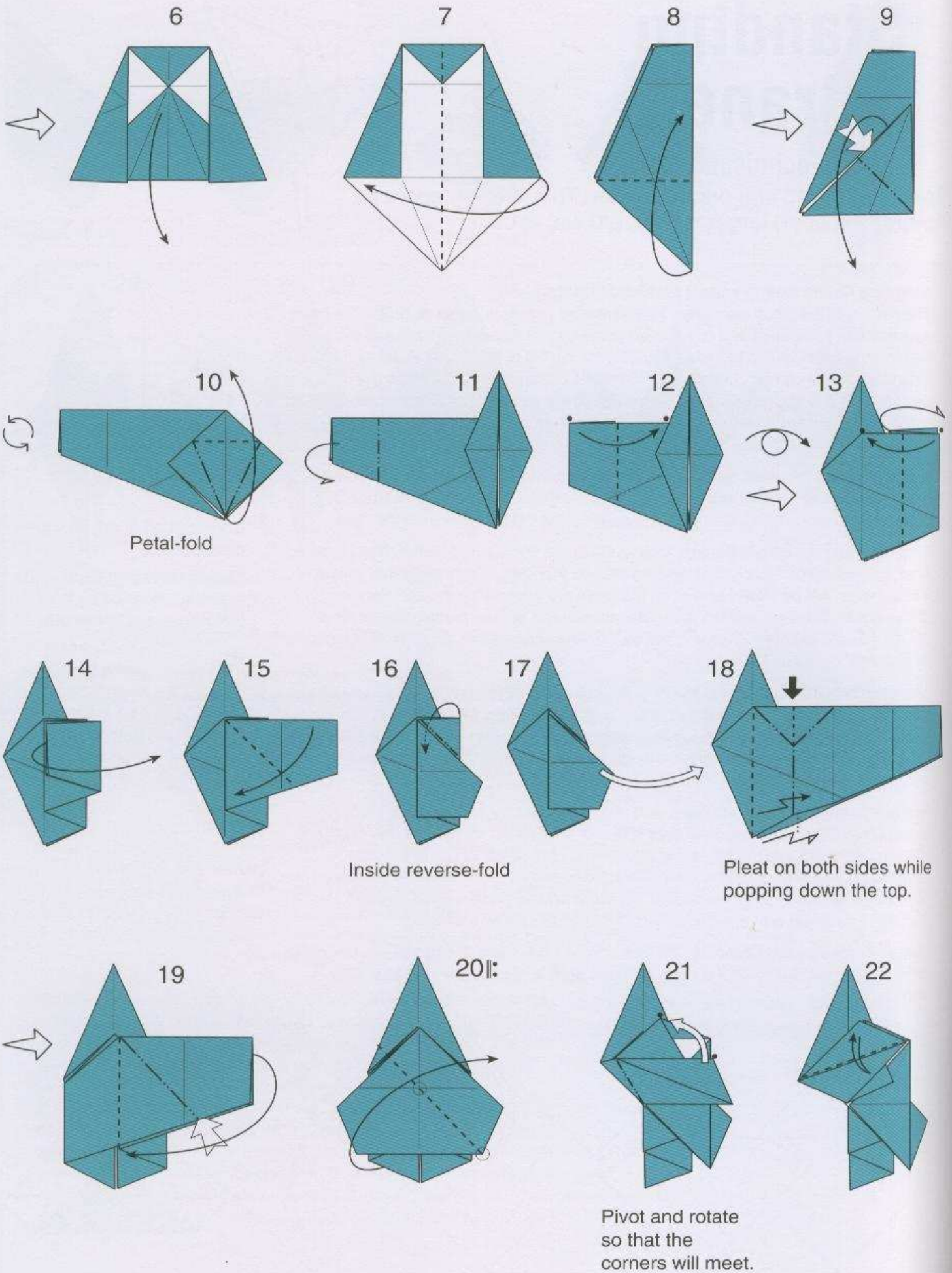


Tree figure (short branches are omitted). The trunk connects the branches.

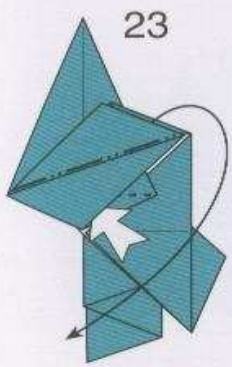
Another crease pattern for five long points



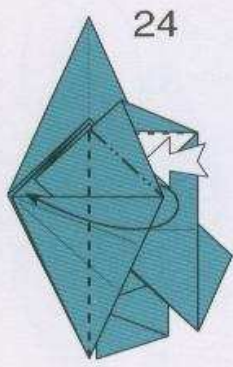




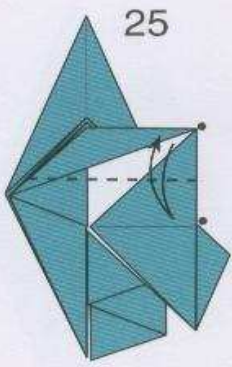




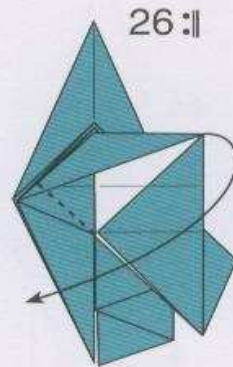
23



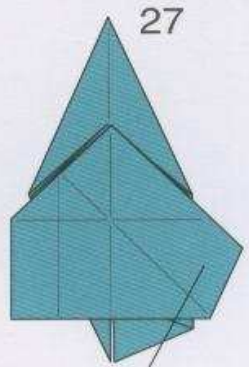
24



25



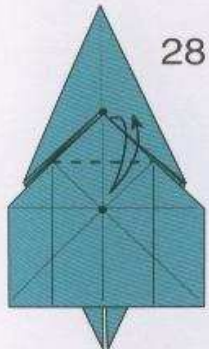
26:II



27

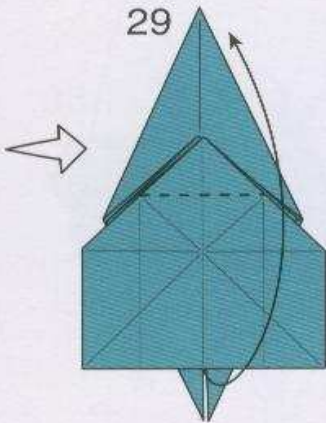
Fold the layers firmly.

Repeat steps 20-26.

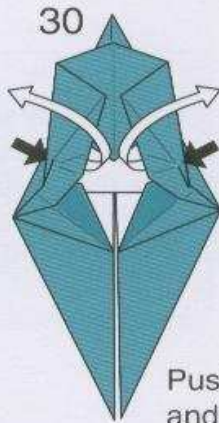


28

Fold and unfold only the upper layer.

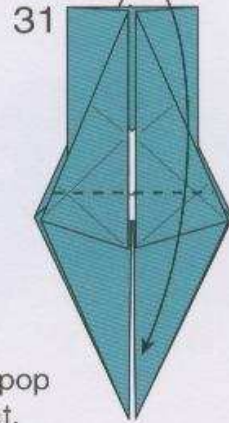


29

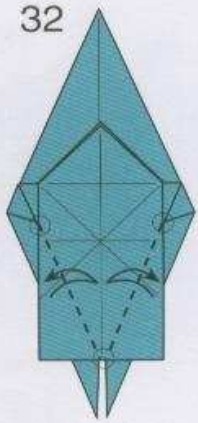


30

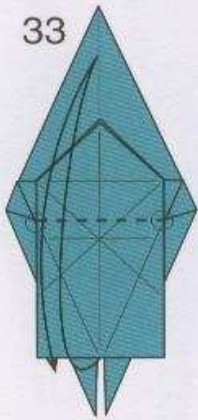
Push in to pop and fold flat.



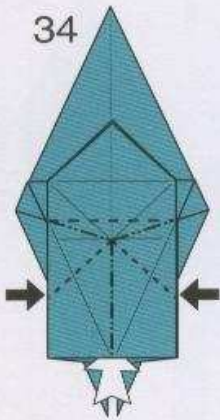
31



32

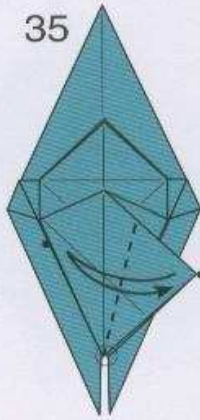


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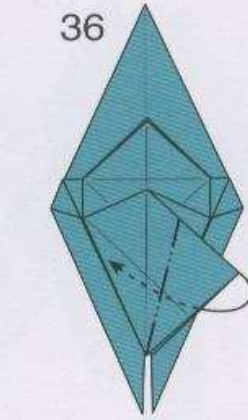


34

Pinch to make an isosceles right triangle.

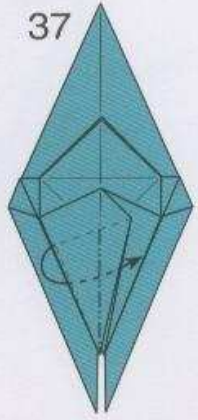


35



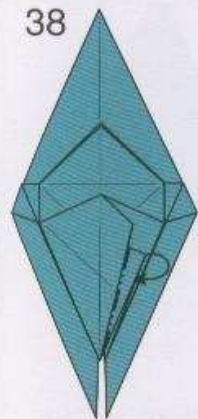
36

Inside reverse-fold



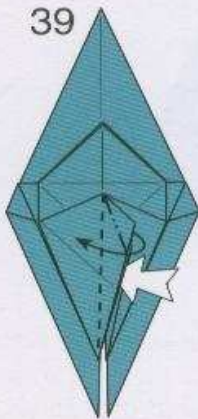
37

Inside reverse-fold inside



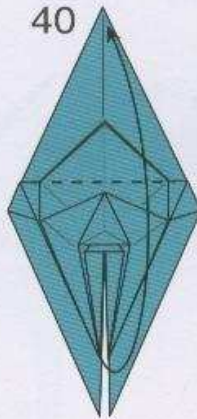
38

Inside reverse-fold

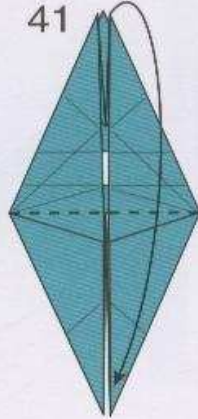


39

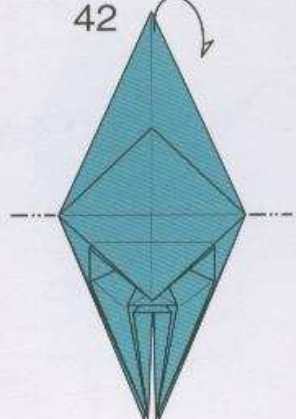
Squash so that the model is symmetric.



40

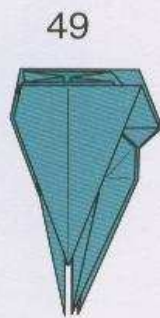
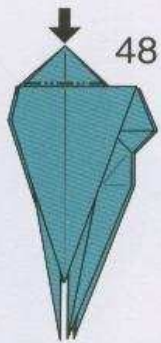
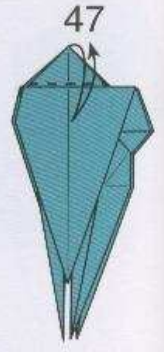
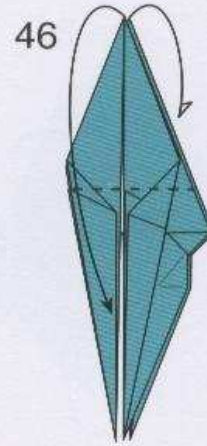
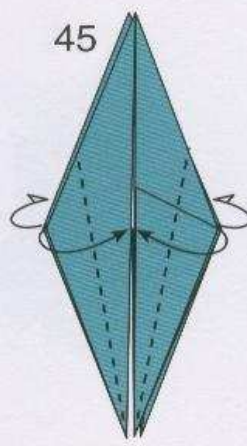
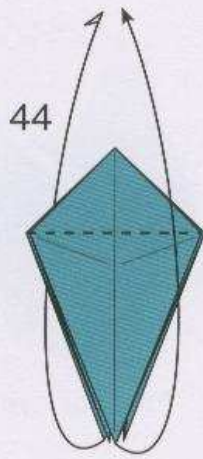
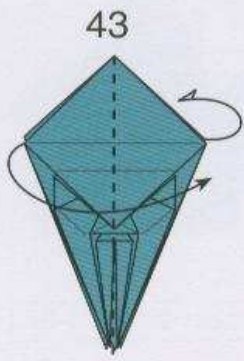


41

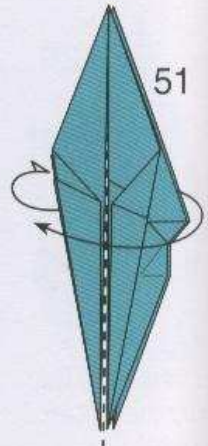
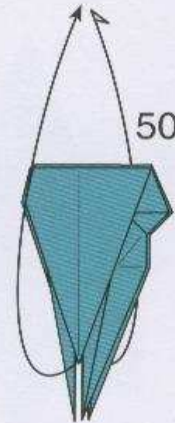


42

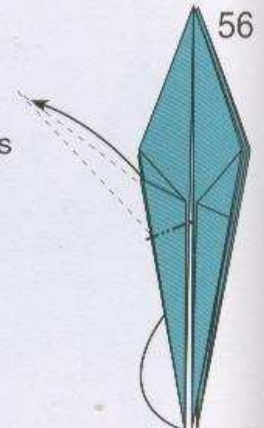
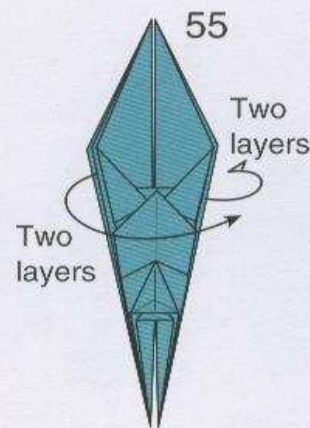
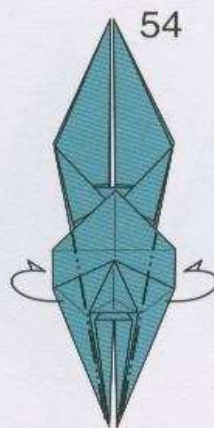
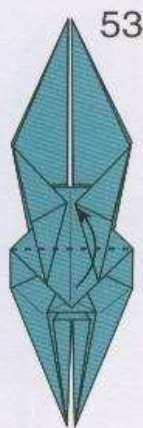
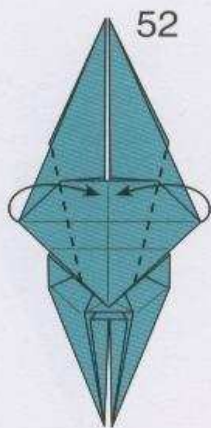




Steps 48-49 show a typical open sink fold. Compare it with a closed sink fold in *Giraffe*.



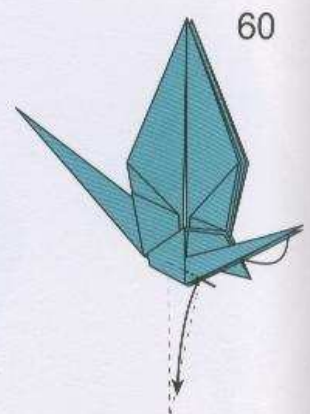
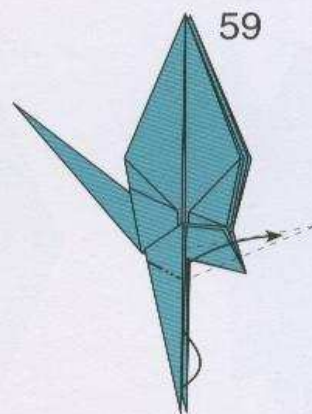
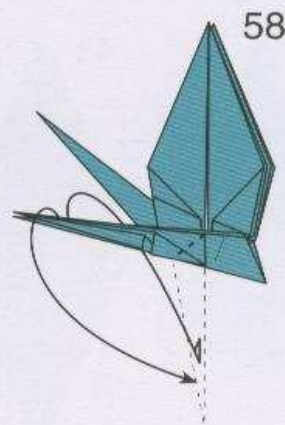
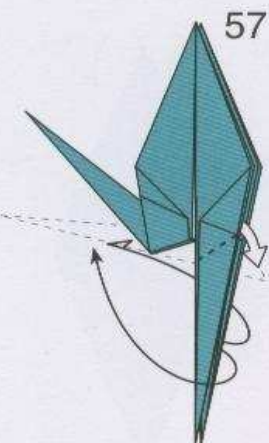
Open-sink.



Fold along the edges.

Fold behind into the top-most gap.

Inside reverse-fold



Outside reverse-fold

Outside reverse-fold

Inside reverse-fold both points simultaneously at the root

Inside reverse-fold



