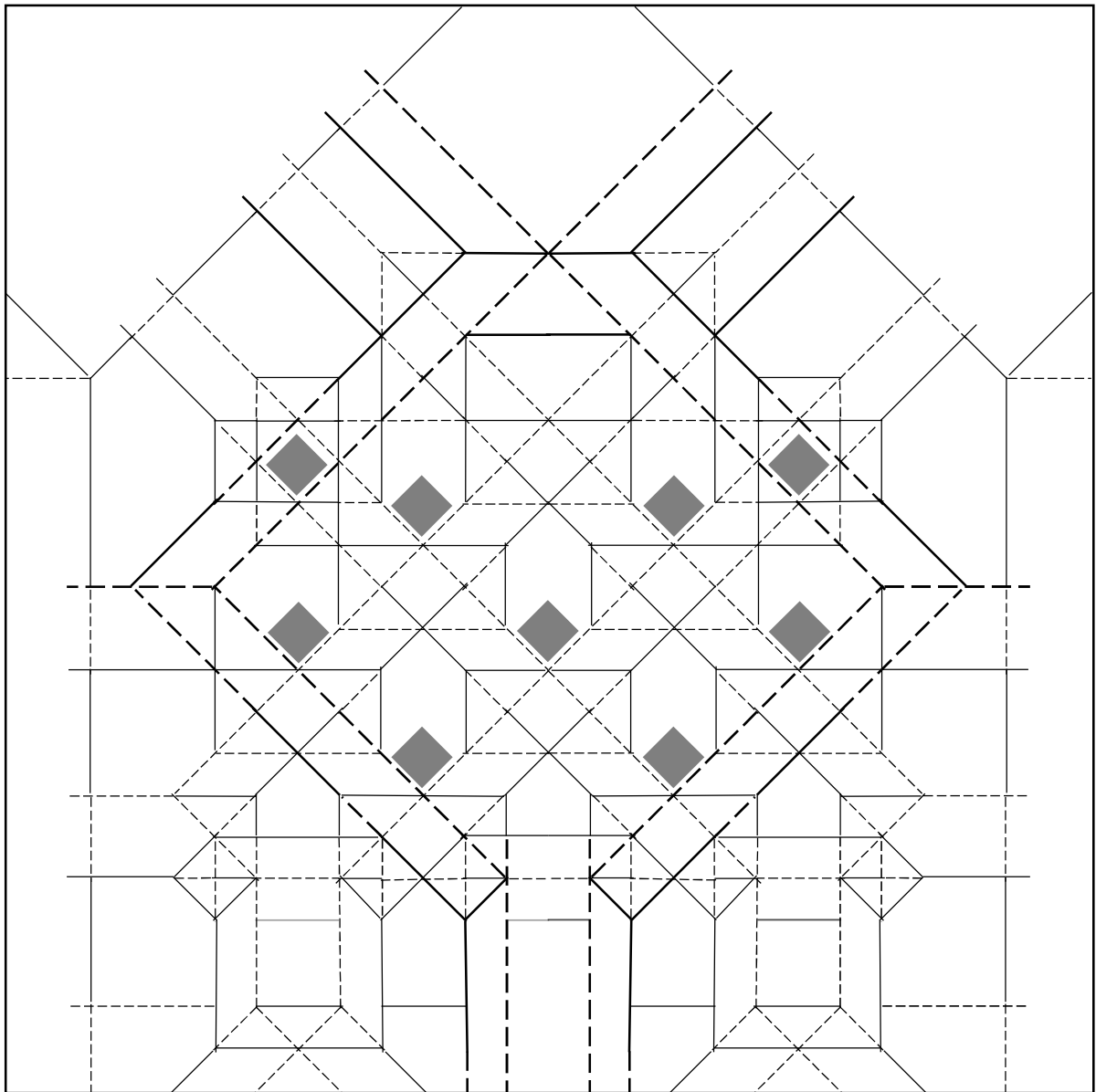


# Amabie

Amabie is a Japanese mermaid appeared in Kumamoto. She is believed as a charm against infections. This Amabie Origami is a modification of the original designed by Ms. Michelle Fung, who was a member of MIT's original origami club (OrigamiMIT). Hopefully the COVID-19 pandemic will end soon.



Print out creases lines on origami sheet. The lines printed on back side of the sheet are eventually hidden in the model. Recommended sheet size is 25 x 25 cm. First trial is better to use this sheet enlarged to A3 paper.

## Yoichiroh Hosokawa

Professor, Bio-Process Engineering Laboratory  
Division of Materials Science,  
NAIST: Nara Institute of Science and Technology  
E-mail: [hosokawa@ms.naist.jp](mailto:hosokawa@ms.naist.jp)

※ Origami is my personal hobby, which does not concern with our research subjects.

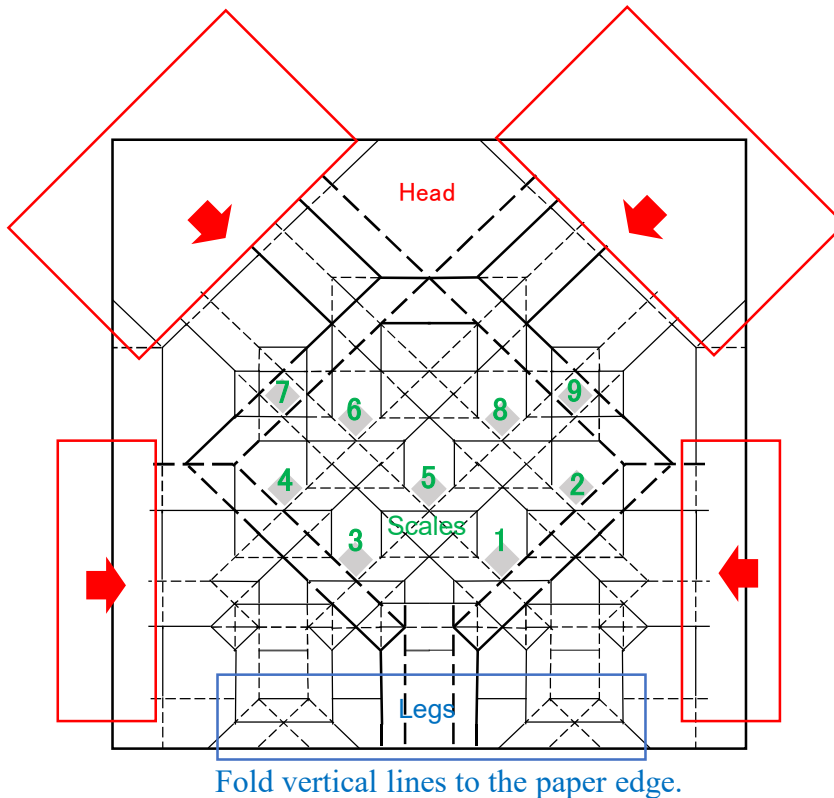
**NAIST** 国立大学法人  
奈良先端科学技術大学院大学  
® NARA INSTITUTE of SCIENCE and TECHNOLOGY  
無限の可能性、ここが最先端 — Outgrow your limits —



# Fold method

## 1. Make creases

in the order of lick, horizontal, and vertical directions



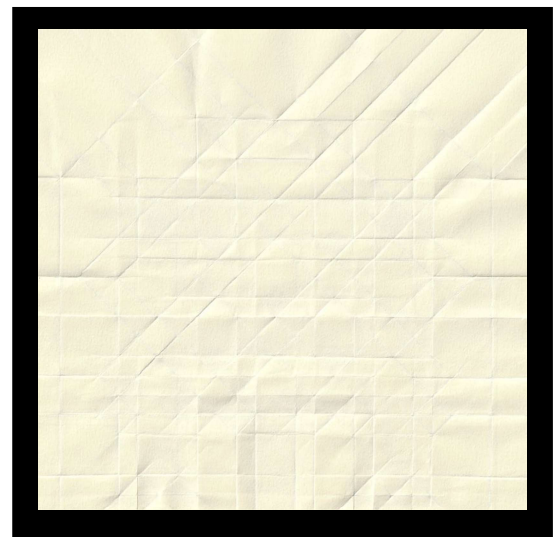
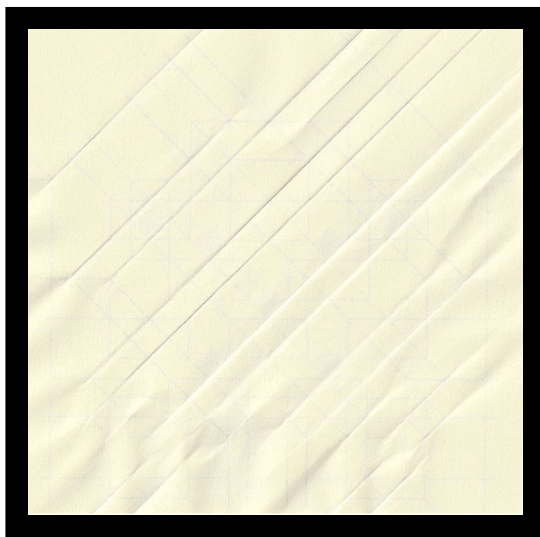
—— : Mountain fold (山折り)

---- : Valley fold (谷折り)

Bold lines: Initial fold in step (3-1)

Gray diamonds: scales (うろこ)

Crease lines (折線) in arrowed directions extend on red box areas. These lines on red box areas are erased not to remain on the completed model.



Original design by MF

August 8, 2020

"Amabie v1" <http://www.michellefung.net/origami/amabie-v1>

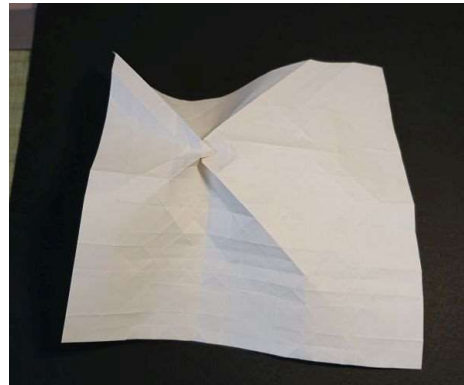
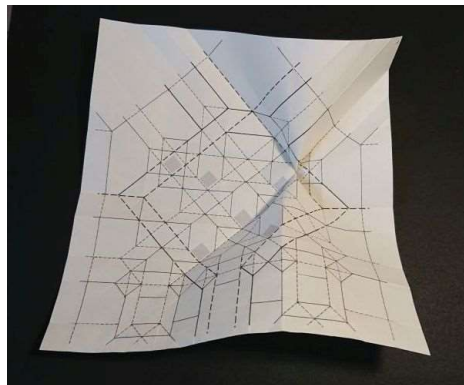
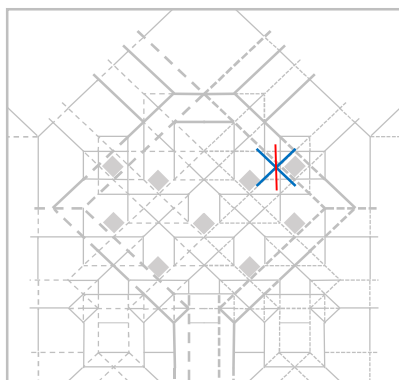
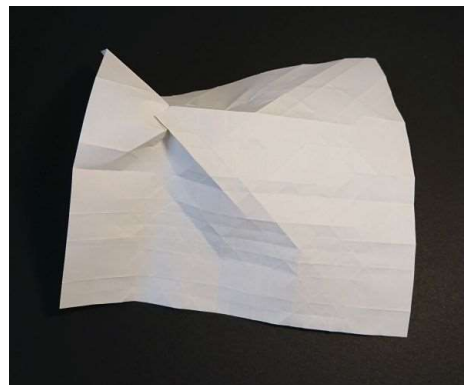
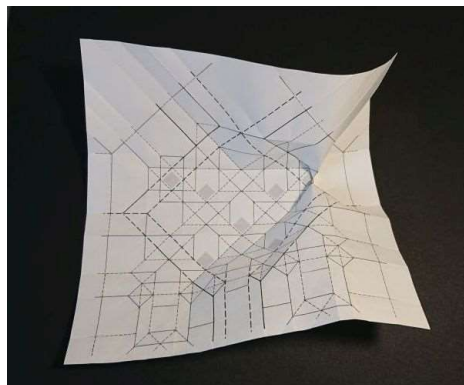
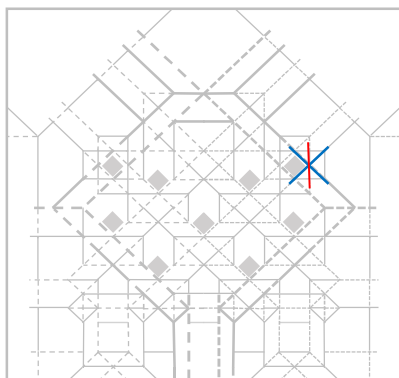
In my model, toes were added to let the model stand by itself. The face was simplified.

## Acknowledgement

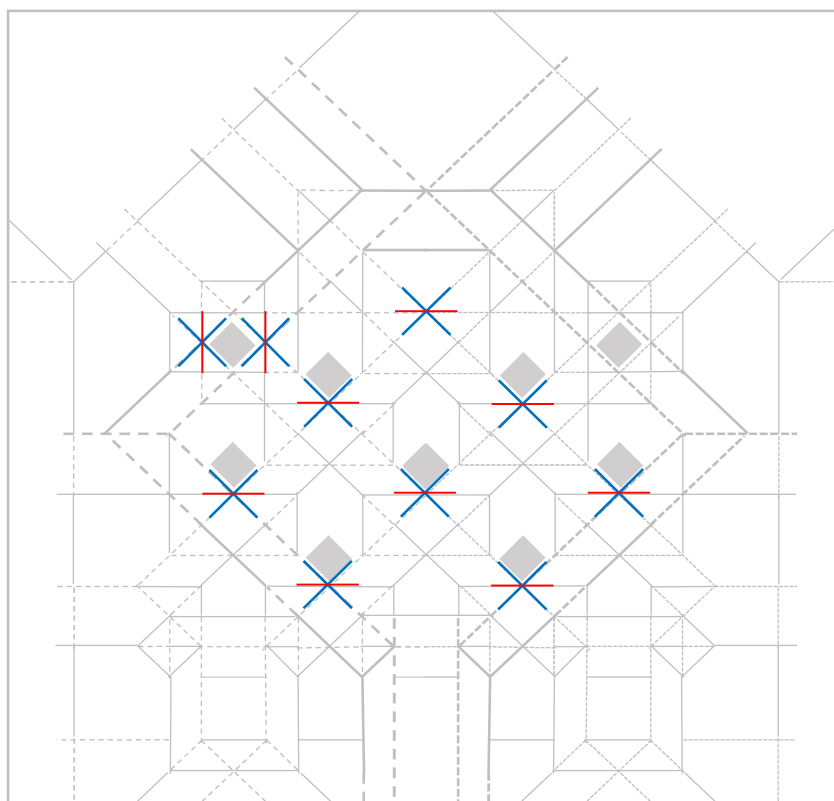
I would like to thank Ms. Michelle Fung for kind permission to utilize her design and to distribute it.

## 2. Fold and unfold to shape scales

This step is to make it easy to fold scales in the next fold step (step 3).

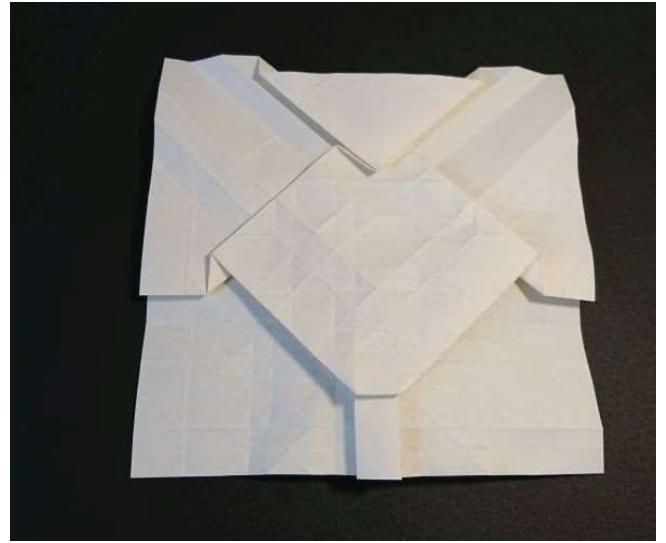
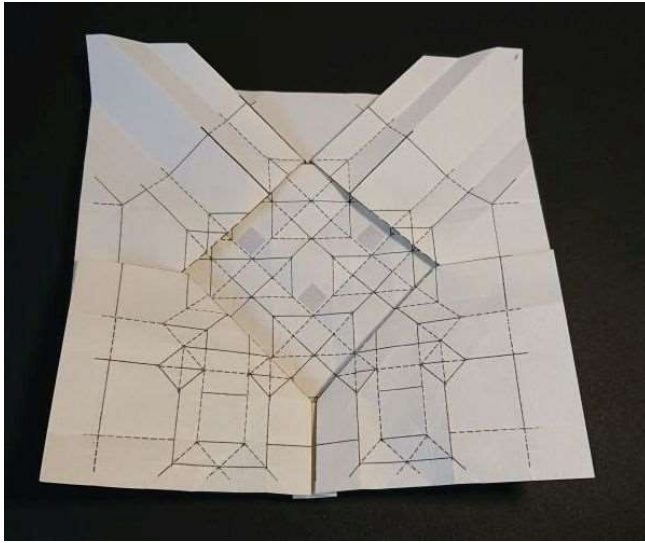


In the same manner, repeat the fold and unfold at cross points marked with the blue and red lines.

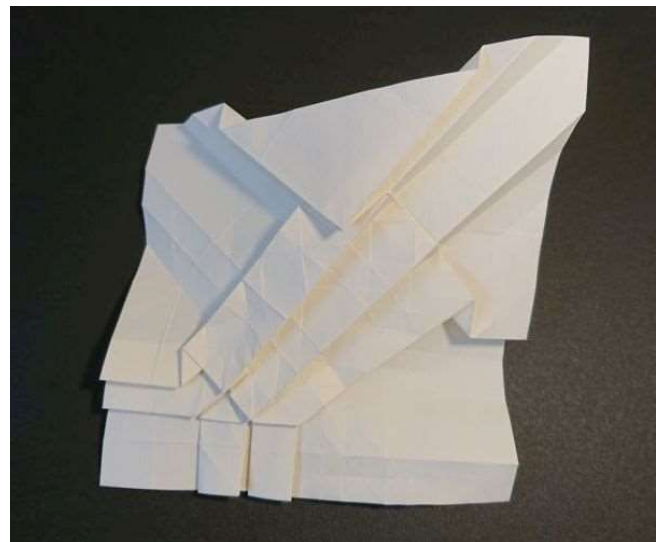
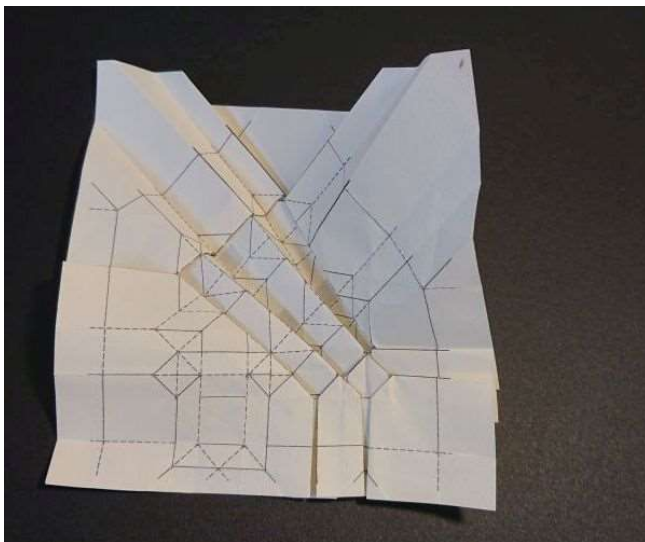


### 3. Fold according to crease lines

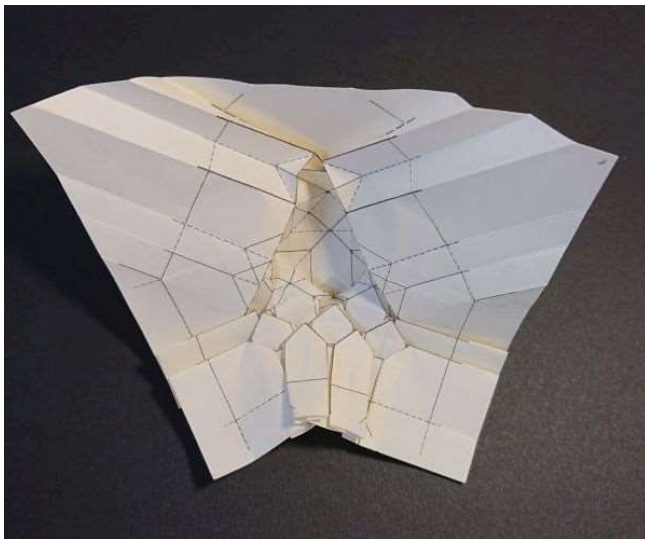
#### 3-1 Fold bold crease lines



#### 3-2 Shape right leg and scales 1 and 2.

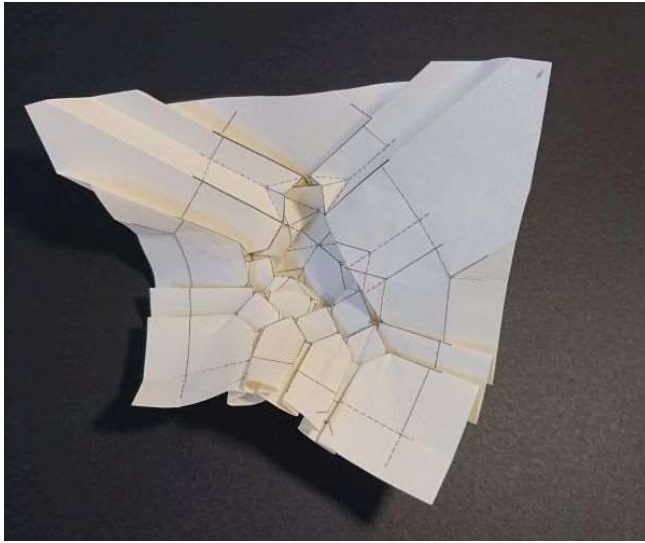


#### 3-3 Shape left leg and scales 3, 4, and 5.

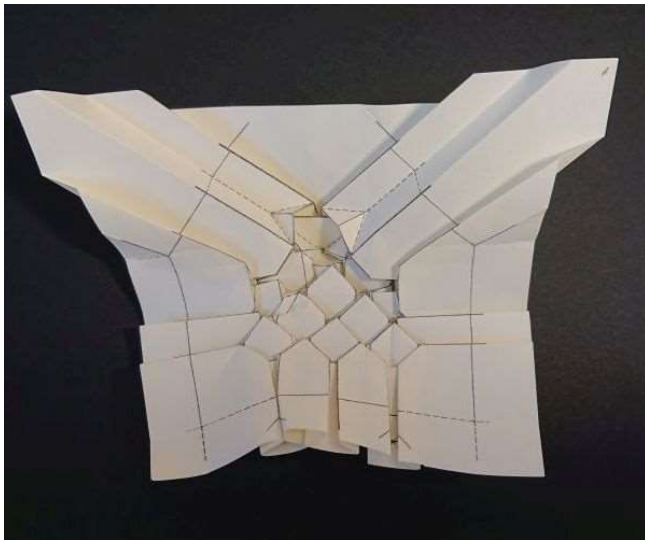




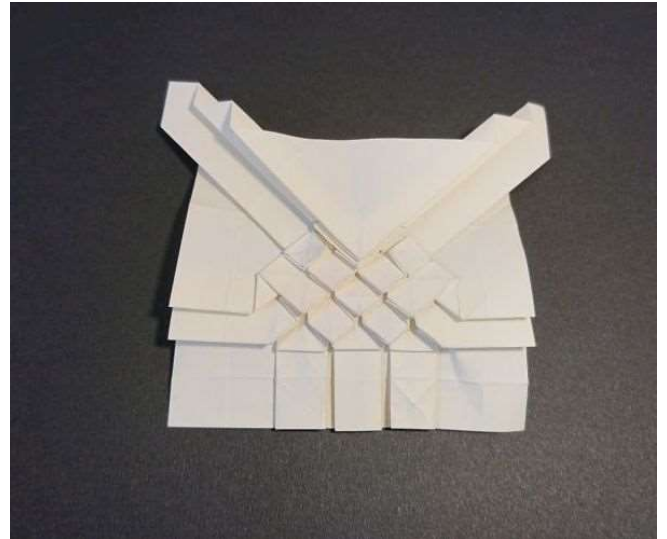
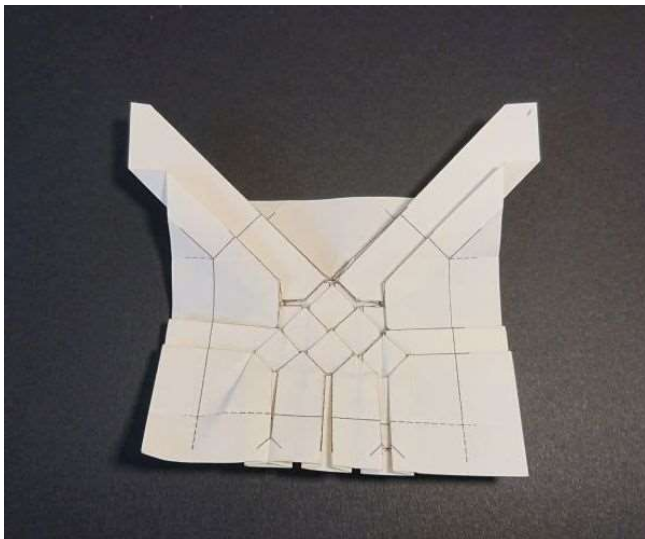
3-4 Shape scales 6 and 7.



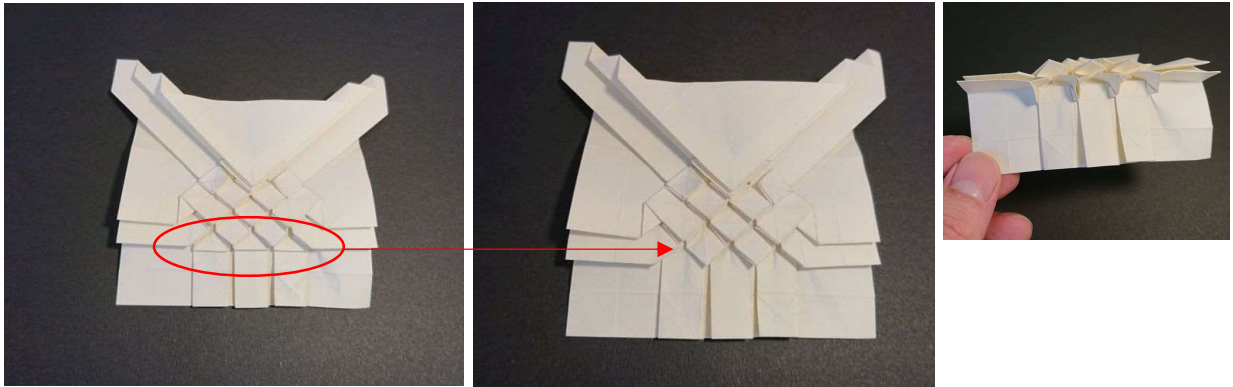
3-5 Shape scales 8 and 9.



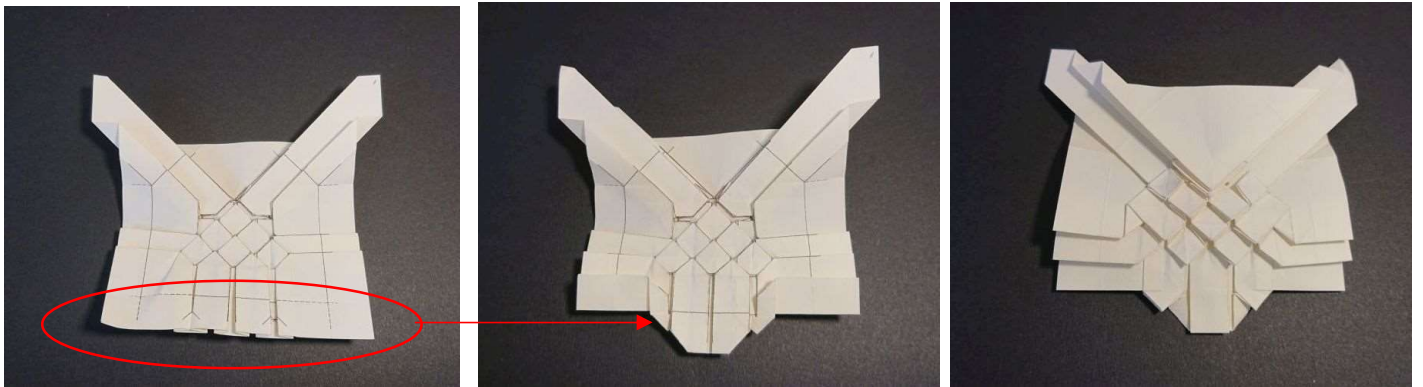
3-6 Adjust the whole and make it flat.



#### 4. Fold up flaps under bottom scales

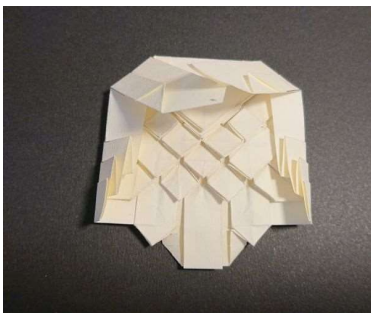


#### 5. Shape toes

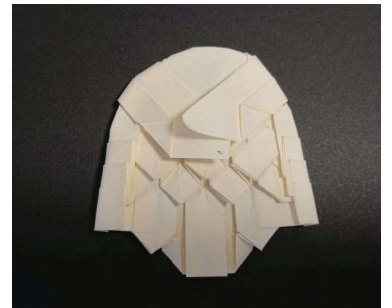
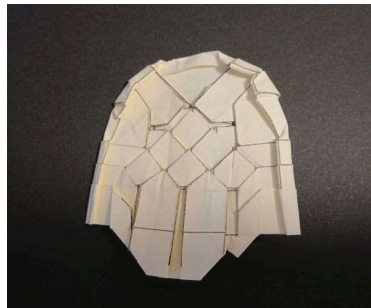


#### 6. Shape the model

6-1 Fold the top and side edges to the front.

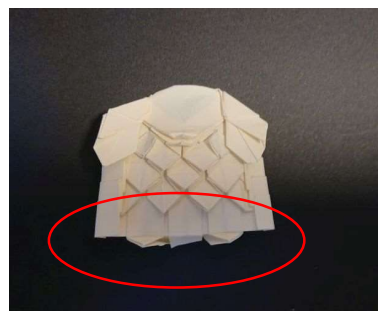
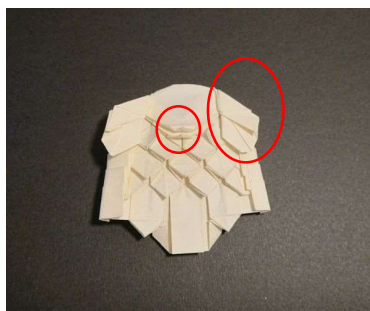
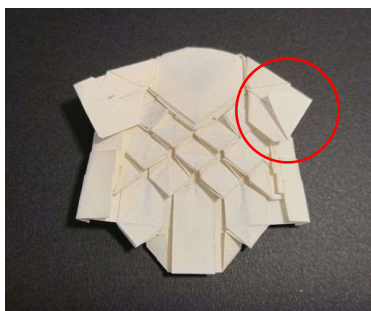


6-2 Fold the edges to the back to shape the model.



5-4 Shape toes and apply glue to stand alone.

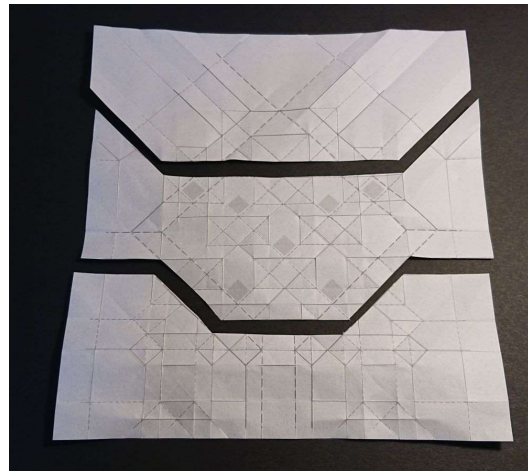
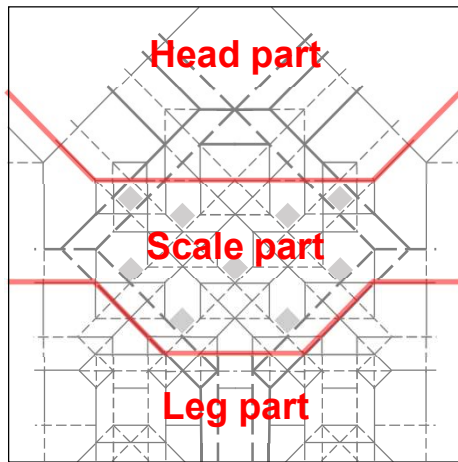
6-3 Shape hair and mouth.



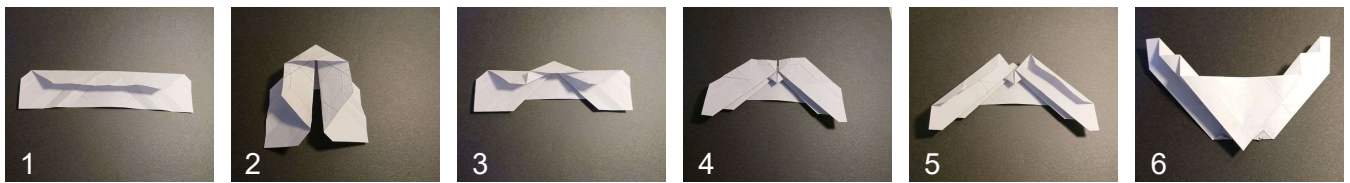


## 7. If you fail in the step 3

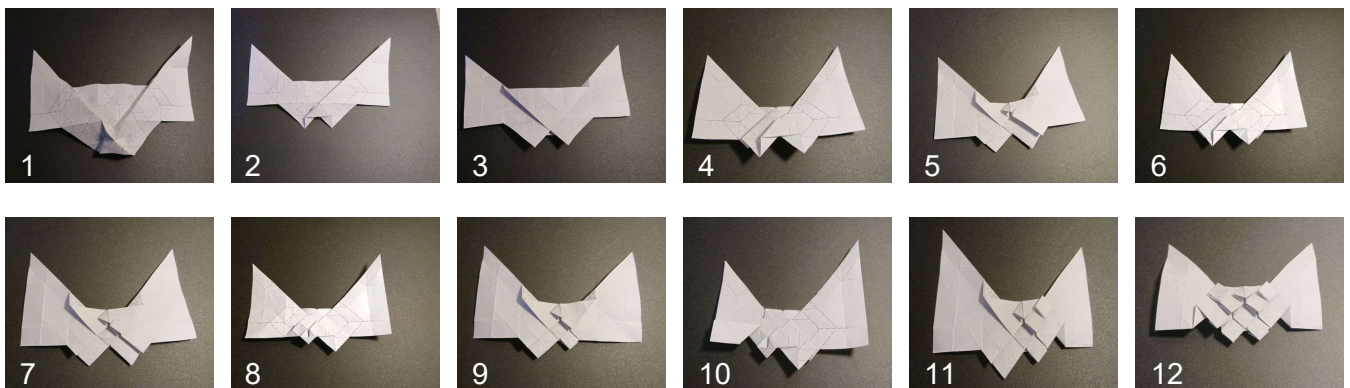
You should cut the sheet as follow and consider these fold processes, respectively.  
After that, try again without cutting sheet. The key to completing it lies in your spirit of continuous improvement for the development. Outgrow your limits!



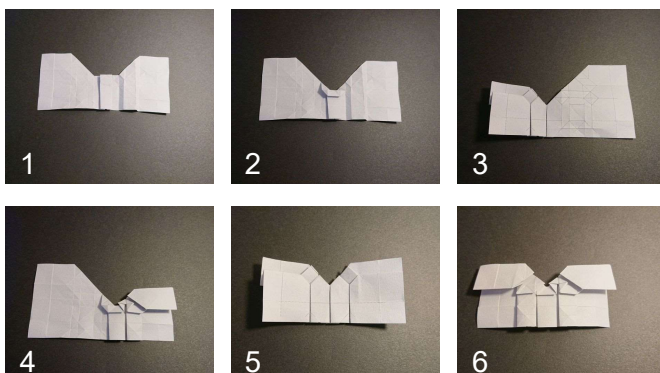
### 7-1 Head part



### 7-2 Scale part



### 7-3 Leg part



In these models, the three parts folded with sheets of different colors are joined.



## 8. Completed models

