

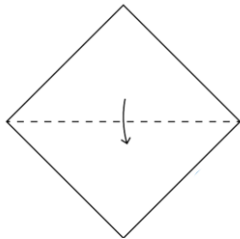
Fun with Paper Folding and Learning Math

By Zaman Alikhani

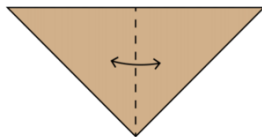
Grade Level: Elementary (Grades 3-6)

Core Concepts: Patterning, Geometry and Measurement, Spatial Relations

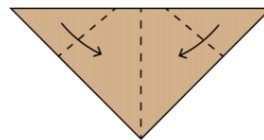
1. Dog Origami



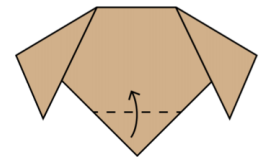
Fold in half



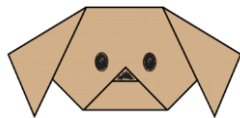
Fold in half to make a line and unfold.



Fold down the two corners to make the dog's ears



Fold up to form the nose.



Draw the eyes and shade the nose

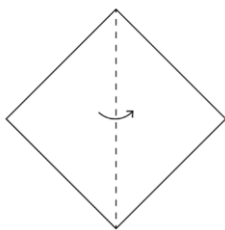
Questions:

1. What shape are the dog's ears and nose?
2. How many different shapes do you see?

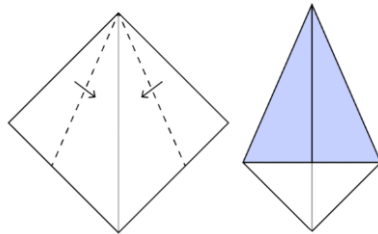
From:

<https://dreme.stanford.edu/news/math-paper-fold-some-math-your-day>

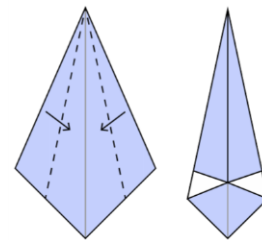
2. Swan Origami



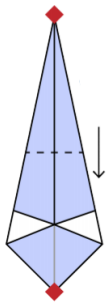
Fold in half.
Crease and unfold



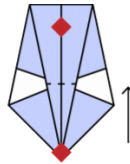
Fold by bringing the two edges to meet at the center.



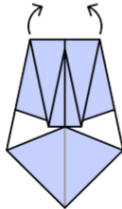
Flip over. Fold the long edges to meet at the center.



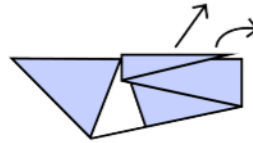
Fold by bringing the top point to the bottom point.



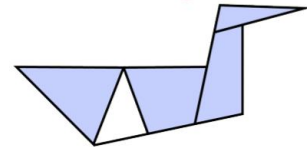
Fold the upper layer to form the head of the swan.



Press at the two edges so the center line moves up



Left the head and the neck up



Adjust the neck as you like.

Questions

1. What kind of triangles you see?
2. Every time you fold the shape and the two halves are the same, what do you think that is?

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3. Origami Box

Making an origami box is another simple paper folding activity. Such activities can help with visualizing some important mathematical concepts in geometry, algebra, calculus, and topology. It is interesting to unfold an origami object, such as a box, and look at the crease pattern.



An origami box and its crease pattern.

For step-by-step instructions on how to make an origami box, you may want to use the following link to a YouTube video: <https://www.youtube.com/watch?v=Cd5Z8hmcb10>