

3D Geometry

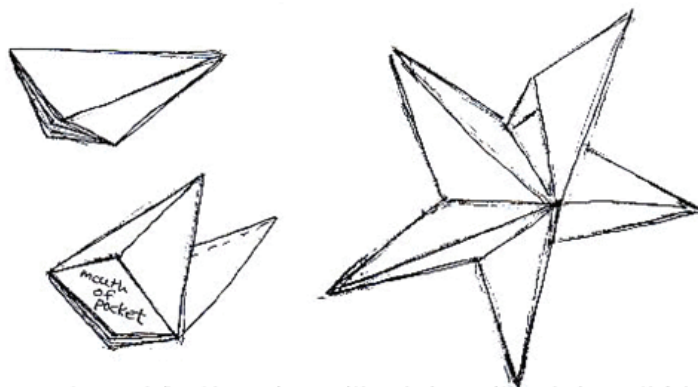
Activity 5 - Make a 3D Star

Origami is an ancient Japanese art of folding paper. The word origami comes from two Japanese words: “ori”, which means to fold, and “kami”, which means paper. There is a lot of geometry involved in creating a three-dimensional star through origami. You have to be aware of different angles, measurements, and figures.

For this activity, you will need the following: card stock, scissors, Scotch tape, a ruler and a protractor.

Activity Instructions:

1. Make five identical non-convex hexagons from card stock or poster board.
See the diagram on the following page to determine the number of degrees for each angle.
2. Fold along the dotted lines as shown. Be sure to make your creases sharp!
3. Each hexagon makes one point of the star.
4. Tape together the two longest sides.
5. Repeat this with the other four hexagons.
6. Next, tape one side of the mouth of a pocket to one side of the mouth of another pocket. Do this four times and you will have five pockets that fold flat. Open them like a fan, and be sure that each pocket fills with air. Now you have a five-pointed 3D star!

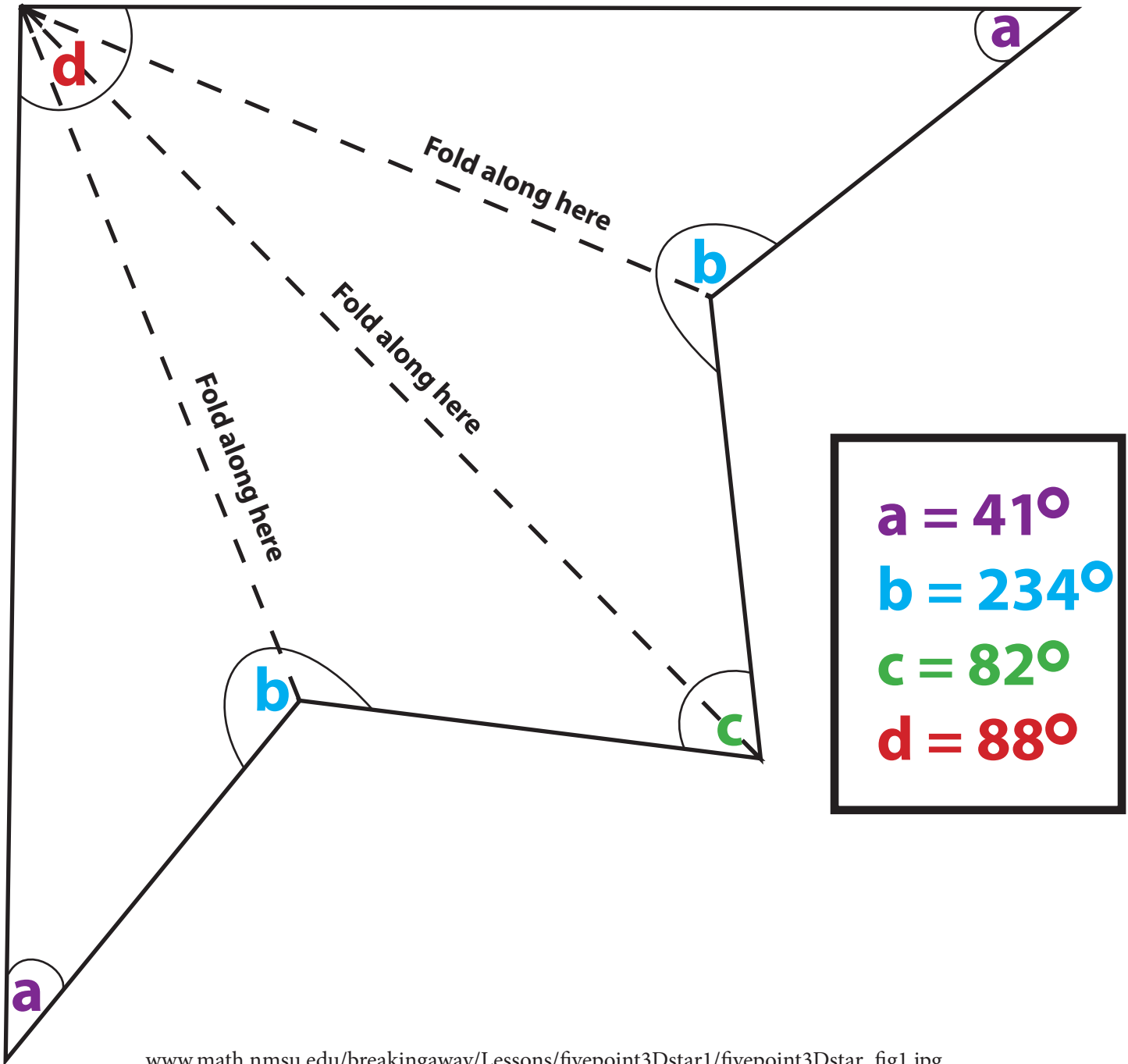


www.math.nmsu.edu/breakingaway/Lessons/fivepoint3Dstar1/fivepoint3Dstar_fig2.jpg

Can you believe THIS is math?

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Activity 5 - Make a 3D Star - *continued*



Can you believe THIS is math?