

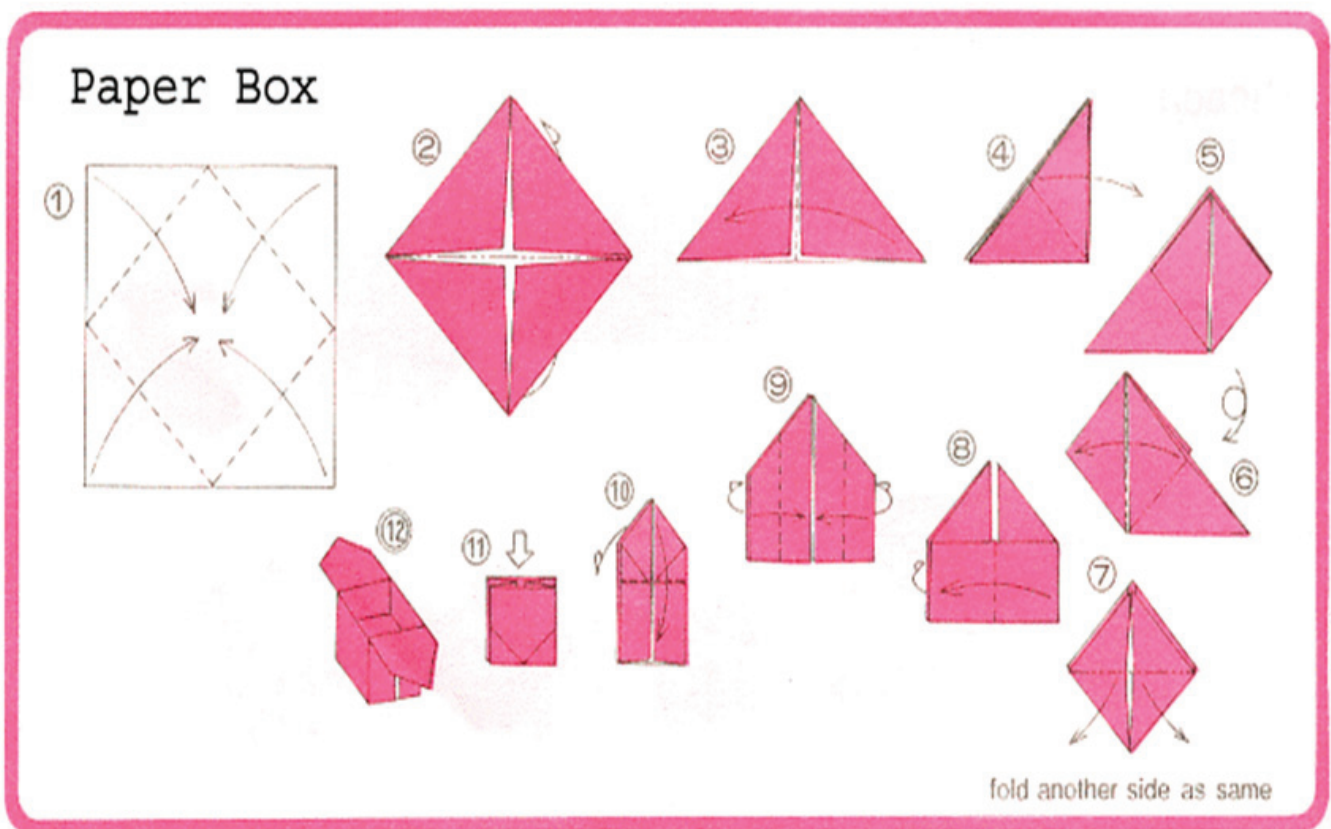
Origami

Activity 3 - Origami Box

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. Origami has become increasingly popular over the past few decades and has spread to North America, Europe and other places around the world.

For this activity you will need a square piece of paper. Use origami paper if you have it; but if not, note paper, construction paper or plain white paper would be fine too. There’s no gluing or cutting involved. All you have to do is follow the folding instructions carefully step by step, and you’ll have your box.

Instructions:



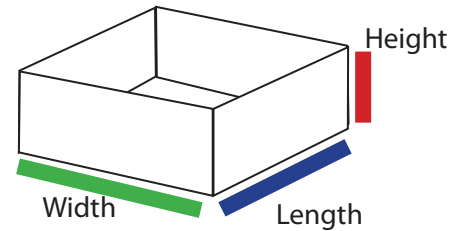
Can you believe THIS is math?

Origami

Activity 3 - Origami Box - *continued*

Activity Questions:

- Measure the length, width and height of your box. Record the measurements.
- What is the shape of the base of your box?
- What is the area of the base of your box? To find this, you need to multiply two of your measurements together: which ones are you going to use? Why?
- What is the area of each one of the four sides of your box? Which two measurements are you going to use to find the areas?
- What is the shape of each side of the box?
- Find the surface area of your box. To do this, add up the areas of the base and the four sides of your box.
- Find the volume of your box. Volume tells you how much room there is in your box, or how much it can hold. To find volume, multiply all three of your measurements together.



Further Ideas:

- Use different sizes of square paper to create more boxes. Measure the length, width and height for each box. For each box, calculate the surface area and volume. Compare your results and see how the size of the square paper affects the surface area and volume of the resulting box.
- You can compare the volumes by filling the boxes with something like rice so that you can see how much rice each box will hold. Compare these amounts with the size of the square paper you used to make each box.

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