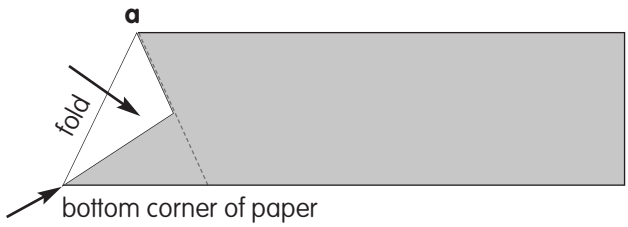
HOW TO MAKE A HEXA-HEXAFLEXAGON

1.

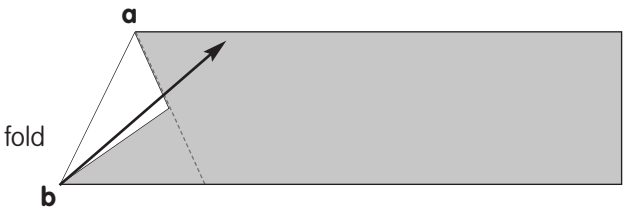
Use a strip of paper 4 cm x 45.5 cm (1.5" x 18"). Mark 2 cm in from one short end '**a**'.

2.



Make a diagonal fold to make a triangle. Start at the 2 cm mark '**a**'. This will be the **top** of your triangle. Line up '**a**' with the bottom corner of the paper and fold.

3.



Make a diagonal fold from '**b**' to the top of the long strip of paper. Line up '**ab**' along the edge of the top of the paper.

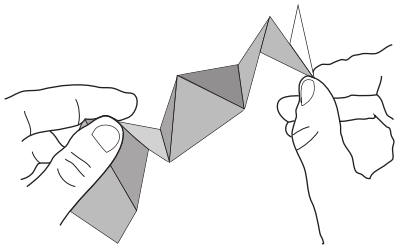
4.

You should have an equilateral triangle.

5.

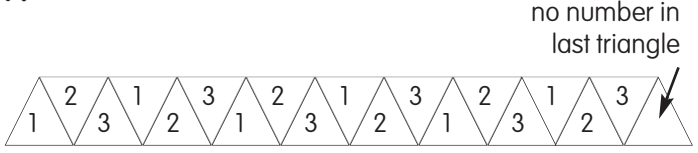
Open the paper and trim the extra paper off the end.

6.



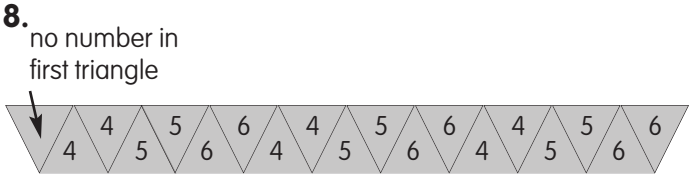
Accordion fold the triangles along the whole strip of paper. There should be 19 triangles. Trim the extra paper off the end.

7.



Place the paper so the first triangle is pointing up. Number it '**1**'. Continue numbering the triangles '**1**, **2**, **3**' as shown. Do not number the last triangle.

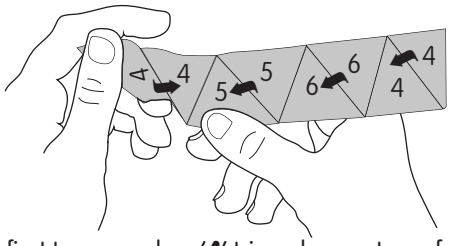
8.



Flip the paper over so the first triangle is pointing down. Do **not** number it. Number the next two triangles '**4**'. Continue numbering the triangles '**5**, **5**, **6**, **6**, **4**, **4**' as shown.

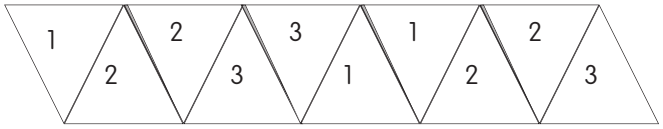
HOW TO MAKE A HEXA-HEXAFLEXAGON

9.



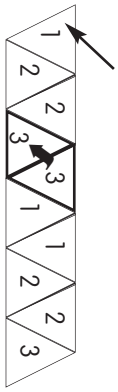
Fold the first two number '**4**' triangles on top of each other. Next fold the two number '**5**' triangles on top of each other. Continue along the strip folding all the pairs of numbers on top of each other. You will make a flat spiral.

10.



When you flip the paper over it should read **1**, **2**, **2**, **3**, **3**, **1**, **1**, **2**, **2**, **3**. This is side '**B'**.

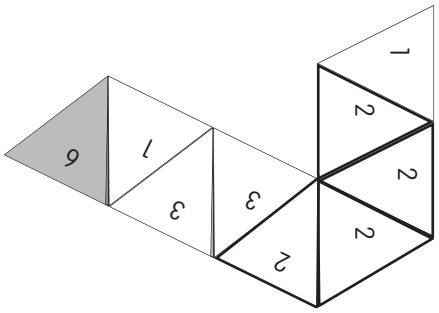
11.



Place the paper with side '**B**' facing up and '**1**' at the top.

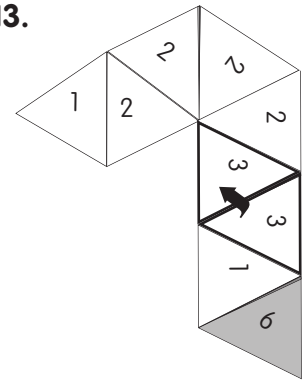
Fold the bottom number '**3**' triangle over and on top of the **top** number '**3**' triangle.

12.



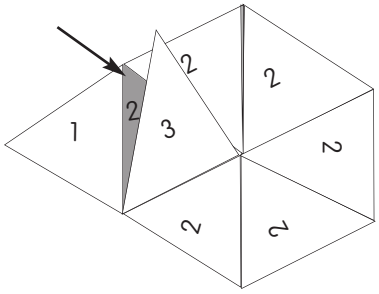
You should see four number '**2**' triangles.

13.



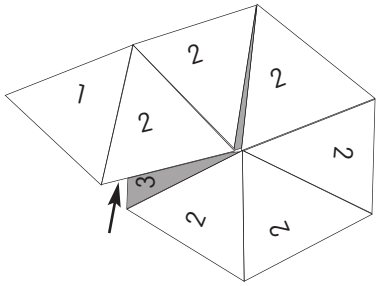
Rotate the paper so the number '**2**' triangles are at the top. Fold the bottom number '**3**' triangle over and on top of the **top** number '**3**' triangle.

14.



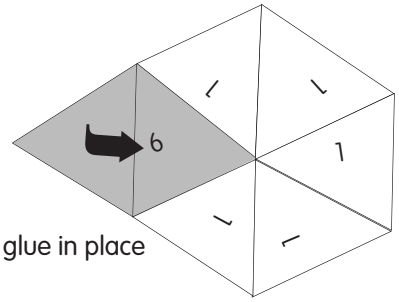
You should see five number '**2**' triangles. Another number '**2**' triangle is under the number '**3**' triangle.

15



Tuck the number '**3**' triangle under the number '**2**' triangle. You should see six number '**2**' triangles.

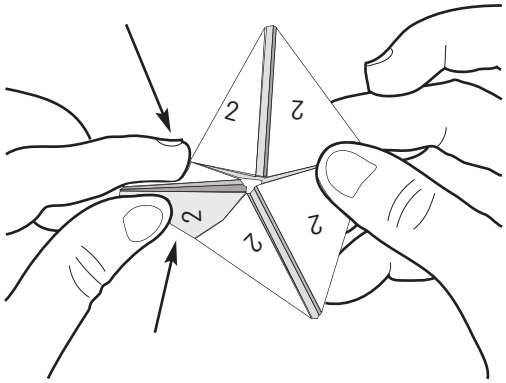
16.



Flip the paper over. Glue the blank triangle to the number '**6**' triangle. You should see six number '**1**' triangles.

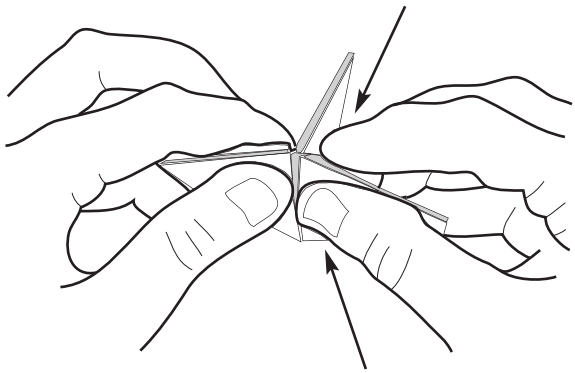
HOW TO FLEX A HEXA-HEXAFLEXAGON

17.



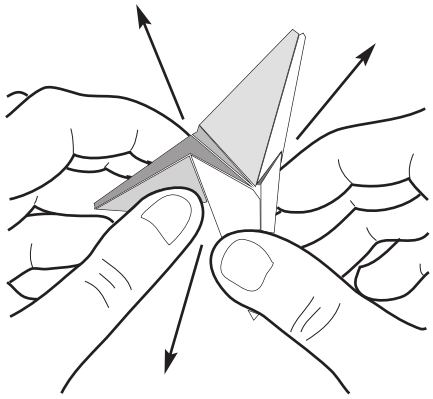
Start with the number '**2**' triangles facing you. Pinch two triangles together along one of the edges.

18.



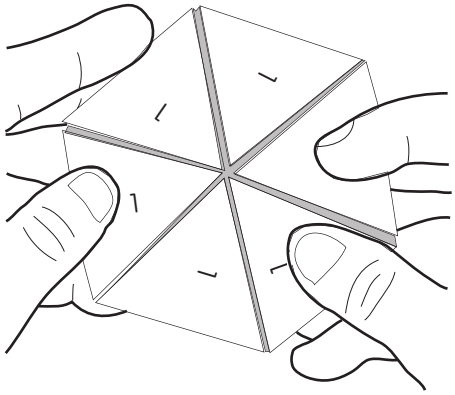
Pinch the triangles on the opposite sides together.

19.



Pull the centre of the triangles out to open them to a new face of the hexa-hexaflexagon.

20.



Continue to pinch and flex different sides together until you have shown all the faces of the hexa-hexaflexagon. Some will come up more often than others.