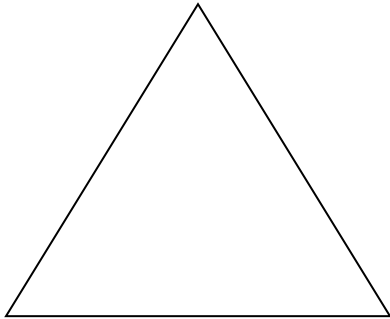
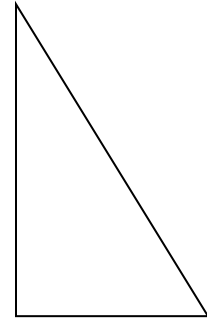


# Math Circle - Symmetries

1. Cut out an equilateral triangle.



Fold it to get this

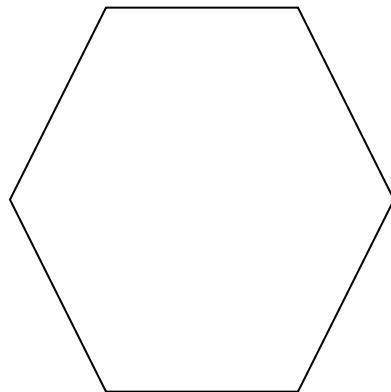


Unfold it. Notice that the equilateral triangle is symmetric with respect to the line where you folded.

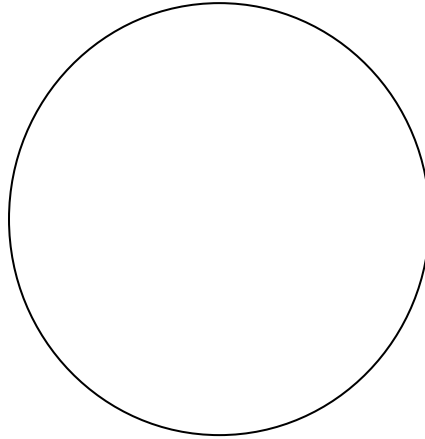
Fold the same triangle to find other lines of symmetry. Draw them in the figure above.

2. Cut out the square and fold to find all lines of symmetry. How many different lines of symmetry are there? Draw the square and its lines of symmetry here:

3. Cut out the hexagon and fold to find all lines of symmetry. How many can you find? Draw them here:



4. How many lines of symmetry does a circle have?



5. Draw the symmetry lines for the following letters:

**A B D E**

**H I S W**

**Homework:** (Draw the lines)

Show a letter with 0 symmetry lines:

Show a letter with 1 symmetry line:

Show a letter with 2 symmetry lines:

Show a letter with 4 symmetry lines:

Show a letter with **more than 4**  
symmetry lines:

## **Homework: (Rotational Symmetry)**

Take the hexagon, how can you move the hexagon so that it falls onto itself? Can you find the angle(s) needed for this rotation?

