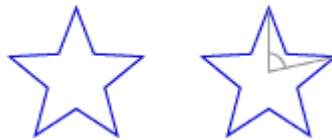


Name: _____ Date: _____

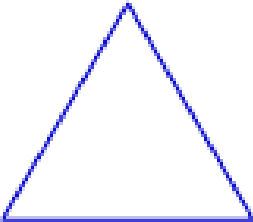
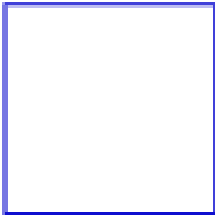
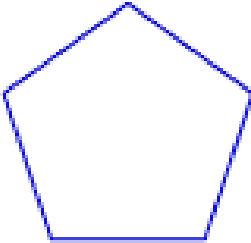
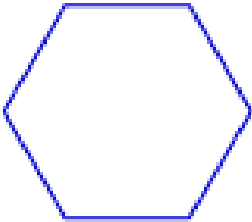
Rotational Symmetry

If you can rotate (or turn) a figure around a center point by fewer than 360° and the figure appears unchanged, then the figure has **rotational symmetry**. The point around which you rotate is called the center of rotation, and the smallest angle you need to turn is called the angle of rotation.

This figure has rotational symmetry of 72° , and the center of rotation is the center of the figure:

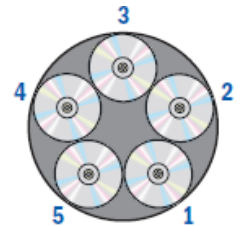


Do the regular polygons have rotational symmetry? For each polygon, what are the center and angle of rotation?

			
Equilateral Triangle	Square	Regular Pentagon	Regular Hexagon

CD Player: Your CD player can hold five compact discs on a rotating tray like the one shown.

a. Does the tray have rotational symmetry? Explain.

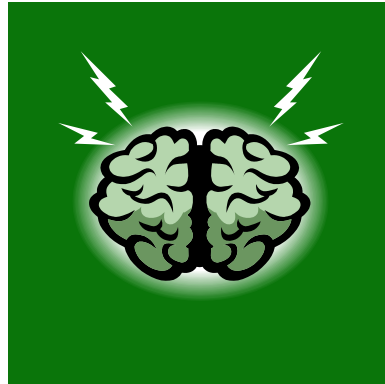


b. The tray can move only clockwise. A CD in position 1 is currently playing. How many degrees must the tray rotate to play a CD in position 3?

Symmetry on the BRAIN

I've divided the alphabet into five categories as shown below.

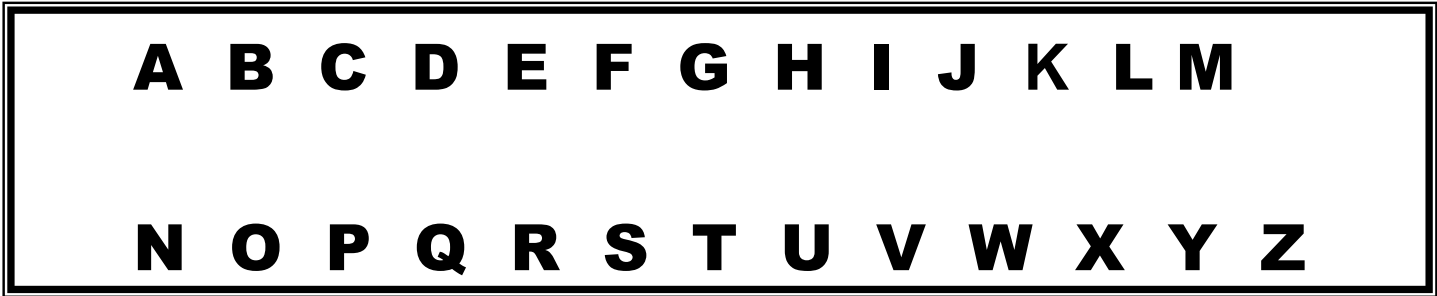
- (1) S Z
- (2) M T U V W Y
- (3) C D E K
- (4) H O X
- (5) F G J L P Q



- Can you identify the category to which each letter of the word **BRAIN** belongs?
- Write a sentence or two to explain your choice.

Find other five letter words whose letters each belong in different categories.

The Symmetry of Language



Look at the letters above. All 26 letters of the alphabet are included.

1. The letter **M** has vertical symmetry. List all other letters that have vertical symmetry.
2. The letter **E** has horizontal symmetry. List all other letters that have horizontal symmetry.
3. What letters have both types of symmetry?

4. The word **V
O
M
I
T** has vertical symmetry when written top to bottom.

List some other words that have this property.

5. The word **W O W** has vertical symmetry when written left to right.

List some other words or names that have this property.