

SLO: I can identify symmetry in a line and rotational symmetry. Problems worthy of attack prove their worth by fighting back. —Piet Hein THE ROAD TO

WISDOM? Well, it's plain and simple to express. Err and err and err again, but less and less and less. — Piet Hein.

VOCABULARY (have your vocabulary sheet out EVERY day)

(1) TO DO: Use the links on my website to define and illustrate the following terms on the vocabulary sheet. If you do not have access to the website, use a geometry textbook (glossary and index) to define and illustrate them. (symmetry link <http://www.ms.uky.edu/~lee/ma111fa09/slides11.pdf>)

Symmetry

Line Symmetry

Rotational Symmetry

(2) TO DO: For each letter of the alphabet:

a) Draw all lines of symmetry (reflection). You may use tracing paper or a translucent mirror to help you.

A B C D E

F G H I J K

L M N O P

Q R S T U

V W X Y Z

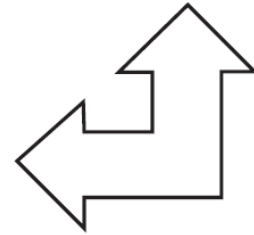
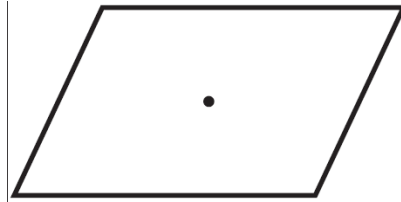
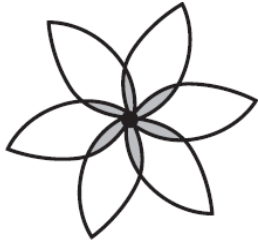
b) Look at each letter of the alphabet again. Find letters with rotational symmetry, write the number of positions the letter can be in and still look identical to the original position (count the original position). (1 means ONLY the original position will look identical to itself.)

c) Look at the letters that have rotational symmetry. If a letter has lines up with itself in 2 positions, how many degrees would you rotate the letter so that it would line up exactly with the original letter (preimage)?

SLO: I can identify symmetry in a line and rotational symmetry. Problems worthy of attack prove their worth by fighting back. —Piet Hein THE ROAD TO

WISDOM? Well, it's plain and simple to express. Err and err and err again, but less and less and less. — Piet Hein.

d) Determine whether or not each shape has line symmetry (reflection), rotational symmetry or both. Draw in lines of reflection and number of rotations.



TO READ AND DO: Line symmetry involves a flip or **reflection**. Rotational symmetry involves a rotation or turn. Instead of looking for symmetry, you can also just reflect (flip) or rotate (turn) a shape. You can also translate (slide) or dilate (enlarge or reduce) a shape. For the each pair of shapes, determine whether the shaded figure is a translation, reflection, rotation, or dilation of the empty shape.
