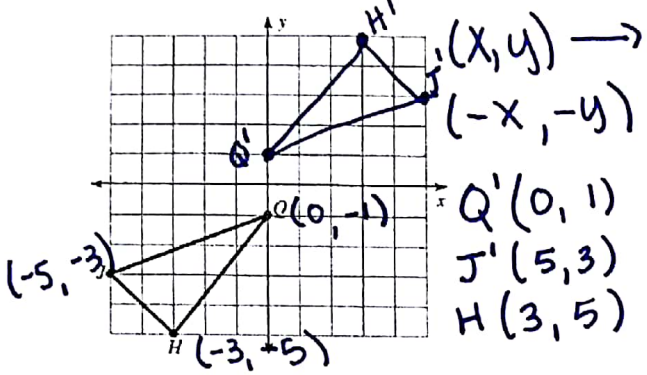
Day 4 Rotations Hw

Graph the image of the figure using the transformation given write the algebraic rule.

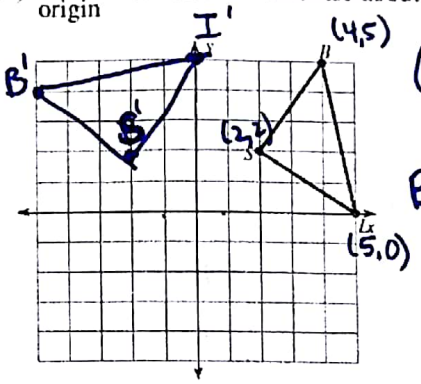
1) rotation 180° about the origin




$(x, y) \rightarrow (-x, -y)$

$Q'(0, 1)$
$J'(5, 3)$
$H(3, 5)$

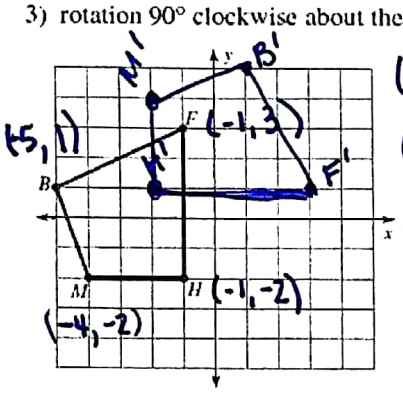
2) rotation 90° counterclockwise about the origin




$(x, y) \rightarrow (-y, x)$

$B'(-5, 4)$
$S'(-2, 2)$
$I'(0, 5)$

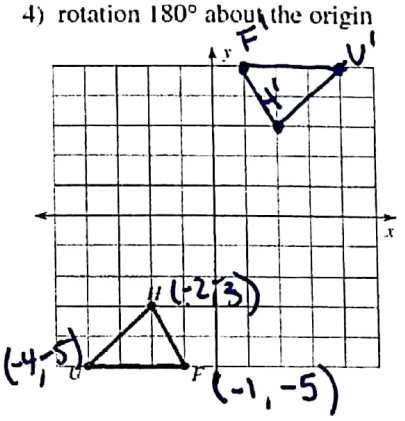
3) rotation 90° clockwise about the origin




$(x, y) \rightarrow (y, -x)$

$F'(3, 1)$
$B'(1, 5)$
$H'(-2, 1)$
$M'(-2, 4)$

4) rotation 180° about the origin

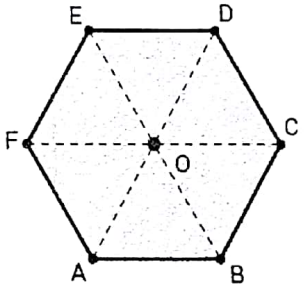



$(x, y) \rightarrow (-x, -y)$

$H'(2, 3)$
$U'(4, 5)$
$F'(1, 5)$

*Remember: A regular polygon is a polygon that is equiangular (all angles are equal in measure) and equilateral (all sides have the same length). In the case of regular polygons the center is the point that is equidistant from each vertex.*

Given regular hexagon ABCDEF with center O,




a. C is rotated 60° about O, what is the image of C? D

b. C is rotated 120° about O, what is the image of C? E

c. C is rotated 180° about O, what is the image of C? F

d. $\overline{DC}$ is rotated 240° about O, what is the image of $\overline{DC}$? $\overline{AB}$

e. Explain the significance of the multiples of 60°.

General Rule: The regular hexagon has rotation symmetry with respect to the center of the polygon and angles of rotation that measure 60, 120, 180, 240, 300 and 360