

Geometry Notes
Rotations

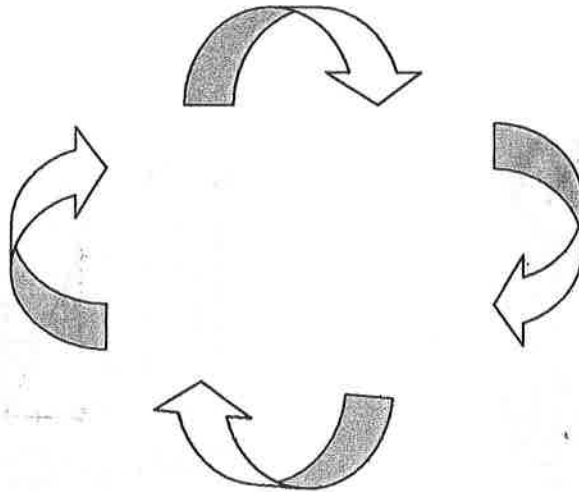
Name: _____

Date: _____

*Rotation: a transformation that turns a figure through an angle about a fixed point (the origin).

0° & 360°
CW & counter CW
(x, y)

270° clockwise
90° counter CW
(-y, x)

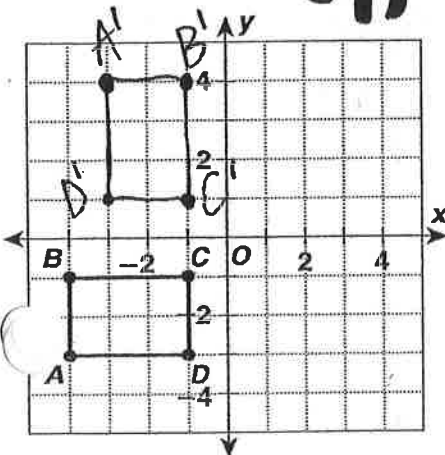


90° clockwise
270° counter CW
(y, -x)

180° clockwise
180° counter CW
(-x, -y)

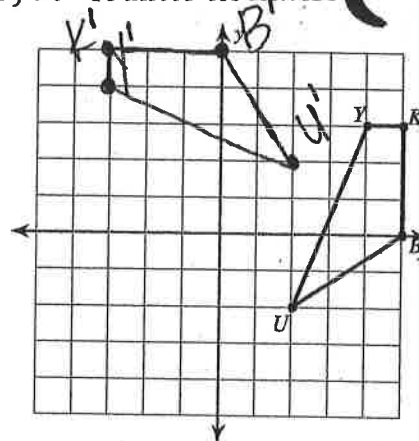
Ex1: Rotate each polygon about the origin.

A) 90° Clockwise **(y, -x)**



A	A'
(-4, -3)	(-3, 4)
B	B'
(-4, -1)	(-1, 4)
C	C'
(-1, -1)	(-1, 1)
D	D'
(-1, -3)	(-3, 1)

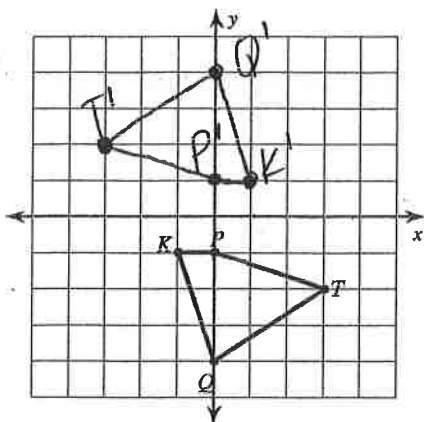
B) 90° Counter clockwise **(-y, x)**



V(4, 3)	V'(-3, 4)
W(5, 3)	W'(-3, 5)
X(5, 0)	X'(0, 5)
U(2, -2)	U'(2, 2)

C) 180° Clockwise/Counter clockwise (same rotation!)

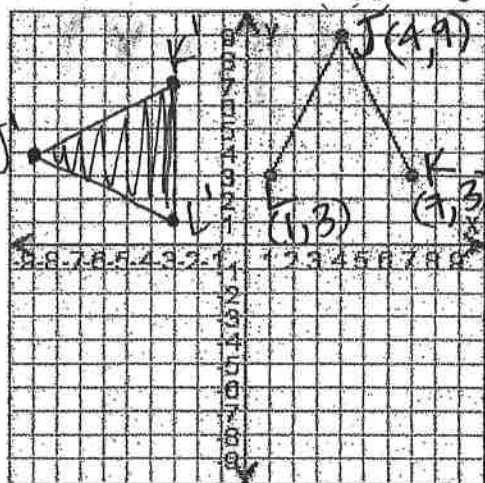
$(-x, -y)$



$K(-1, -1)$	$K'(1, 1)$
$P(0, -1)$	$P'(0, 1)$
$T(3, -2)$	$T'(-3, 2)$
$Q(0, -4)$	$Q'(0, 4)$

D) 270° Clockwise

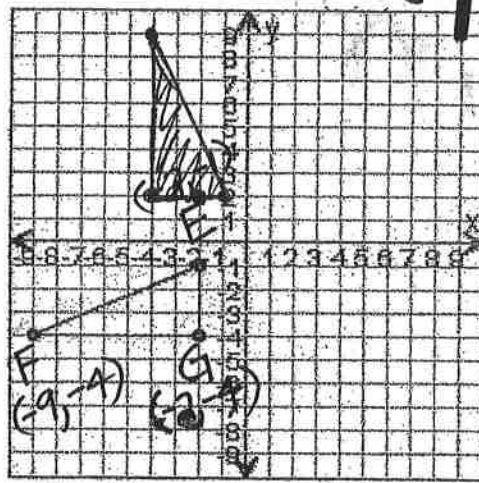
$(-y, x)$



J	$(4, 9)$	$(-9, 4)$
K	$(7, 3)$	$(-3, 7)$
L	$(1, 3)$	$(-3, 1)$

E) 270° Counter clockwise

$(y, -x)$



E	$(-2, -1)$	$(-1, 2)$
F	$(-9, -4)$	$(-4, 9)$
G	$(-2, -4)$	$(-4, 2)$