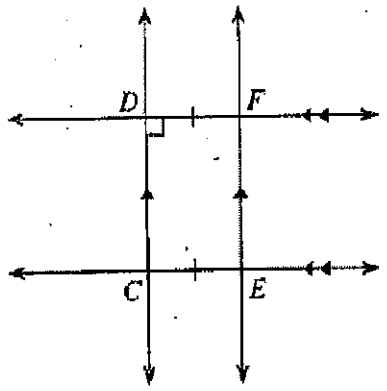
More Rotation Practice Name: Key

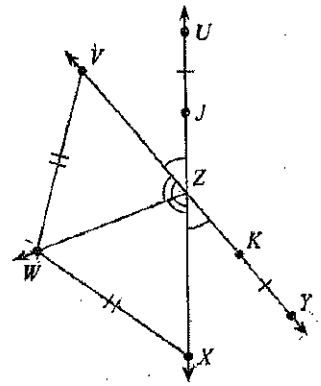
Give four Geometric notations for each figure below.

1.



1. $\overline{DF} \cong \overline{CE}$
2. $\overleftrightarrow{DC} \parallel \overleftrightarrow{FE}$
3. $\overleftrightarrow{EC} \parallel \overleftrightarrow{FD}$
4. $\overleftrightarrow{CD} \perp \overleftrightarrow{FD}$

2.



1. $\overline{UZ} \cong \overline{YZ}$
2. $\angle YZX \cong \angle UZV$
3. $\angle VZW \cong \angle XZW$
4. $\overline{VW} \cong \overline{XW}$

3. Which of the following is not an isometry? (Circle it)

Translation Rotation (Dilation) Reflection

Record the new vertices after each transformation.

4. rotation 90° clockwise about the origin
$L(0, -3), K(-1, 0), J(2, 0), I(3, -5)$

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

$L'(-3, 0)$ $K'(0, 1)$ $J'(0, -2)$ $I'(-5, -3)$

5. rotation 180° about the origin
$T(-3, -3), U(-3, -2), V(-1, 0), W(2, -4)$

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

$T'(3, 3)$ $U'(3, 2)$ $V'(1, 0)$ $W'(-2, 4)$

6. rotation 90° counterclockwise about the origin
$W(-1, -1), V(-4, 3), U(1, 5), T(3, 0)$

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

$W'(1, -1)$ $V'(-3, 4)$ $U'(-5, 1)$ $T'(0, 3)$

7. **Rotation 270 about the origin** CW
$C(-2, 0), D(-2, 3), E(3, 1)$

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

$C'(0, 2)$ $D'(3, 2)$ $E'(1, -3)$

Determine the rule for the following transformations.

8. $B(-5, -1), C(-4, 1), D(0, 1), E(0, -3)$
to
$B'(-1, 5), C'(1, 4), D'(1, 0), E'(-3, 0)$

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

90° clockwise Rotation

9. $Q(-3, -3), R(-1, 2), S(1, 0)$
to
$Q'(3, -3), R'(-2, -1), S'(0, 1)$

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

90° counterclockwise Rotation