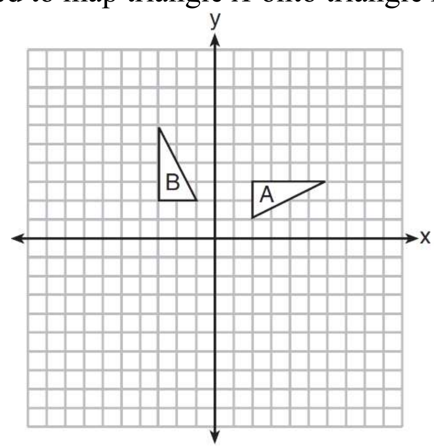
Name____________________ Date____________
Mr. Schlansky Geometry

Identifying Transformations

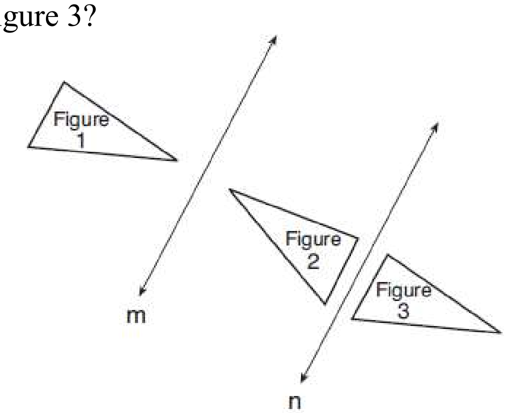
1. In the diagram below, which single transformation was used to map triangle *A* onto triangle *B*?



1) line reflection
2) rotation
3) dilation
4) translation

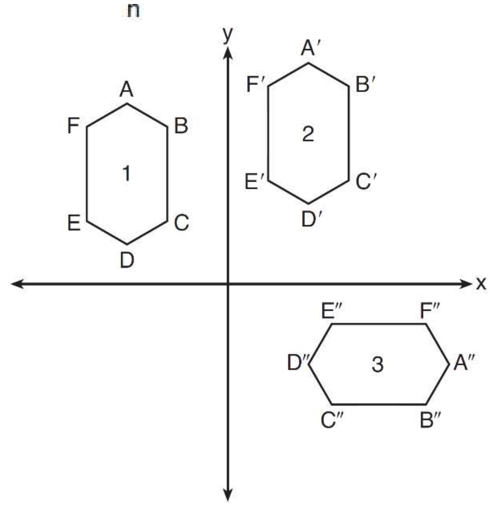
2. In the diagram below, line *m* is parallel to line *n*. Figure 2 is the image of Figure 1 after a reflection over line *m*. Figure 3 is the image of Figure 2 after a reflection over line *n*. Which single transformation would carry Figure 1 onto Figure 3?

1) a dilation
2) a rotation
3) a reflection
4) a translation



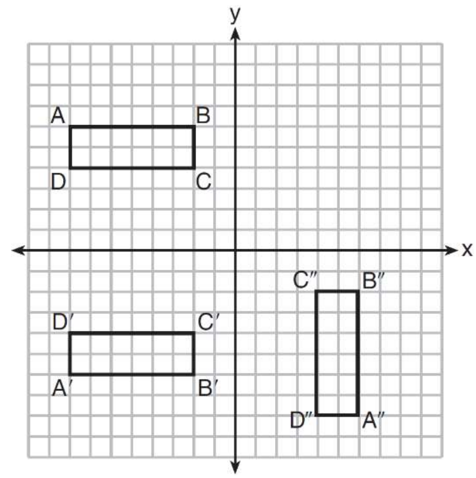
3. In the diagram below, congruent figures 1, 2, and 3 are drawn.
Which sequence of transformations maps figure 1 onto figure 2 and then figure 2 onto figure 3?

1) a reflection followed by a translation
2) a rotation followed by a translation
3) a translation followed by a reflection
4) a translation followed by a rotation



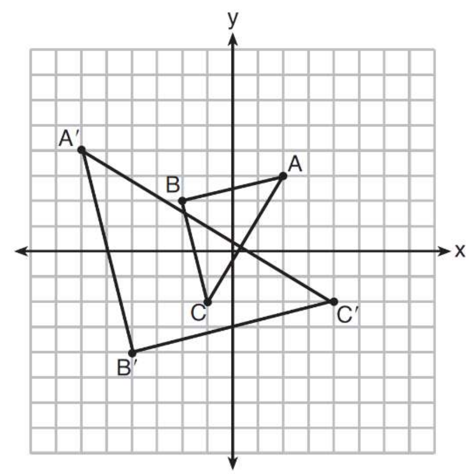
4. A sequence of transformations maps rectangle *ABCD* onto rectangle *A"B"C"D"*, as shown in the diagram below.
Which sequence of transformations maps *ABCD* onto *A'B'C'D'* and then maps *A'B'C'D'* onto *A"B"C"D"*?

1) a reflection followed by a rotation
2) a reflection followed by a translation
3) a translation followed by a rotation
4) a translation followed by a reflection

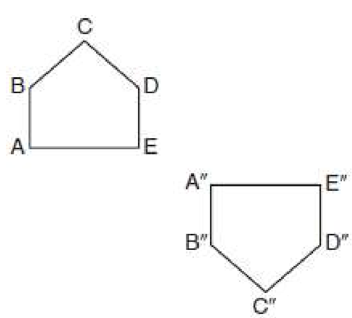


5. Which sequence of transformations will map $\triangle ABC$ onto $\triangle A'B'C'$?

1) reflection and translation
2) rotation and reflection
3) translation and dilation
4) dilation and rotation



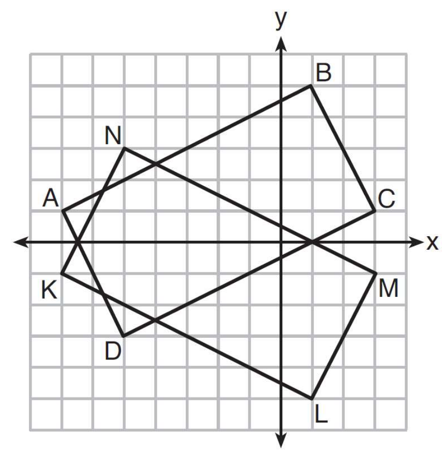
6. Identify which sequence of transformations could map pentagon *ABCDE* onto pentagon *A"B"C"D"E"*, as shown below.



1) dilation followed by a rotation
2) translation followed by a rotation
3) line reflection followed by a translation
4) line reflection followed by a line reflection

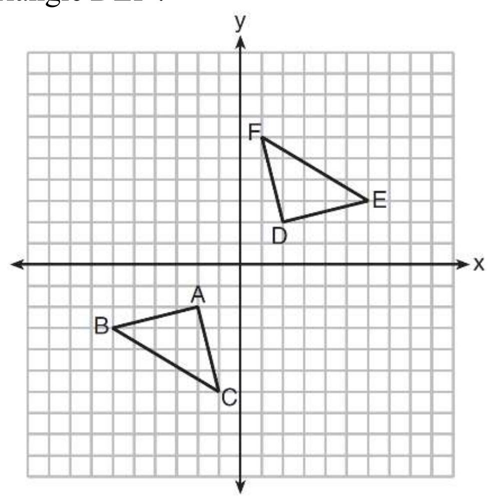
7. On the set of axes below, rectangle *ABCD* can be proven congruent to rectangle *KLMN* using which transformation?

1) rotation
2) translation
3) reflection over the *x*-axis
4) reflection over the *y*-axis



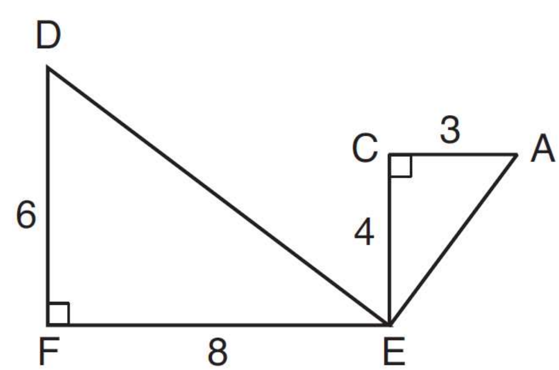
8. Triangle *ABC* and triangle *DEF* are graphed on the set of axes below.
Which sequence of transformations maps triangle *ABC* onto triangle *DEF*?

1) a reflection over the *x*-axis followed by a reflection over the *y*-axis
2) a 180° rotation about the origin followed by a reflection over the line $y = x$
3) a 90° clockwise rotation about the origin followed by a reflection over the *y*-axis
4) a translation 8 units to the right and 1 unit up followed by a 90° counterclockwise rotation about the origin

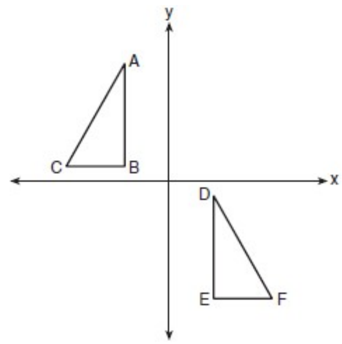


9. Given: $\triangle AEC$, $\triangle DEF$, and $\overline{FE} \perp \overline{CE}$
What is a correct sequence of similarity transformations that shows $\triangle AEC \sim \triangle DEF$?

1) a rotation of 180 degrees about point *E* followed by a horizontal translation
2) a counterclockwise rotation of 90 degrees about point *E* followed by a horizontal translation
3) a rotation of 180 degrees about point *E* followed by a dilation with a scale factor of 2 centered at point *E*
4) a counterclockwise rotation of 90 degrees about point *E* followed by a dilation with a scale factor of 2 centered at point *E*



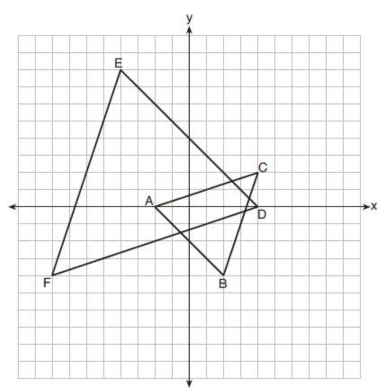
10. In the diagram below, $\triangle ABC \cong \triangle DEF$.



Which sequence of transformations maps $\triangle ABC$ onto $\triangle DEF$?

1) a reflection over the x-axis followed by a translation
2) a reflection over the y-axis followed by a translation
3) a rotation of 180° about the origin followed by a translation
4) a counterclockwise rotation of 90° about the origin followed by a translation

11. On the set of axes below, $\triangle ABC$ has vertices at $A(-2,0)$, $B(2,-4)$, $C(4,2)$, and $\triangle DEF$ has vertices at $D(4,0)$, $E(-4,8)$, $F(-8,-4)$.



Which sequence of transformations will map $\triangle ABC$ onto $\triangle DEF$?

1) a dilation of $\triangle ABC$ by a scale factor of 2 centered at point A
2) a dilation of $\triangle ABC$ by a scale factor of $\frac{1}{2}$ centered at point A
3) a dilation of $\triangle ABC$ by a scale factor of 2 centered at the origin, followed by a rotation of 180° about the origin
4) a dilation of $\triangle ABC$ by a scale factor of $\frac{1}{2}$ centered at the origin, followed by a rotation of 180° about the origin