

check for orientation

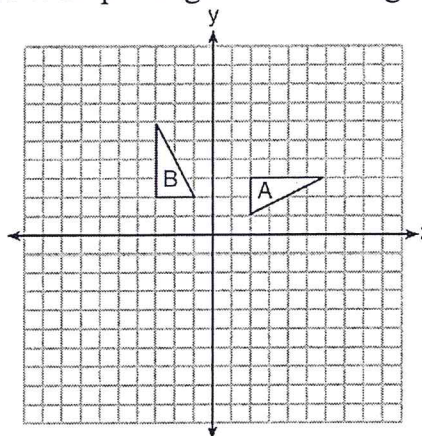
Name Schlansky
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Date _____
Geometry

Identifying Transformations

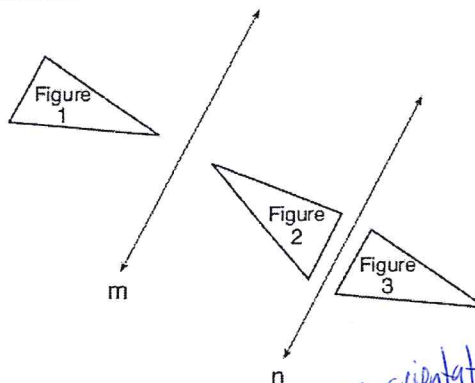
1. In the diagram below, which single transformation was used to map triangle A onto triangle B ?

- 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?

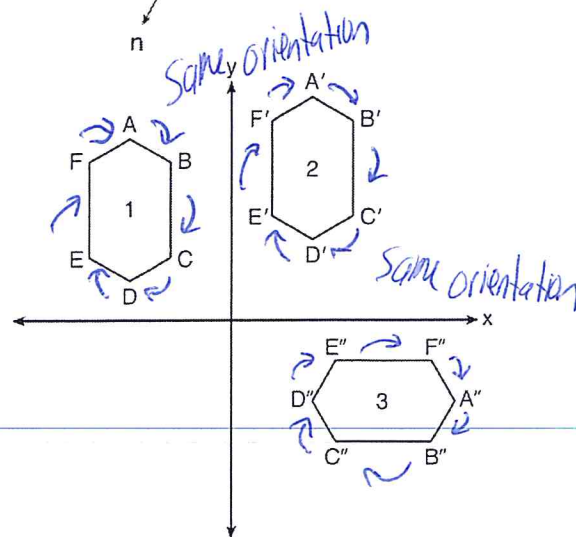
- 1) a dilation
- 2) a rotation
- 3) a reflection
- 4) a translation



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?

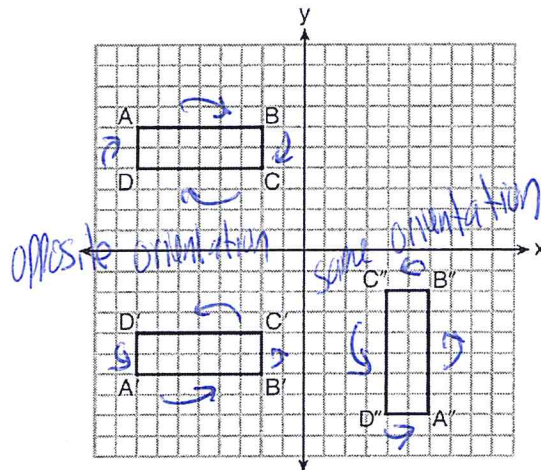
- 1) a reflection followed by a translation
- 2) a rotation followed by a translation
- 3) a translation followed by a reflection
- 4) a translation followed by a rotation



4. A sequence of transformations maps rectangle $ABCD$ onto rectangle $A''B''C''D''$, as shown in the diagram below.

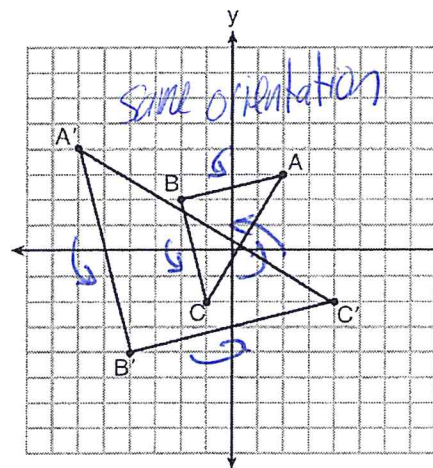
Which sequence of transformations maps $ABCD$ onto $A'B'C'D'$ and then maps $A'B'C'D'$ onto $A''B''C''D''$?

- 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

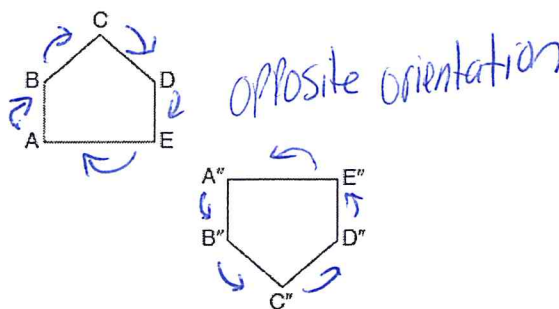


5. Which sequence of transformations will map $\triangle ABC$ onto $\triangle A'B'C'$?

- 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.

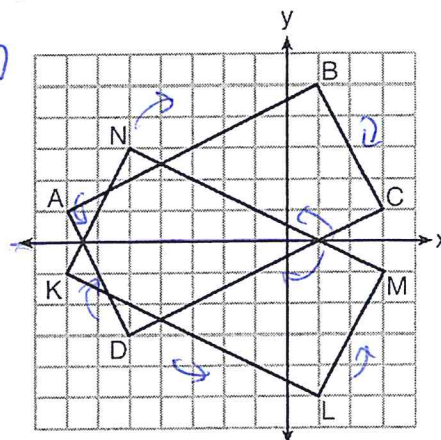


- 1) dilation followed by a rotation
- 2) translation followed by a rotation *no reflection*
- 3) line reflection followed by a translation
- 4) line reflection followed by a line reflection

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

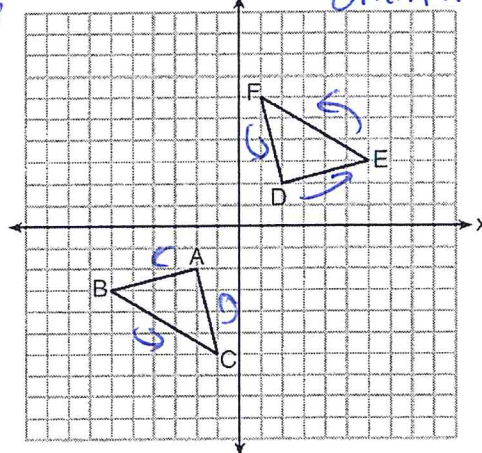
opposite orientation



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 reflections preserves orientation*
- 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

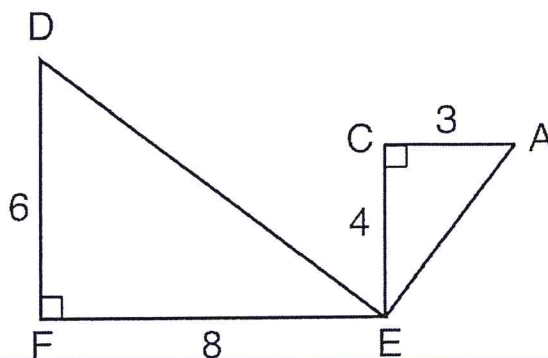
same orientation



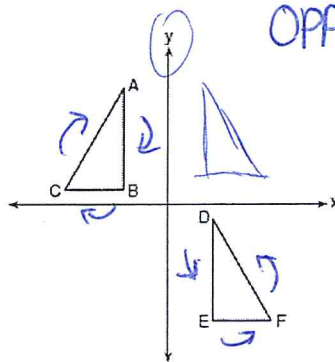
9. Given: $\triangle AEC$, $\triangle DEF$, and $\overline{FE} \perp \overline{CE}$

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 $D(4, 0)$, $E(-4, 8)$, $F(-8, -4)$.

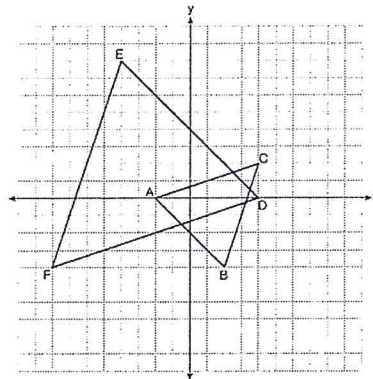


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Which sequence of transformations will map $\triangle ABC$ onto $\triangle DEF$?

- 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