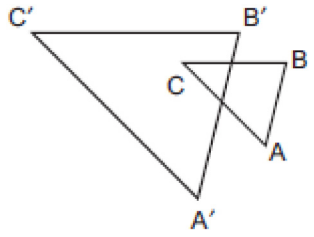
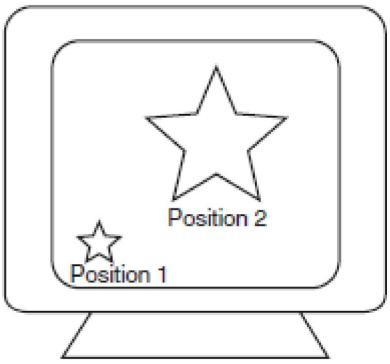
## G.G.60: Identifying Transformations: Identify specific similarities by observing orientation, numbers of invariant points, and/or parallelism

1 In the accompanying diagram, $\triangle ABC$ is similar to but not congruent to $\triangle A'B'C'$.



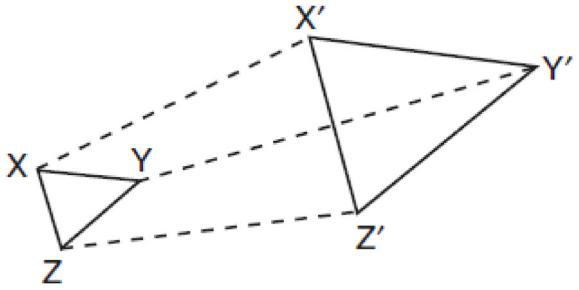

Which transformation is represented by $\triangle A'B'C'$
1) rotation
2) translation
3) reflection
4) dilation

2 As shown in the accompanying diagram, the star in position 1 on a computer screen transforms to the star in position 2.



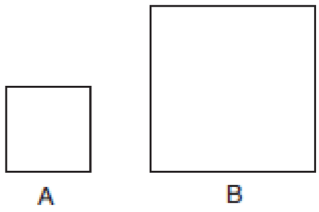

This transformation is best described as a
1) line reflection
2) translation
3) rotation
4) dilation

3 The accompanying diagram shows the transformation of $\triangle XYZ$ to $\triangle X'Y'Z'$.



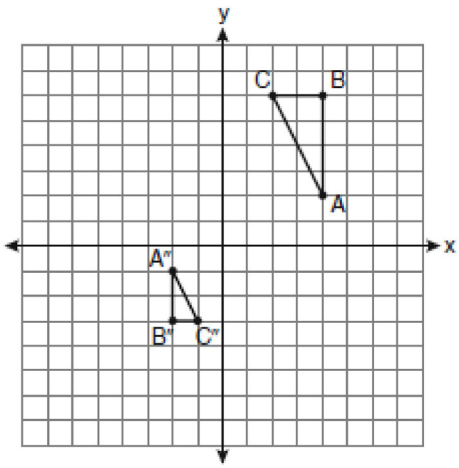

This transformation is an example of a
1) line reflection
2) rotation
3) translation
4) dilation

4 In the accompanying diagram, figure $B$ is the image of figure $A$.




Which type of transformation was performed?
1) dilation
2) translation
3) rotation
4) reflection

5 After a composition of transformations, the coordinates $A(4,2)$, $B(4,6)$, and $C(2,6)$ become $A''(-2,-1)$, $B''(-2,-3)$, and $C''(-1,-3)$, as shown on the set of axes below.



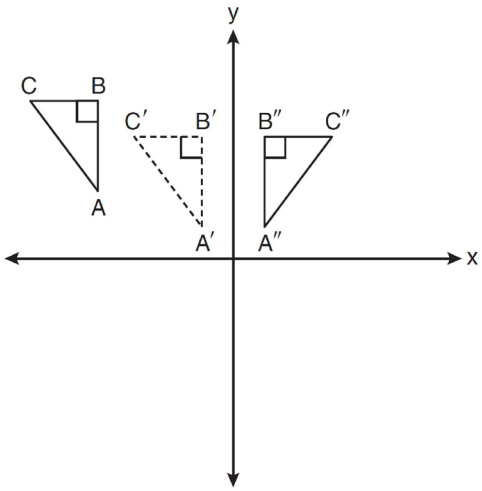

Which composition of transformations was used?

1) $R_{180°} \circ D_2$
2) $R_{90°} \circ D_2$
3) $D_{\frac{1}{2}} \circ R_{180°}$
4) $D_{\frac{1}{2}} \circ R_{90°}$

6 Which transformation produces a figure similar but not congruent to the original figure?

1) $T_{1,3}$
2) $D_{\frac{1}{2}}$
3) $R_{90°}$
4) $r_{y=x}$

7 In the diagram below, $\triangle A'B'C'$ is a transformation of $\triangle ABC$, and $\triangle A''B''C''$ is a transformation of $\triangle A'B'C'$.




The composite transformation of $\triangle ABC$ to $\triangle A''B''C''$ is an example of a

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

8 Which transformation does *not* always produce an image that is congruent to the original figure?

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

9 One function of a movie projector is to enlarge the image on the film. This procedure is an example of a

1) line of symmetry
2) line reflection
3) translation
4) dilation

10 After which transformation of $\triangle ABC$ could the image $\triangle A'B'C'$ *not* have the same area?

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

**G.G.60: Identifying Transformations: Identify specific similarities by observing orientation, numbers of invariant points, and/or parallelism**
**Answer Section**

| | | |
|---|---|---|
| 1 | ANS: 4 | REF: 060216a |
| 2 | ANS: 4 | REF: 080506a |
| 3 | ANS: 4 | REF: 060711a |
| 4 | ANS: 1 | REF: 010804a |
| 5 | ANS: 3 | REF: 060908ge |
| 6 | ANS: 2 | REF: 080906ge |
| 7 | ANS: 4 | REF: 061103ge |
| 8 | ANS: 2 | REF: 060013a |
| 9 | ANS: 4 | REF: 060603a |
| 10 | ANS: 4 | REF: 089618siii |