G.G.55: Properties of Transformations 2: Investigate, justify, and apply the properties that remain invariant under translations, rotations, reflections, and glide reflections

1 Which transformation produces a figure that is always the mirror image of the original figure?
1) line reflection
2) dilation
3) translation
4) rotation

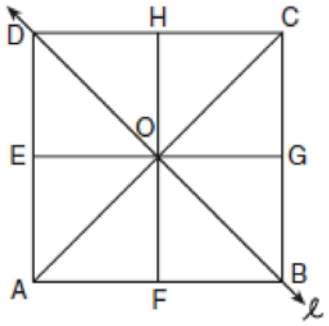
2 Which transformation does *not* preserve orientation?
1) translation
2) dilation
3) reflection in the *y*-axis
4) rotation

3 A property not preserved under a line reflection is
1) angle measure
2) collinearity
3) distance
4) orientation

4 A line reflection preserves
1) distance and orientation
2) angle measurement and orientation
3) distance, but not angle measurement
4) distance and angle measurement

5 Which property is not preserved by a glide reflection?
1) betweenness
2) angle measure
3) orientation
4) collinearity

6 In the accompanying diagram of square *ABCD*, *F* is the midpoint of $\overline{AB}$, *G* is the midpoint of $\overline{BC}$, *H* is the midpoint of $\overline{CD}$, and *E* is the midpoint of $\overline{DA}$.



Find the image of ΔEOA after it is reflected in line ℓ. Is this isometry direct or opposite? Explain your answer.

G.G.55: Properties of Transformations 2: Investigate, justify, and apply the properties that remain invariant under translations, rotations, reflections, and glide reflections
Answer Section

1 ANS: 1 REF: 010809a
2 ANS: 3 REF: 060218b
3 ANS: 4 REF: 068030siii
4 ANS: 4 REF: 088421siii
5 ANS: 3 REF: 088617siii
6 ANS:
ΔHOC. This reflection is an opposite isometry because the orientation of ΔEOA is different from ΔHOC.

REF: 060424b