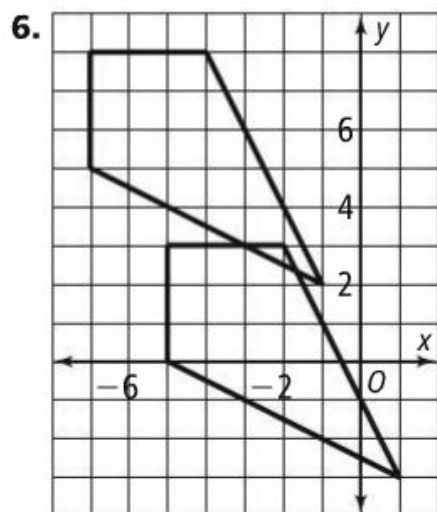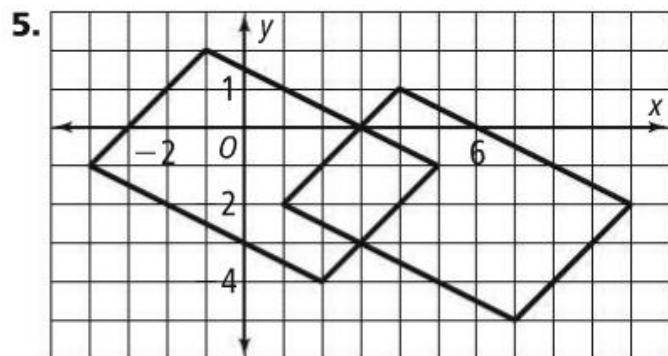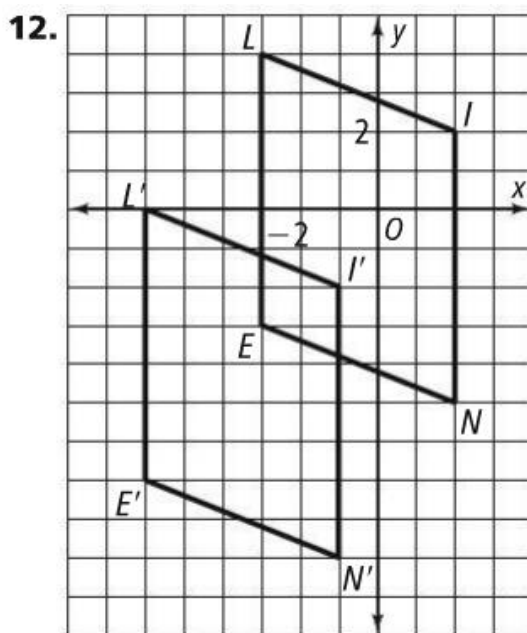**1.** Yes; the distances between the vertices and the angle measures of the image are the same as in the preimage.

2. No; distances between corresponding pairs of points are not equal.

5.

6.

7. $T_{<1,-1>}(x, y)$

8. $T_{<-4,-3>}(x, y)$

9. 1 block west and 7 blocks north

10. 24 mi east and 81 mi south

11. P'; $\overline{T'J'}$

12.

13. $T_{<-12,4>}(H)$

15. The transformation that maps $\triangle ABC$ to $\triangle PQR$ maps A to P and C to R, so it is a reflection, not a translation. The transformation that maps $\triangle ABC$ onto $\triangle RQP$ is a translation.

17. $T_{<-3,1>}(x, y)$

18. $U'(1, 16), G'(2, 12)$

27. $T_{<-2,14>}(x, y)$

28. $T_{<13,-2.5>}(x, y)$