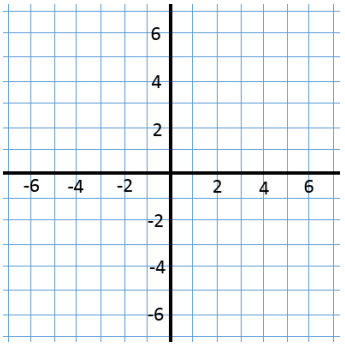
Lesson 4.6 Similarity and Transformations

Name _____ Period _____

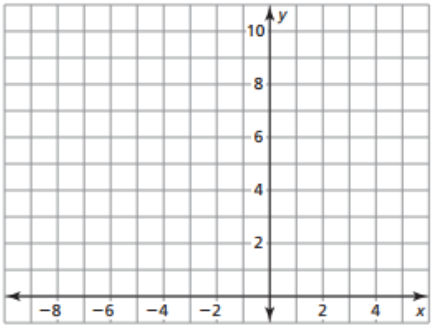
Notes and Assignment

Similarity Transformations

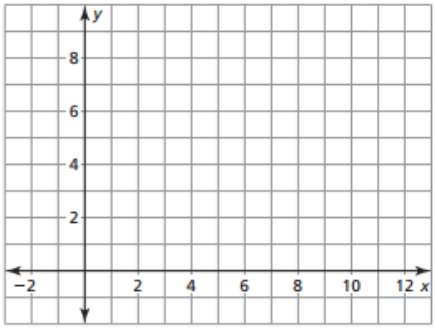
Graph ΔFGH with vertices F(1, 2), G(4, 4) and H(2, 0) and its image after the similarity transformation.
Reflection: in the x-axis
Dilation: (x, y) → (1.5x, 1.5y)



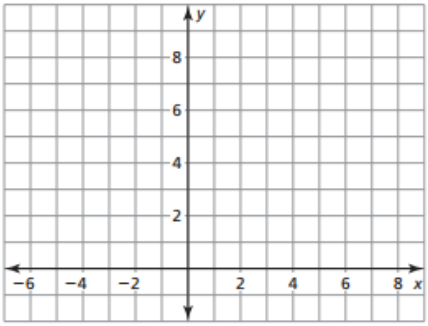
1. Graph A(3, 6), B(2, 5), C(4, 3), D(5, 5)
Translation: (x, y) → (x – 5), (y – 3)
Dilation: (x, y) → (3x, 3y)



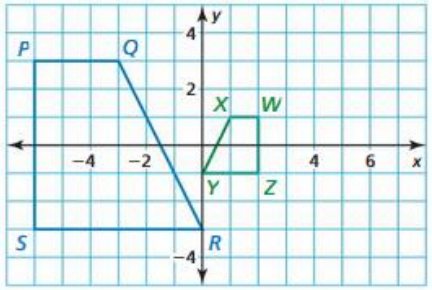
2. Graph R(12, 8), S(8. 0), T(0, 4)
Dilation: (x, y) $\rightarrow(\frac{1}{4}x, \frac{1}{4}y)$
Reflection: in the y-axis



3. Graph X(9, 6), Y(3, 3), Z(-3, 6)
Rotation: 90° about the origin
Dilation: (x, y) → $(\frac{2}{3}x, \frac{2}{3}y)$



Describe a similarity transformation that maps trapezoid PQRS to trapezoid WXYZ.



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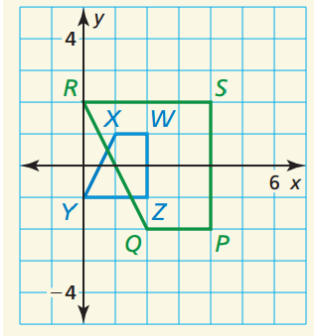
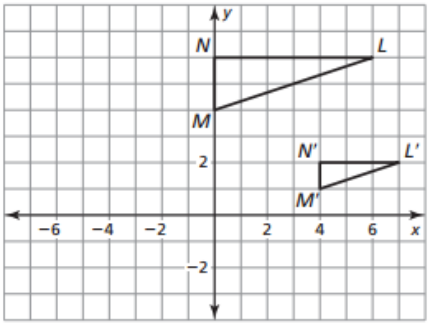
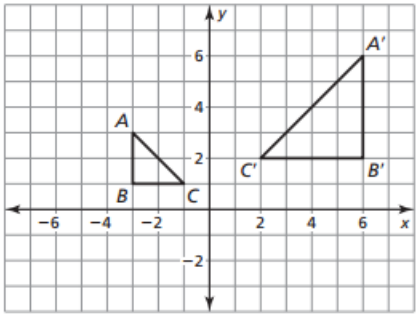


4. Describe a similarity transformation that maps the preimage to the image.



5. Describe a similarity transformation that maps the preimage to the image.



6. Describe a similarity transformation that maps the preimage to the image.