Lesson 3 Assignment

Reflections

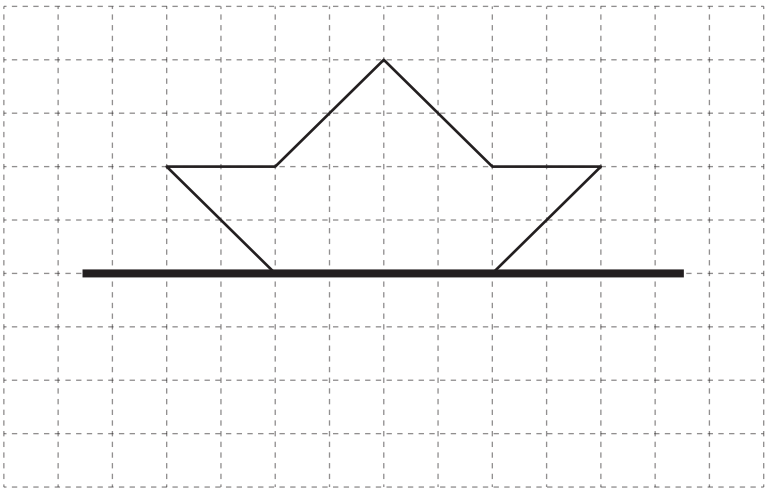
Work slowly and carefully. If you are having difficulty, go back and review the appropriate *Lesson*.

For full marks, show all calculations, steps, and/or explain your answers.

Total: 22 marks.

(1) 1. Draw the line of reflection in the picture below.

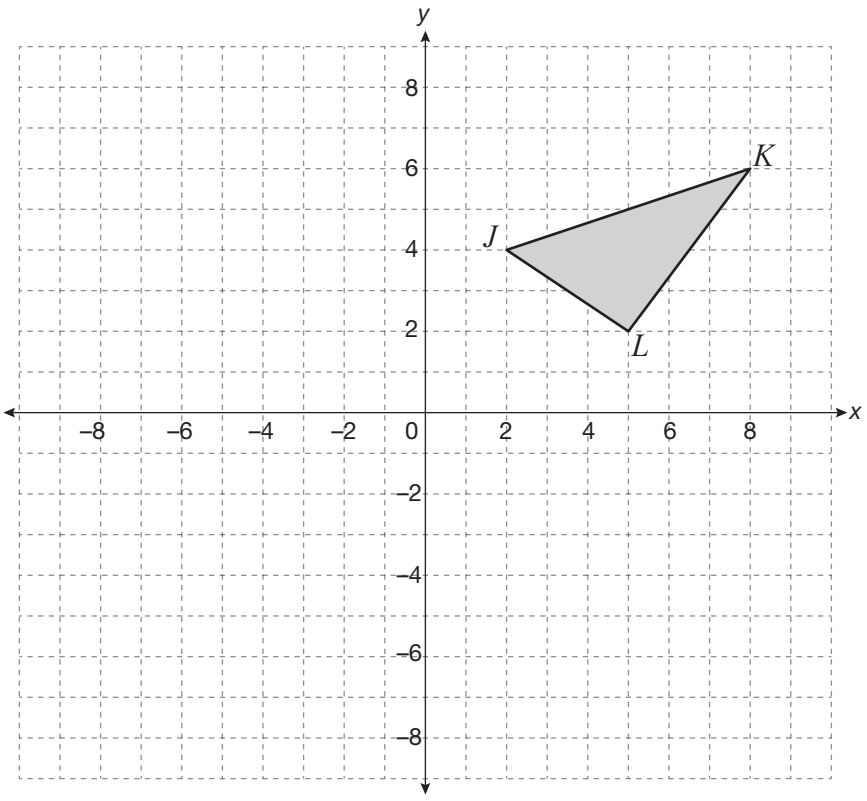
(1) 2. Complete the pattern by drawing the reflection of the image on the other side of the horizontal line of reflection.



3. Use ΔJKL to answer the following questions.

   a. Reflect ΔJKL in the x-axis to produce reflected image $J'K'L'$.

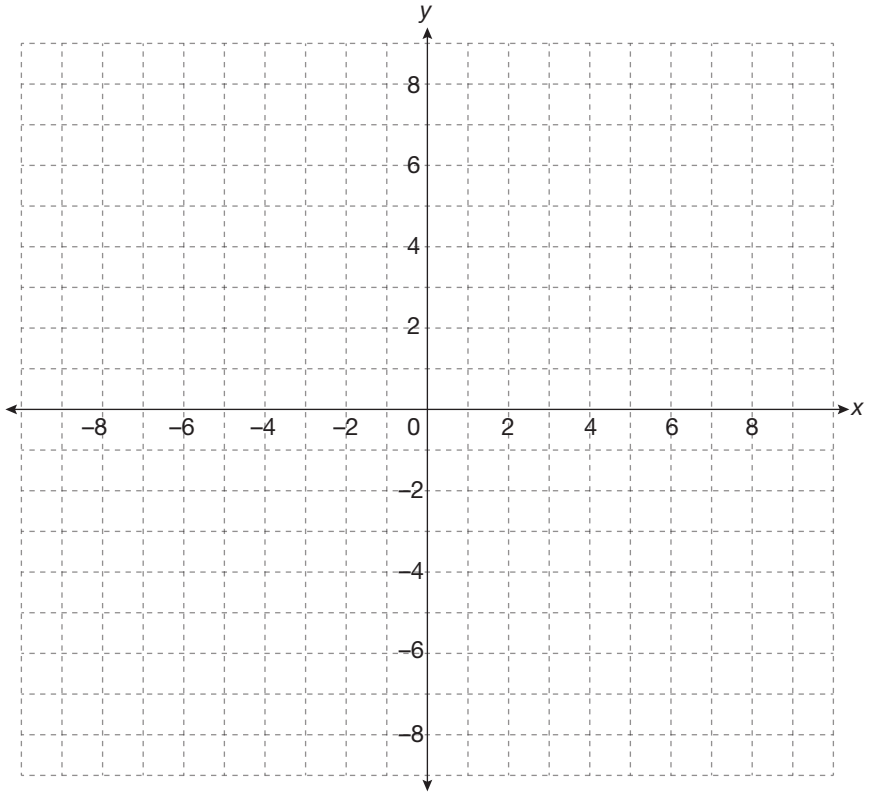
(2) i. Draw and label reflected image $J'K'L'$.



(1) ii. State the coordinates of each vertex.

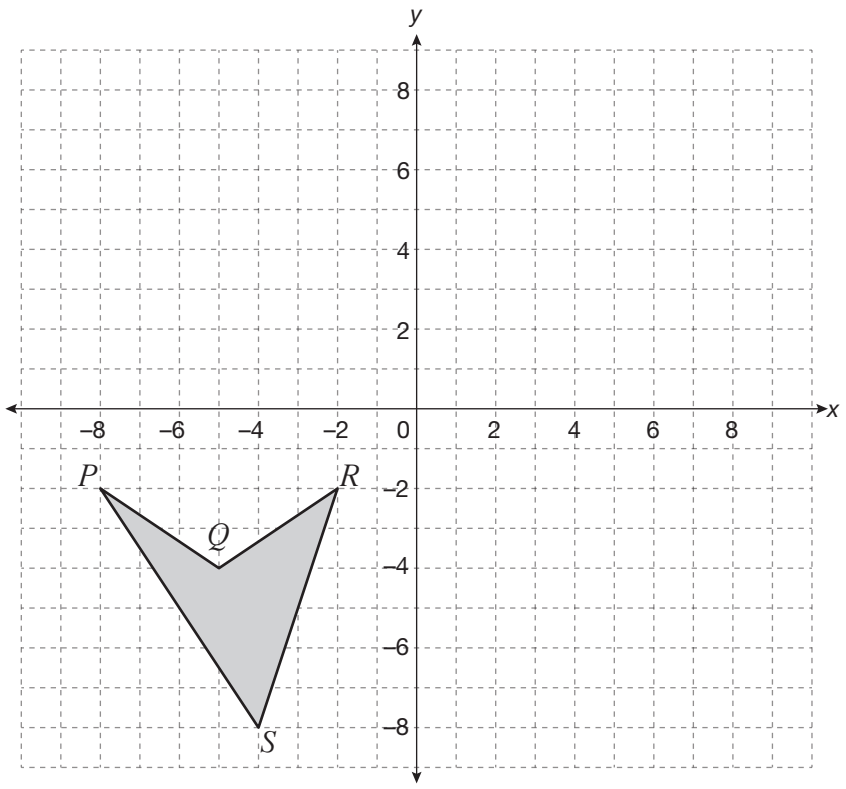
b. Translate image $J'K'L'$ horizontally 10 units to the left and vertically 7 units up.

(2) i. Draw and label $J''K''L''$.



(1) ii. State the coordinates of each vertex of the final image, triangle $J''K''L''$.

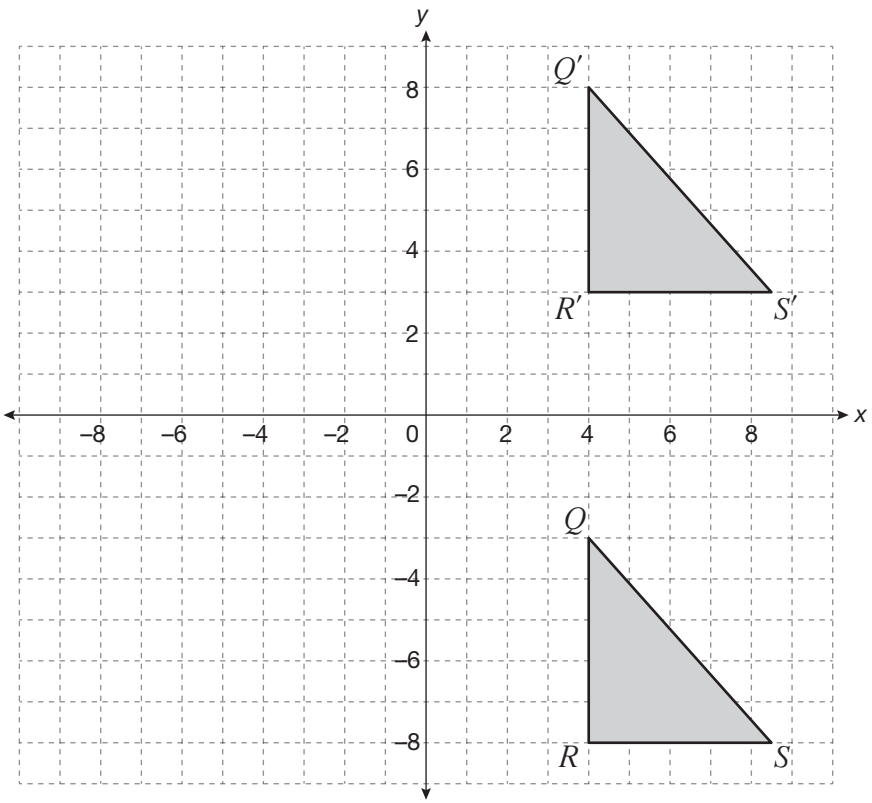
(4) 4. Reflect quadrilateral $PQRS$ in the y-axis and then in the x-axis. Draw and label the two images, $P'Q'R'S'$ and $P''Q''R''S''$.



5. Identify which type of transformation (dilation, translation, or reflection) has been applied to ΔQRS to obtain its image, $\Delta Q'R'S'$. Explain.

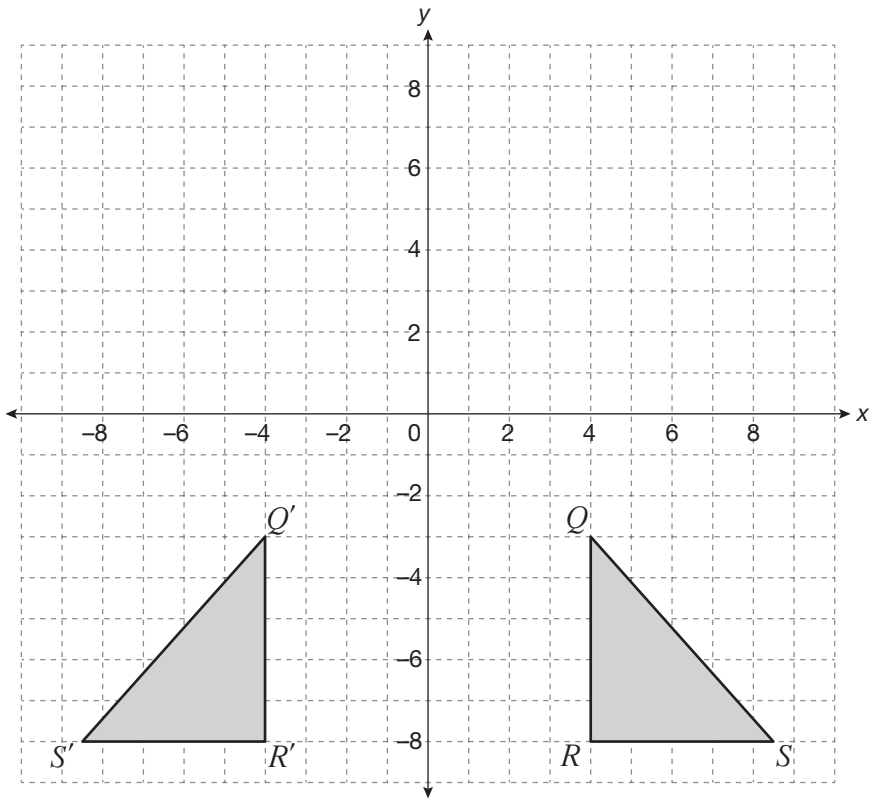
(2)

a.



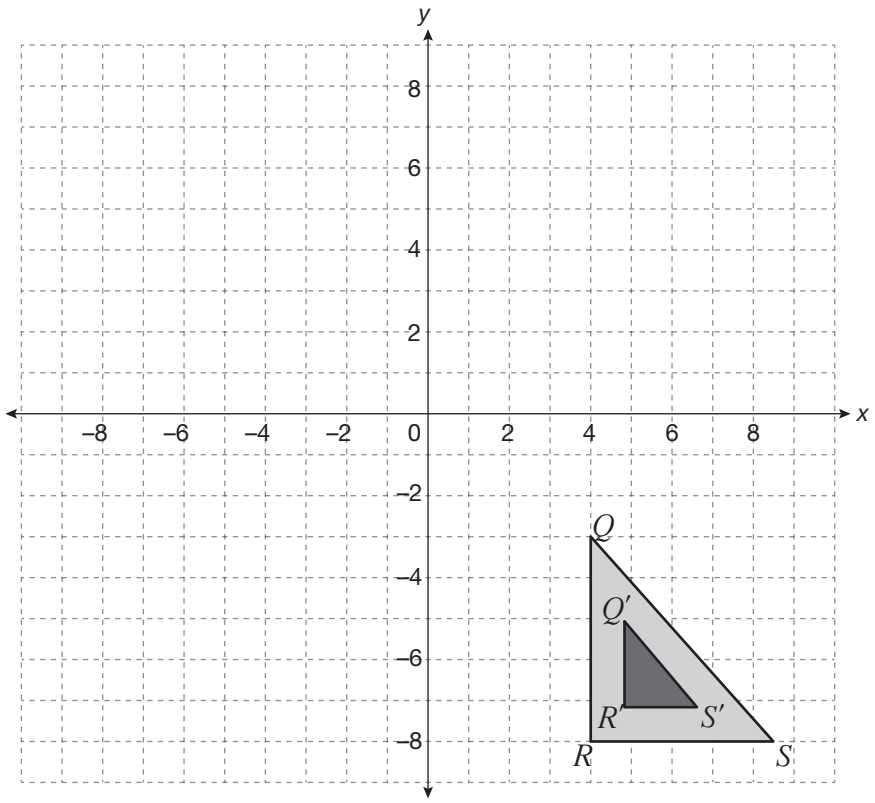
2

b.



2

c.



6. Examine the photo below.

(1) a. Draw the plane of symmetry.

(1) b. List two pairs of objects that are reflected in the plane of symmetry.

(1) c. List two items that are not reflected in the plane of symmetry.

(1) d. List two objects that are divided in half by the plane of symmetry.