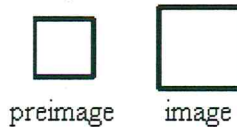
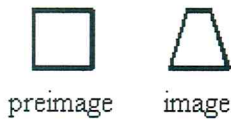
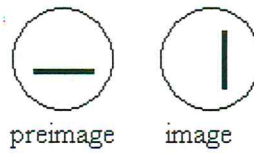
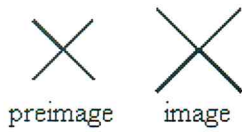


Unit 3 Review

Essential Standards

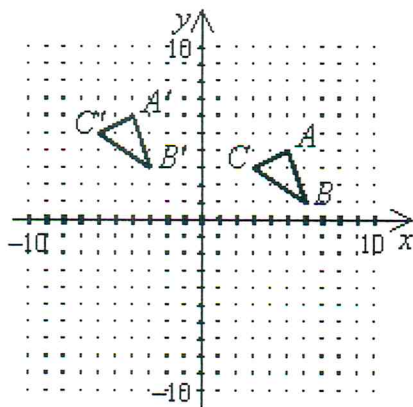
G.CO.2-6
Transformations
in the Plane

1. Which of the following transformations represents an isometry?



2. An ISOMETRY is a transformation which _____.

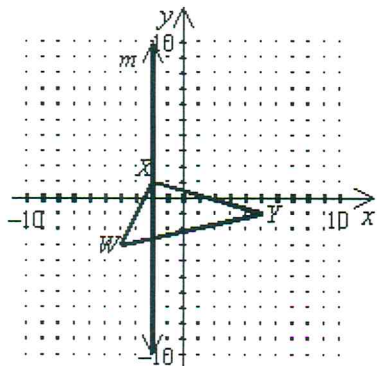
3. The rule for this transformation of $\triangle ABC$ onto $\triangle A'B'C'$ is _____.



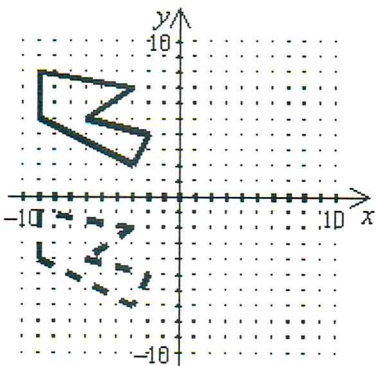
4. The point $A(-7, 3)$ is translated onto A' by the vector $\vec{u} = \langle 5, -4 \rangle$. The coordinates of A' are _____.

Name: _____

5. What are the coordinates of the vertices when the figure is reflected in line m ?

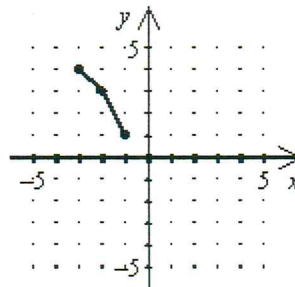
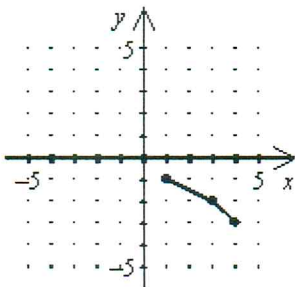
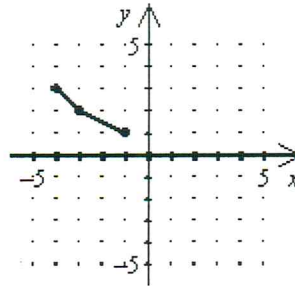
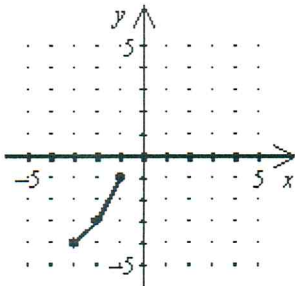
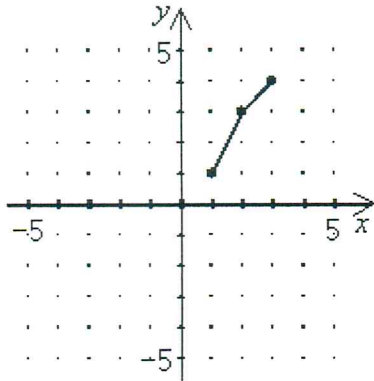


7. The change in position from the solid figure to the dotted figure is best described as a _____.



Name: _____

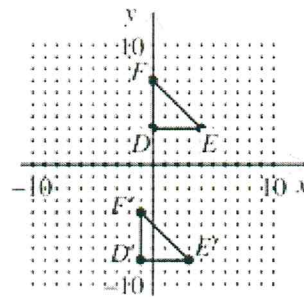
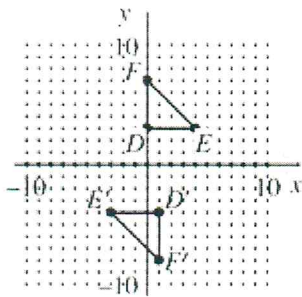
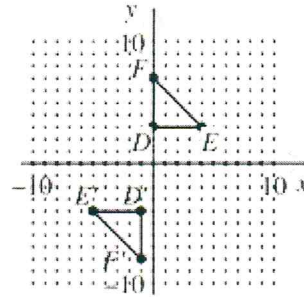
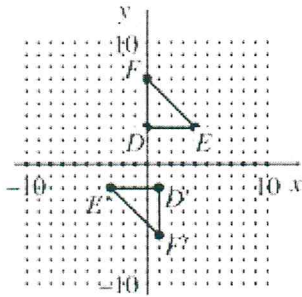
8. The transformation $(x, y) \rightarrow (-x, -y)$ is applied to the figure below. Identify the image of the figure under this transformation.



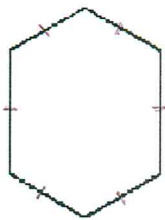
9. The composition of two (or more) isometries is always _____.
an isometry a translation a rotation a reflection

Name: _____

10. Triangle DEF is rotated 180° , then translated using $(x,y) \rightarrow (x-1,y-1)$.



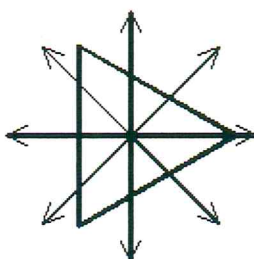
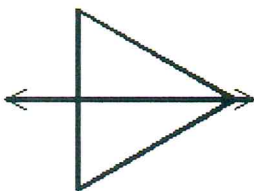
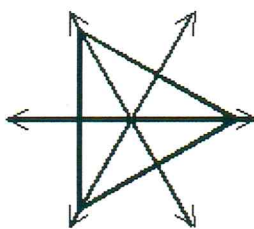
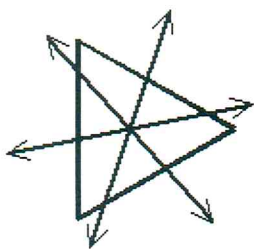
11. How many lines of symmetry does this hexagon have?



12. Which of the following letters (if drawn as simply as possible) has at least one line of symmetry?
Q, S, T, Z

Name: _____

13. Which figure shows all lines of symmetry?



14. Which figure has more than 1 line of symmetry?

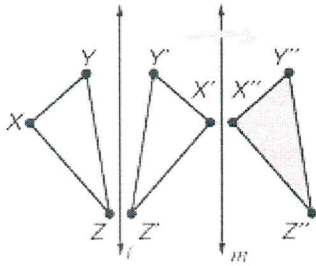


16. During ceramics class, Kylee painted plates for her mother. Which design exhibits rotational symmetry?

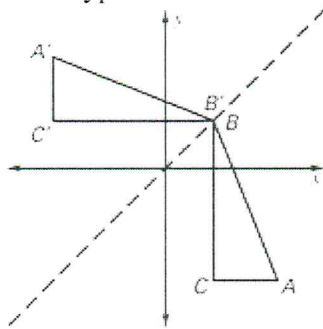


Name: _____

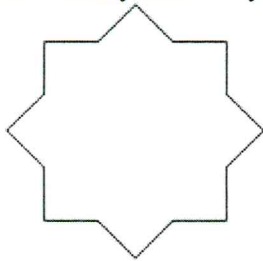
17. What two transformations were performed to obtain $\triangle X''Y''Z''$ in the diagram?



18. What type of transformation is shown in the diagram?



19. How many lines of symmetry does the polygon have?



Name: _____

20. Which of the following is *not* a rotation of the figure?

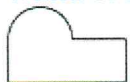


Figure 1:

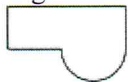


Figure 2:

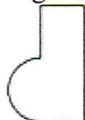


Figure 3:

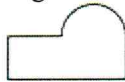
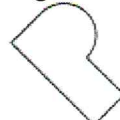
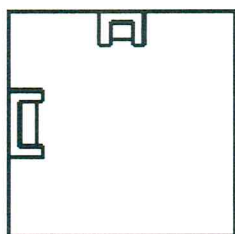


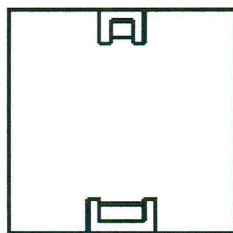
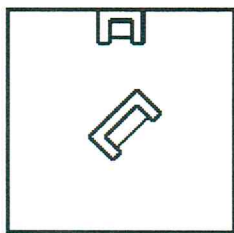
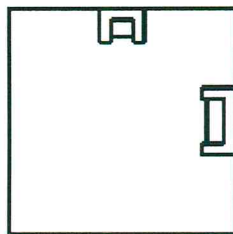
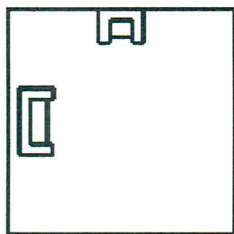
Figure 4:



21. Look at the arrangement of the sofa and chair in the room.

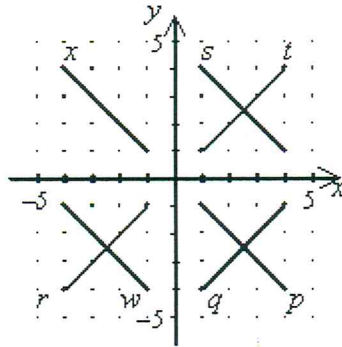


Which room arrangement shows a translation of the arrangement above?



Name: _____

22. Use the figure below.



Segment x is reflected over the x -axis, followed by a reflection over the y -axis, followed by another reflection over the x -axis. Its final image is _____.

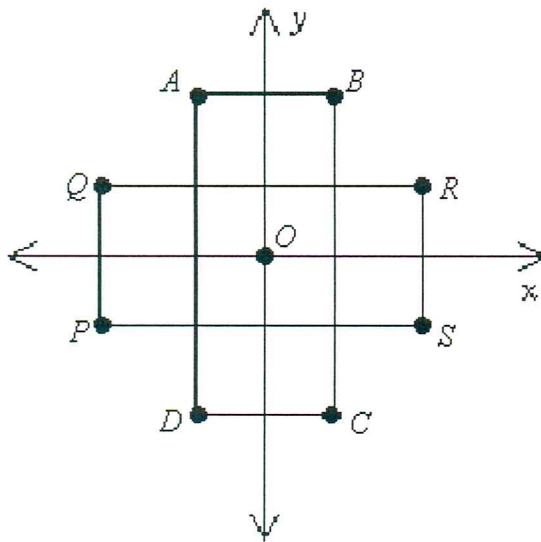
segment p

segment s

segment x

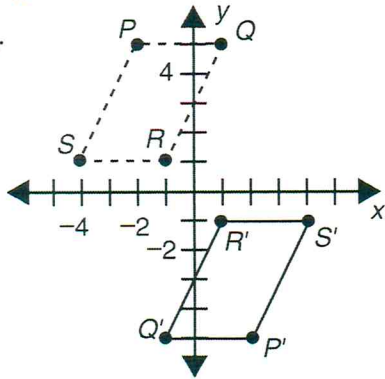
segment t

23. Rectangle $PQRS$ is rotated 90° clockwise about point O . Find the image of \overline{PQ} .

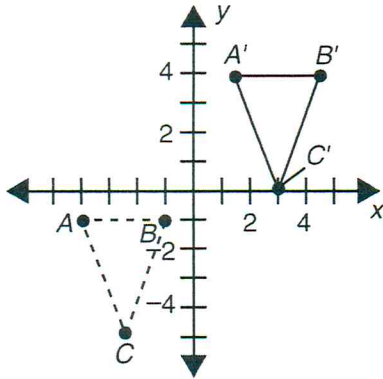


Name: _____

24. The degree of rotation that maps parallelogram $PQRS$ onto parallelogram $P'Q'R'S'$ is _____.



25. Then rule for this transformation of $\triangle ABC$ onto $\triangle A'B'C'$ is _____.

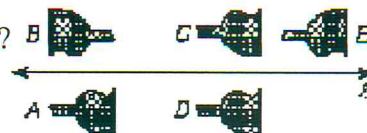


26. The point $A(7, -4)$ is translated onto A' by the vector $\vec{u} = \langle 5, -4 \rangle$. The coordinates of A' are _____.

27. Point $A(-5, -3)$ is translated by the vector $\vec{v} = \langle 8, 0 \rangle$ and then reflected in the line $y = 0$ (the x -axis). The coordinates of its image A' are _____.

Name: _____

28. One of the following represents a translation-reflection. Which one?



$A \rightarrow B$

$A \rightarrow C$

$A \rightarrow E$

$A \rightarrow D$

29. Write a rule to describe the transformation that is a reflection in the x -axis.

30. Describe in words the translation represented by the vector $\langle 2, -1 \rangle$.
