Due at the end of the hour!!!

Name_____ Class_____ Date_____

Chapter 9 Rev (continued)

Describe a single transformation that has the same effect as each composition of transformations.

11. translation $(x, y) \rightarrow (x-10, y+7)$ followed by translation $(x, y) \rightarrow (x+6, y+7)$

translate $(x-4, y+14)$

12. reflection across the line $x = 1$ followed by reflection across the line $x = 6$

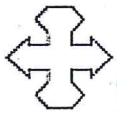
translate of 10

13. translation $(x, y) \rightarrow (x, y+1)$ followed by reflection across the line $y = 2$

glide reflection

What type(s) of symmetry does each figure have? Determine whether each figure will tessellate a plane. If so, draw a sketch. If not, explain.

14.



NO

reflect/rotate

15.

NO

rotation / reflectional

16. What types of symmetry does a tessellation formed by congruent equilateral triangles have?

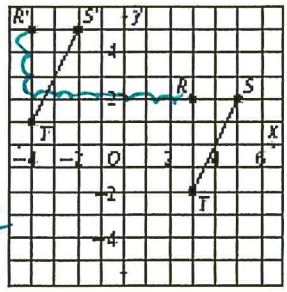
17. Reasoning Does an egg have reflectional symmetry in a plane, rotational symmetry about a line, or both?

Due at the end of the hour!!!

Name_____ Class _____ Date_____

Ch 9 Review Key

Do you know HOW?



1. $\Delta R'S'T'$ is a translation image of ΔRST. What is a rule for the translation? $(x-7, y+3)$

2. Is a glide reflection an isometry? Explain.

yes, same size and shape

Find the coordinates of the vertices of the image of *QRST* for each transformation.

Q=(1,5)
R=(3,-1)
S=(0,0)
T=(-2,3)

3. reflection across the x-axis

$S'(0,0)$ $Q'(1,-5)$ $R'(3,1)$ $T'(-2,-3)$

4. rotation of 90 degrees clockwise about the point (0, 0) $x,y \to (y,x)$

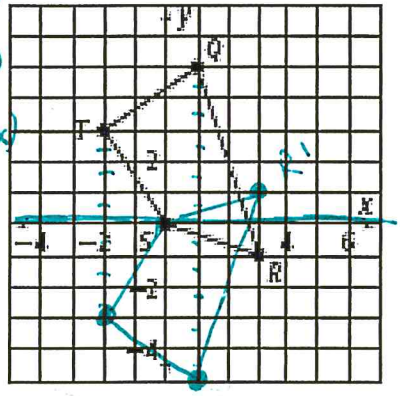
$Q'(-5,1)$ $R'(1,3)$ $S'(0,0)$ $T(-3,-2)$

5. dilation with center (0, 0) and scale factor 4

$Q'(4,20)$ $R'(12,-4)$ $S'(0,0)$ $T'(-8,12)$

6. translation (x,y) -> (x +3, y-2)

$Q'(4,3)$ $R'(6,-3)$ $S'(3,-2)$ $T'(1,1)$



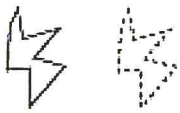
7. glide reflection with translation (x+2, y) and reflection across the line $y = -1$

$Q'(3,-7)$ $R'(5,-1)$ $S'(2,-2)$ $T'(0,-5)$

8. Write the translation rule that maps $X(12, 19)$ onto $X'(-1, 13)$.

$(x-13, y-6)$

Identify the isometry that maps the solid-line figure onto the dotted-line figure.

9.  translation

10.  reflection