Name _____ Date _____

Math 8R Period _____

Transformations Mixed Review

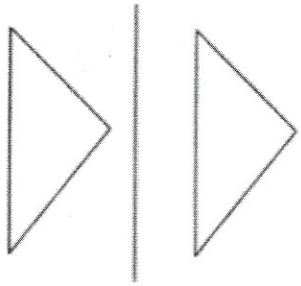
1) Which one of the following letters has both vertical and horizontal line symmetry? A. H C. P B. G D. J	6) If T ' (3, 6) is the image of point T (1, 2) under a dilation with respect to the origin, what is the constant of the dilation?
2) Which one of the following letters has only vertical line symmetry? A. K C. F B. V D. D	7) What is the image of the point (-6, -5) under the translation that shifts (x, y) to (x - 3, y + 6)?
3) Find the image of (6, -3) under the dilation D_3.	8) If the point (-5, 3) undergoes the translation $T_{(x+2,\ y-9)}$, what would be the coordinates of the image?
4) What are the coordinates of the image of A(4, -5) under a reflection in the x-axis?	9) Using the translation that maps (-7, 2) to its image (5, 1), what is the image of any point (x, y)? (_____ , _____)
5) What are the coordinates of the image of B(-6, -8) under a reflection in the y-axis?	10) What type of symmetry does the letter X have? Point, line, or both?

11) Under which transformation is the image similar but **not** congruent to the original figure?

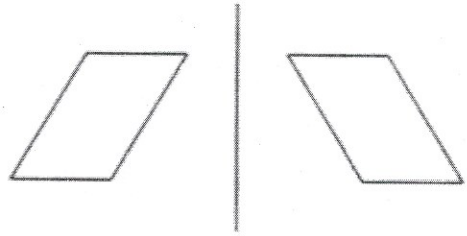
12) Find the image of (-8, 12) under the dilation $D_{\frac{1}{2}}$.

13) Which pair of figures below shows a reflection across the vertical line?

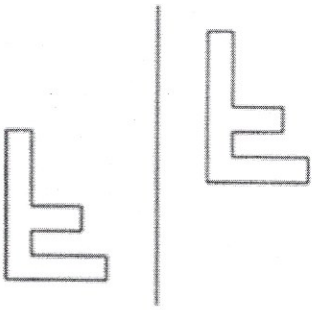
A.



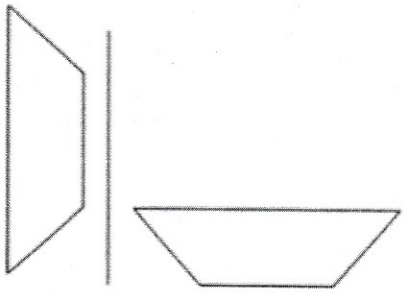
B.



C.

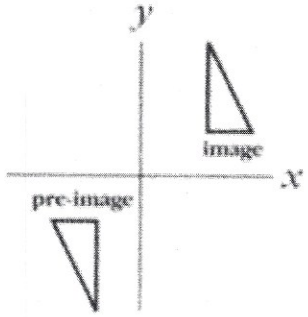


D.

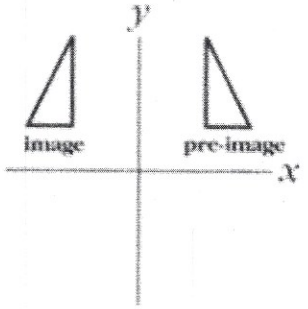


14) Which diagram below best shows a rotation of the pre-image to the image?

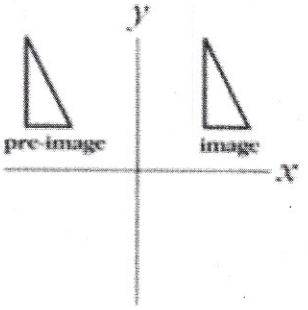
A.



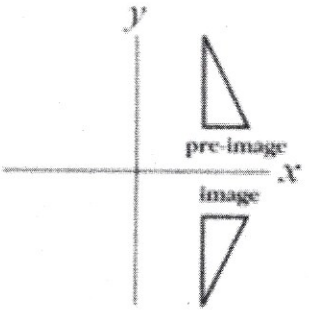
B.



C.

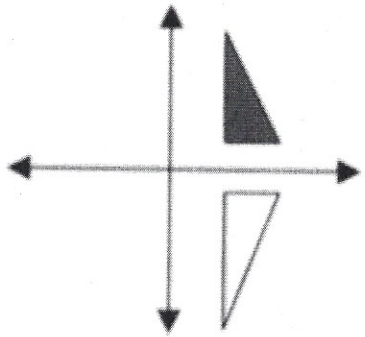


D.

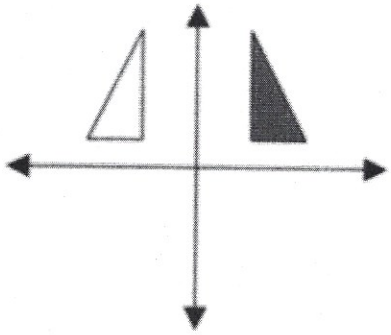


15) Which of the diagrams below best shows a translation of the white triangle down 4 units?

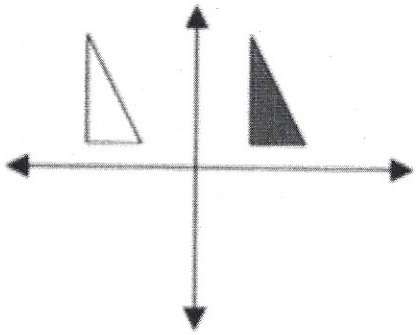
A.



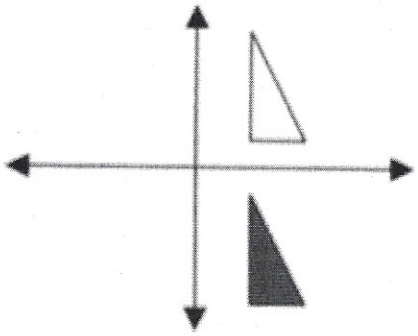
B.



C.

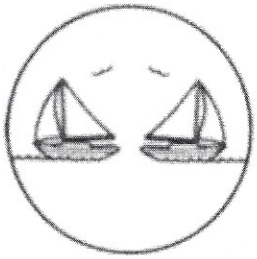


D.

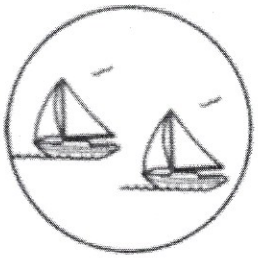


16) A member of the Boating Club created a design with two boats. The two boats in the design are related only by a *translation*. Which of these could be the design?

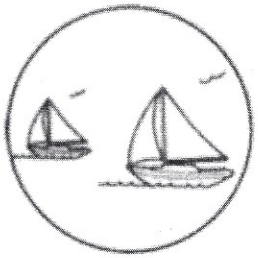
A.



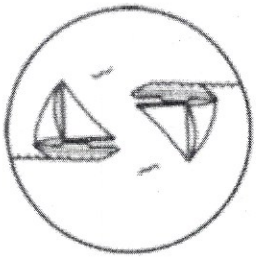
B.



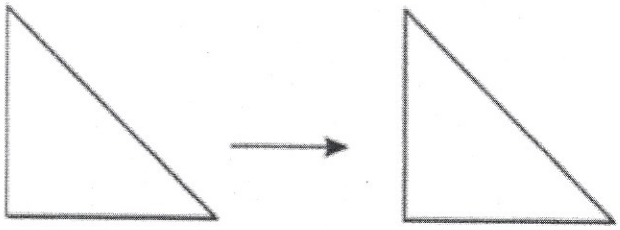
C.



D.



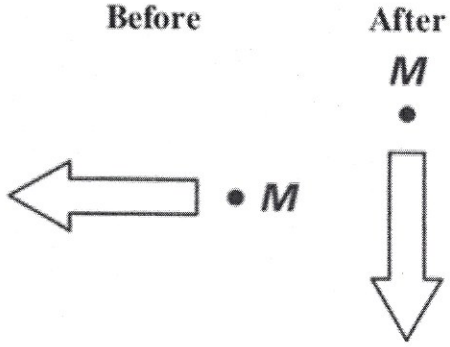
17) Dana had a triangle on her desk and moved it as shown in the following picture:



What transformations describes the movement of the triangle?

_____

18) The position of an arrow and Point M are shown in the before-and-after drawing below.

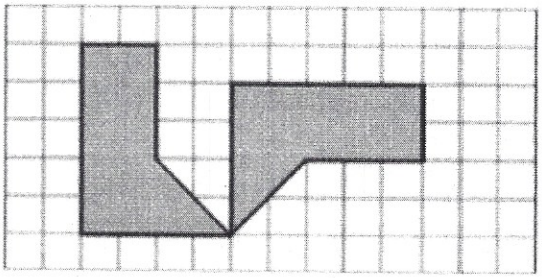


Which statement best describes how the position of the arrow was changed from before to after?

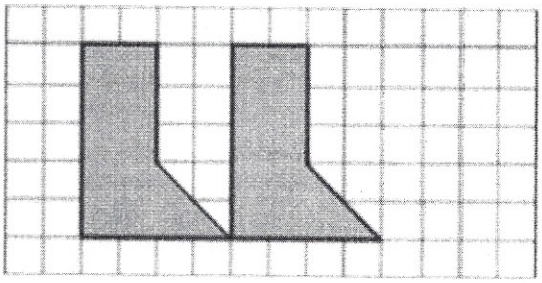
A. The arrow was rotated 90° clockwise around Point M.
B. The arrow was rotated 180° clockwise around Point M.
C. The arrow was rotated 90° counterclockwise around Point M.
D. The arrow was rotated 270° counterclockwise around Point M.

19) Which of the following shows a rotation?

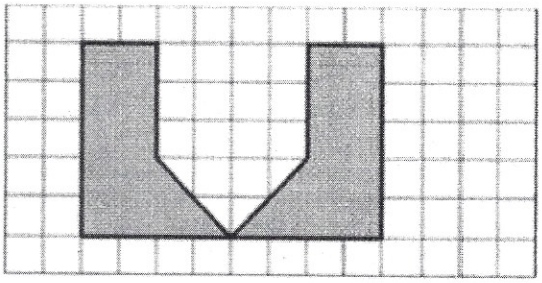
A.



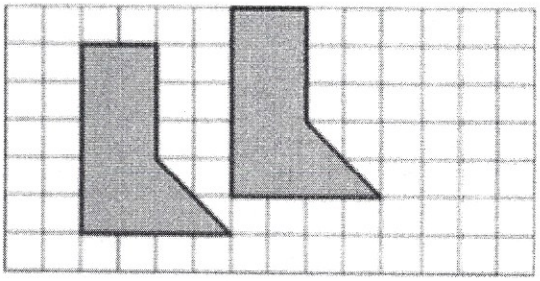
B.



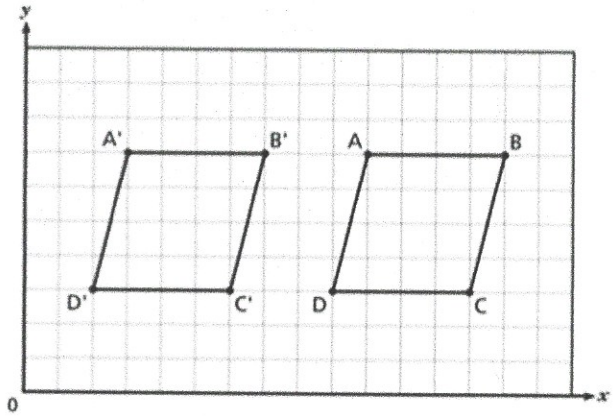
C.



D.



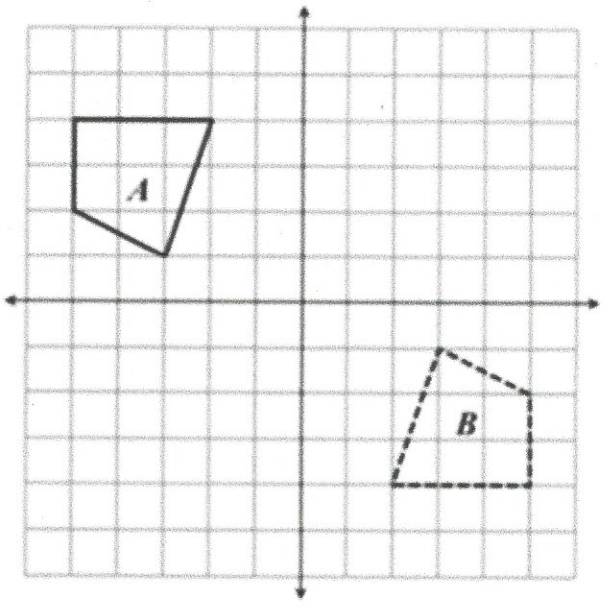
20) Parallelogram ABCD was translated to parallelogram A'B'C'D'.



How many units and in which direction were the x-coordinates of parallelogram ABCD moved?

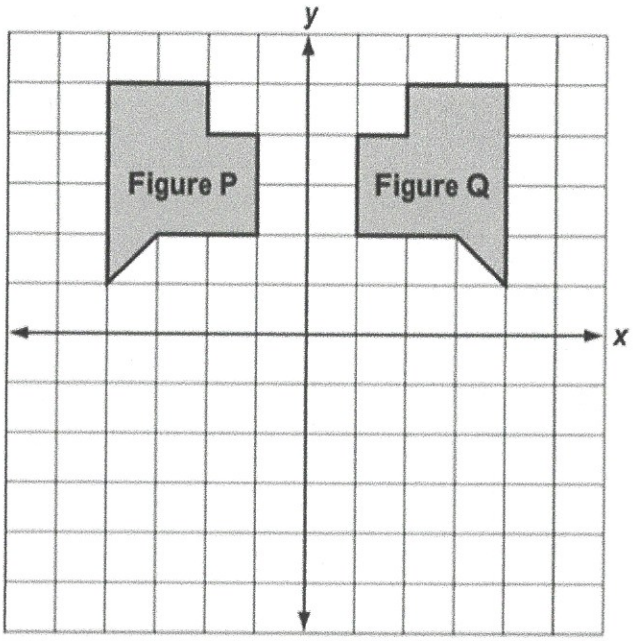
_____ units to the _____ .

21) Which transformation maps the solid figure A onto the dashed figure B?



a. Rotation 180° about the origin.
b. Translation to the right and down.
c. Reflection across the x-axis.
d. Reflection across the y-axis.

22) Lainey drew Figure P on a coordinate grid. Then she did a one-step transformation of Figure P to draw Figure Q, as shown below.

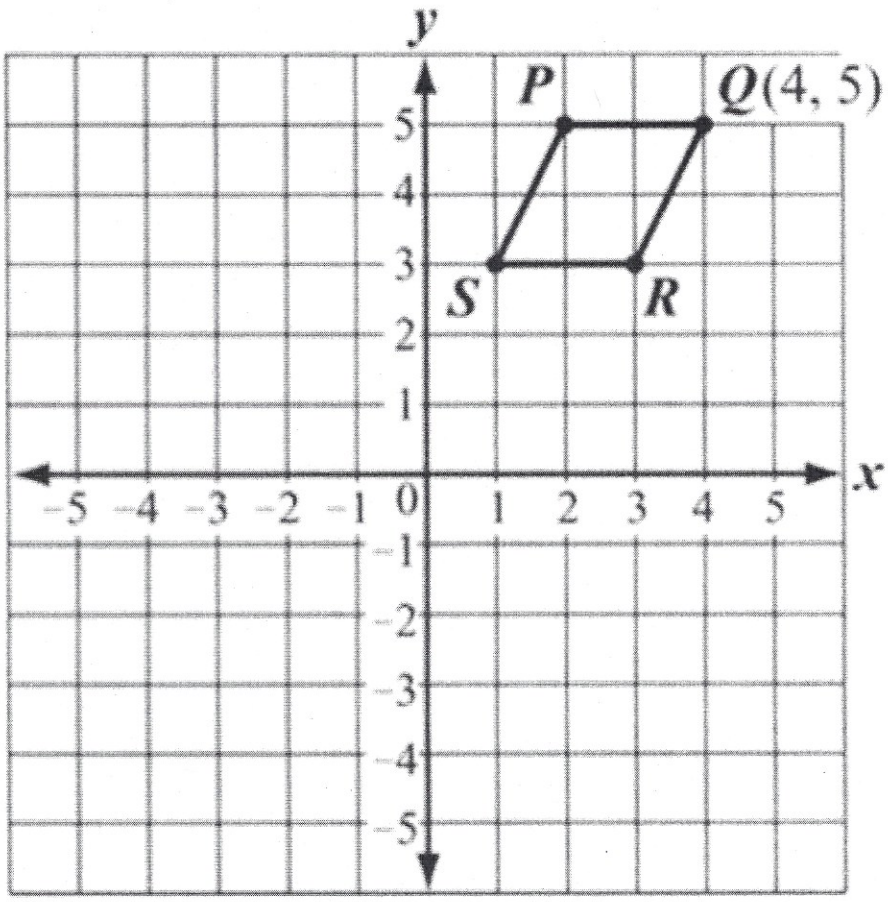


Which of the following one-step transformations of Figure P could Lainey have done to draw Figure Q?

a. Rotation 180° clockwise.
b. Translation to the right.
c. Reflection across the x-axis.
d. Reflection across the y-axis.

23) Parallelogram PQRS and the coordinates of point Q are shown on the coordinate plane below.

Graph the image of PQRS after a translation of (x - 6, y - 4).



What are the coordinates of point Q'? _____