Unit 3 Review

Name: Key

Test Thursday October 10,2019

1- Write a description of the rule $(x, y) \rightarrow (x+10, y+8)$.

(a) translation 10 units to the right and 8 units up

(b) translation 10 units to the left and 8 units down

(c) translation 10 units to the right and 8 units down

(d) translation 10 units to the left and 8 units up

$(x, -y)$

2- Point A (-2, -10) is reflected over the x-axis. Write the coordinates of A'.

(a) $(2,-10)$

(c) $(-2,-10)$

(b) $(2,10)$

(d) $(-2,10)$

$(-x, -y)$

3- Point D (2, 4) is rotated 180° about the origin, what is the coordinate of D?

(a) $(-4,2)$

(c) $(-2,-4)$

(b) $(4,-2)$

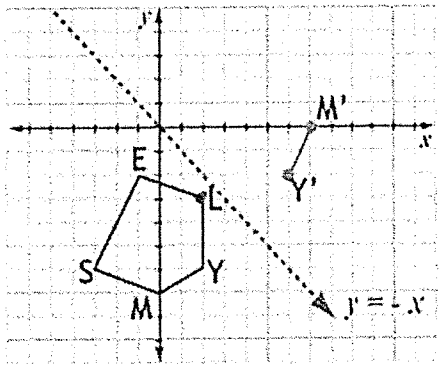
(d) $(-4,-2)$

4- If this pentagon is reflected across y=-x

What would the coordinate for point L'

$(-y, -x)$

$L(2, -3) \rightarrow L'(3, -2)$



5- The coordinates of the vertices of triangle 1 are A(6,6), B(12,9), C(9,6). $(-x, -y)$

The coordinates of the vertices of triangle 2 are A'(-6,-6), B'(-12,-9), C'(-9,-6).

What transformation was performed on triangle 1 to create triangle 2?

a- Translation

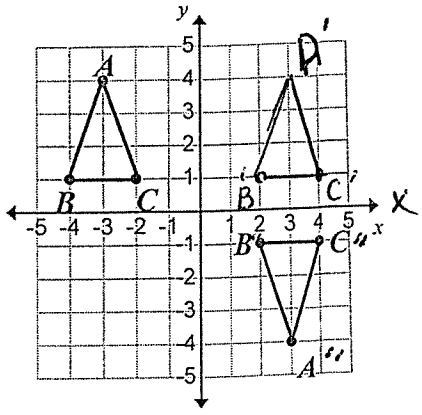
b-Reflection across the y-axis

c- Reflection across y=x

d- Rotation 180 degree

6-

a- Describe the types of transformations the triangle ABC Undergoes



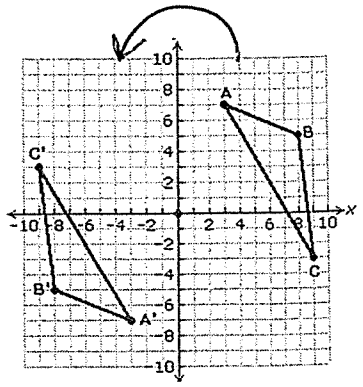
1. Translated 6 units to the right
2. Reflected across the x-axis.

** Answers may vary

b- Are the above two triangles congruent? Explain your reasoning

Yes, Because Sizes and shapes were Preserved.

7-



a- What type of this transformation does the given picture represent? Explain your reasoning.

$A(3,7) \longrightarrow A'(-3,-7)$

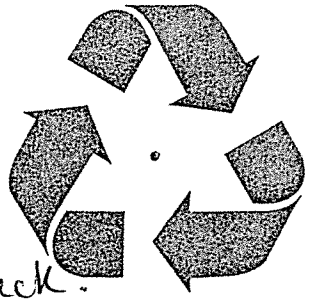
Rotation 180°

$(x,y) \longrightarrow (-x,-y)$

b- Describe the transformation that you chose based on the picture

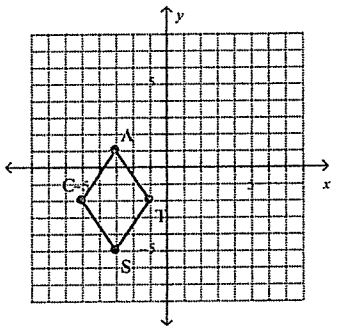
The picture was Rotated around the origin Counterclockwise, 180°.

8- A recycling logo is shown. Describe all the transformations that map this logo onto itself.

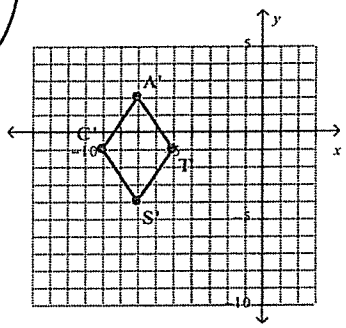


It has Rotational Symmetry We Can rotate this image 3 times 120° each time and it will give us the same image back.

9- Apply the transformation $(x,y) \rightarrow (x-4, y+1)$ to the rhombus below. What single vector maps the pre-image onto the image?

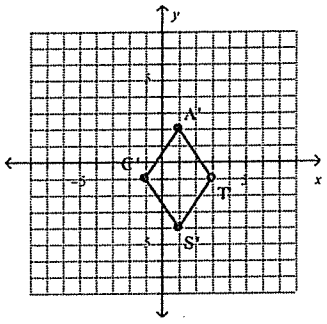


A.



The vector is $\langle -4, 1 \rangle$.

C.



The vector is $\langle 4, -1 \rangle$.

B.

D.

10. Quadrilateral RAPS is located at the vertices R(-4,1), A(-3,4), P(0,5), S(-1,1). Where will points R'', A'', P'', S'', be located after the quadrilateral has been reflected across the line $y = x$ and then rotated 180° about the origin?

A. $R''(1,4), A''(4,3)$
$P''(5,0), S''(1,1)$

B. $R''(-4,1), A''(-3,4)$
$P''(0,5), S''(-1,1)$

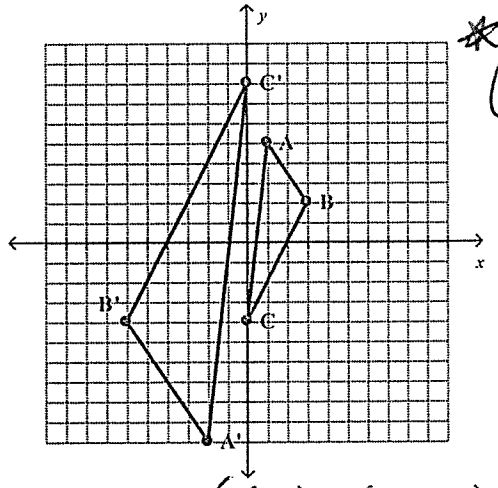
$y=x$ / rotate

C. $R''(1,-4), A''(4,-3)$
$P''(5,0), S''(1,-1)$

D. $R''(-1,4), A''(-4,3)$
$P''(-5,0), S''(-1,1)$

if we do both

11. What dilation maps triangle ABC onto triangle A'B'C' below?



A. $(x,y) \rightarrow (2x, 2y)$

B. $(x,y) \rightarrow (0.5x, 0.5y)$

C. $(x,y) \rightarrow (-2x,-2y)$

D. $(x,y) \rightarrow (-0.5x,-0.5y)$

only option for dilation

** Combination of two

A(1,5)
A'(-2,-10) To get

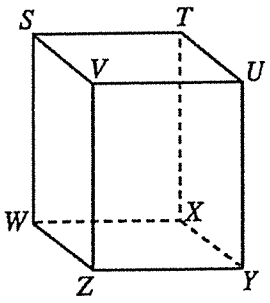
C.

(Scale factor)
- Can not be negative
- We are not shrinking

* for this question if it asked for Transformations I would pick C
But it only ask for dilation here.

1- Which set of four points are not coplanar?

Circle all that apply



a. S, W, X, and U

b. W, V, X, and Y

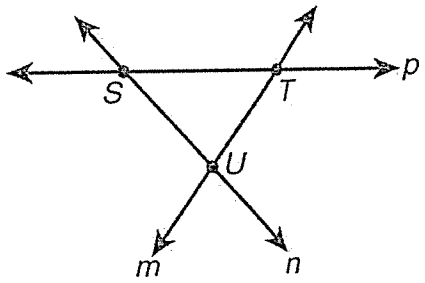
c. S, T, V, and U

d. T, U, X, and Y

2- Name all the rays that has an endpoint U

$\overrightarrow{UT}$ $\overrightarrow{US}$

2 Rays



3- How many line segments does this picture have?

$\overline{SJ}$ $\overline{JR}$ $\overline{RK}$ $\overline{KT}$ $\overline{SR}$ $\overline{SK}$ $\overline{ST}$

$\overline{JK}$ $\overline{JT}$, $\overline{RT}$ 10 line Segments.