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| Name: | Class: | Date: |

**1.3 Transformations:**

Transformations are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Three types of transformations are: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Translations:

A translations results when the geometric figure \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into a new position.

1. On the grid to the right, draw the grid and triangle on page 18 of your text.
2. With tracing paper, trace out figure ABC
3. Slide the figure ABC 6 units up and 2 units to the right and draw out the new figure.
4. Label the new figure A’B’C’



What are the coordinates of figure ABC? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are the coordinates of figure A’B’C’? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Show You Know: Copy the grid and figure on the page 20 and translate the figure 5 units right and 3 units down. Label the new figure E’D’I’L’S’



What are the coordinates of EDILS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are the coordinates of E’D’I’L’S’? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Reflections:

A reflection results when the geometric figure \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into a new position. The new figure is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the original figure.

1. On the grid to the right, copy the grid and the triangle on the top of page 19 of your text.
2. With tracing paper, trace out figure ABC.
3. Flip your traced image over the x-axis (be mindful of how far away the original figure is from the x-axis), and draw out the new figure. Label it A’B’C’



1. Compare the distance of A and A’ from the line of reflection \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Compare the distance of B and B’ from the line of reflection \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Predict the distance of C and C’ from the line of reflection \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are the coordinates of ABC and A’B’C’? What do you notice?

Show You Know: Copy the grid and figure on the page 21 and reflect the figure in line of reflection r. Label the new figure F’L’I’P’.



What are the coordinates of FLIP? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are the coordinates of F’L’I’P’? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Rotations:

A rotation results when the geometric figure \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_into a new position.

1. On the grid to the right, copy the grid and the figure in the middle of page 19 of your text.
2. With tracing paper, trace out figure ABCD.
3. Mark the centre of rotation as D
4. Find the line connecting A to the centre of rotation at D. Draw a broken line from D at a 90° angle clockwise
5. Place your traced figure back over the original and put your pencil tip on the tracing paper at D. Turn the tracing clockwise until point A is on the broken line.
6. Draw the new figure and label it A’B’C’D’



How are the figures ABCD and A’B’C’D’ the same? How are they different?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Look at the lines that join A to D, and A’ to D’. What do you notice about the lengths of those line?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Show You Know: Copy the grid and figure on page 23 of your text. Rotate the figure 270° counterclockwise about the center of rotation A. Label the new figure N’T’U’R’.



What are the coordinates of NTUR? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are the coordinates of N’T’U’R’? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_