

Sequence of Transformations Assignment

Directions - Answer all parts of the questions on graph paper. Write the coordinates of the pre-image at the top of the graph and graph it using a straightedge (ex. ruler). Make sure to show the transformations using different colors (ex. colored pencils, crayons, etc.). Show line of reflection when reflecting. Remember to label pre-image and images.

- 1)
 - a. Plot the pre-image, Quadrilateral ABCD: A(-6,4), B(-5,6), C(-4,4), D(-5,2)
 - b. Then, reflect the quadrilateral across the line $x = -2$ creating image A'B'C'D'
 - c. Then, translate the image A'B'C'D' $(x,y) \rightarrow (x+3, y-5)$ to create image A''B''C''D''
- 2)
 - a. Plot the pre-image, Pentagon EFGHI: E(-5,1), F(-3,3), G(-1,3), H(1,1), I(-2,0)
 - b. Then, reflect the pentagon across the line $y = 3$ creating image E'F'G'H'I'
 - c. Then, rotate E'F'G'H'I' 90° counterclockwise about the origin to create image E''F''G''H''I''
- 3)
 - a. Plot the pre-image, Pentagon JKLMN: J(2,4), K(3,7), L(4,5), M(5,7), N(6,4)
 - b. Then, translate the pentagon $(x,y) \rightarrow (x-4, y-2)$ creating image J'K'L'M'N'
 - c. Then, reflect J'K'L'M'N' across the line $y = x$ to create image J''K''L''M''N''
- 4)
 - a. Plot the pre-image, Quadrilateral OPQR: O(1,-6), P(3,-5), Q(7,-1), R(-5,-2)
 - b. Then, translate the quadrilateral $(x,y) \rightarrow (x-6, y+7)$ creating image O'P'Q'R'
 - c. Then, rotate O'P'Q'R' 180° clockwise about the origin to create image O''P''Q''R''
- 5)
 - a. Plot the pre-image, Quadrilateral STUV: S(-2,-2), T(-5,-6), U(-6,-6), V(-6,-5)
 - b. Then, rotate the quadrilateral 90° clockwise about the origin creating image S'T'U'V'
 - c. Then, translate S'T'U'V' $(x,y) \rightarrow (x+8, y+1)$ creating image S''T''U''V''
- 6)
 - a. Plot the pre-image, Triangle WXY: W(0,4), X(-2,-2), Y(1,-3)
 - b. Then, rotate the triangle 270° clockwise about the origin creating the image W'X'Y'
 - c. Then, reflect W'X'Y' across $y = -x$ creating image W''X''Y''