4-1 Opener - Reflections

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Graph the image of each figure under the given reflection.

**A graph of a line and a square

Description automatically generated**Determine the coordinates of the image.

Square in the line .

1. Determine the coordinates of after a reflection in the line

1. Graph the transformation of the figure.  
   parallelogram in the line

**A graph of a line with a straight line

Description automatically generated**

4-1 Exit Slip - Reflections

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. **A graph of a triangle with blue lines

   Description automatically generated**Graph the image of each figure under the given reflection.

Determine the coordinates of the image.

in the line

1. Determine the coordinates of after a reflection in the line
2. Graph the transformation of the figure.  
   parallelogram *DEFG* in the line *y* = 2

**A graph of a rectangle with a blue line

Description automatically generated**

4-2 Opener – Translations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Determine whether a translation maps square onto square . If so, find the translation vector. If not, explain why.

**A grid with lines and letters

Description automatically generated**

A graph of a trigonometry

Description automatically generated

**STAGE ACTORS** A director is staging actors for an upcoming performance. In the first scene, three actors are positioned in a triangle, with actors at points *A, B,* and *C*. If the director wants the same grouping of actors on the other side of the stage for Scene 2, at what coordinates should each actor stand? Use the translation vector 〈–5, –4〉.

4-2 Exit Slip – Translations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

Determine whether a translation maps parallelogram onto parallelogram If so, find the translation vector. If not, explain why.

**A graph of a line graph

Description automatically generated with medium confidence**

A grid with lines and dots

Description automatically generated**MARCHING BAND** The high school band director is positioning the marching band in preparation for an upcoming football game halftime show.The band’s first move is a group march from one corner of the field to the opposite corner. The corners of the band’s formation are represented by points *J, K, L,* and *M.* What is the translation vector representing the band’s movement to points *J’, K’, L’,* and *M’*?

4-3 Opener – Rotations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. A graph of x and y axis

   Description automatically generatedTriangle has vertices and Graph and its image after a rotation of counterclockwise about
2. A graph of x and y axis

   Description automatically generated **BOTANICAL GARDENS** The chief botanist for the regional botanical gardens wants   
   to relocate three dogwood trees so that they will get better sunlight. The locations   
   of the three trees on a coordinate plane are represented by the points *L*, *M*, and *N*.   
   What will the new coordinates of each tree be if rotated 270° counterclockwise about   
   the point (–2, –1)?

4-3 Exit Slip – Rotations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. A graph of x and y axis

   Description automatically generatedQuadrilateral has vertices and

Graph quadrilateral and its image after a rotation of about

1. **NEW HOME** Plans for a new home do not take advantage of the view of the valley below. The owners want to rotate the house before it is built so that the valley can be seen from the new porch. The corners of the proposed house are represented by points *A, B, C,* and *D.* If they rotate the house 270° clockwise about the point (–1, 2), what will be the coordinates of the new house location?

A graph of a line with a square and a square with a square in the center

Description automatically generated with medium confidence

4-4 Opener – Compositions of Transformations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1) Graph each figure with the given vertices and its image after the indicated glide reflection.

 ∆*ABC*: *A*(1, –1), *B*(2, –3), *C*(1, –3)

Translation: along 〈1, 0〉

Reflection: in *y* = *x*

AB: *A*(–2, 4), *B*(0, 2)

Translation: along 〈2, –4〉

Reflection: in *y-*axis is

A graph of x and y axis

Description automatically generatedA graph of x and y axis

Description automatically generated

4-4 Exit Slip – Compositions of Transformations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Graph each figure with the given vertices and its image after the indicated glide reflection.

∆*TUV*: *T*(–3, 3), *U*(0, 1), *V*(–1, 0)

Translation: along 〈2, 1〉

Reflection: in *x-*axis

XY: *X*(–4, 3), *Y*(–2, 1)

Translation: along 〈1, 0〉

Rotation: 90° clockwise about origin

A graph of x and y axis

Description automatically generatedA graph of x and y axis

Description automatically generated

4-5 Opener – Tessellations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Determine whether the pattern is a tessellation.

If so, describe it as uniform, not uniform, regular, not regular, or semiregular.

A pattern of blue and yellow triangles

Description automatically generatedA black background with a black square

Description automatically generated with medium confidenceA colorful circular pattern with black and blue squares

Description automatically generated

1. Determine whether a tessellation can be created from each figure. If so, describe the transformation(s) that can be used to create the tessellation and draw a picture to support your reasoning.

a right trapezoid

4-5 Exit Slip – Tessellations

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Determine whether the pattern is a tessellation.

If so, describe it as uniform, not uniform, regular, not regular, or semiregular.

A pattern of blue leaves and flowers

Description automatically generatedA colorful pattern of squares

Description automatically generatedA black background with a black square

Description automatically generated with medium confidence

1. Determine whether a tessellation can be created from each figure. If so, describe the transformation(s) that can be used to create the tessellation and draw a picture to support your reasoning.

a right triangle

4-6 Opener – Symmetry

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. **A black and blue rectangle with a black background

   Description automatically generated**Determine whether each figure has a line of symmetry. If so, draw the lines of symmetry and state how many lines of symmetry it has.

**A blue and black cross

Description automatically generated**

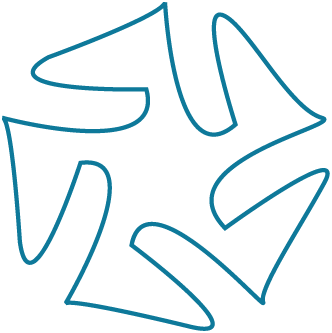
**A black and blue rectangle with a black background

Description automatically generated**

**A blue and black cross

Description automatically generated**

1. Determine whether each of the designs has rotational symmetry.

A blue and black logo

Description automatically generated

4-6 Exit Slip – Symmetry

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_

1. Determine whether each figure has a line of symmetry. If so, draw the lines of symmetry and state how many lines of symmetry it has.

A blue hexagon on a black background

Description automatically generated

**A black rectangle with blue border

Description automatically generated**

A blue hexagon on a black background

Description automatically generated

**A black rectangle with blue border

Description automatically generated**

1. Determine whether the design has rotational symmetry.

A blue line art on a black background

Description automatically generated

**A black and blue rectangle with a blue border

Description automatically generated**