Wednesday, February 20, 2019

- Warm-up

  Transform ΔEFG using the following rules.
  Write each answer as a matrix.

  1. (x, y) → (-x, -y)
  2. (x, y) → (y – 3, x + 1)

$$\Delta EFG = \begin{bmatrix} 5 & 4 & -8 \\ -1 & 5 & 6 \end{bmatrix}$$

- Rotations

Objectives:

Content: I will use rules to produce rigid transformations.

Social: I will participate in the class activities and support my group.

Language: I will explain how to *translate, rotate, and reflect rigid shapes using rules*.

Transform ΔEFG using the following rules.
Write each answer as a matrix.

$$\Delta EFG = \begin{matrix} \\ x \\ y \end{matrix}\begin{matrix} E & F & G \end{matrix}\begin{bmatrix} 5 & 4 & -8 \\ -1 & 5 & 6 \end{bmatrix}$$

1. (x, y) → (-x, -y)

$$\begin{bmatrix} -5 & -4 & 8 \\ 1 & -5 & -6 \end{bmatrix}$$

2. (x, y) → (y – 3, x + 1)

$$\begin{bmatrix} -1-3 & 5-3 & 6-3 \\ 5+1 & 4+1 & -8+1 \end{bmatrix} = \begin{bmatrix} -4 & 2 & 3 \\ 6 & 5 & -7 \end{bmatrix}$$

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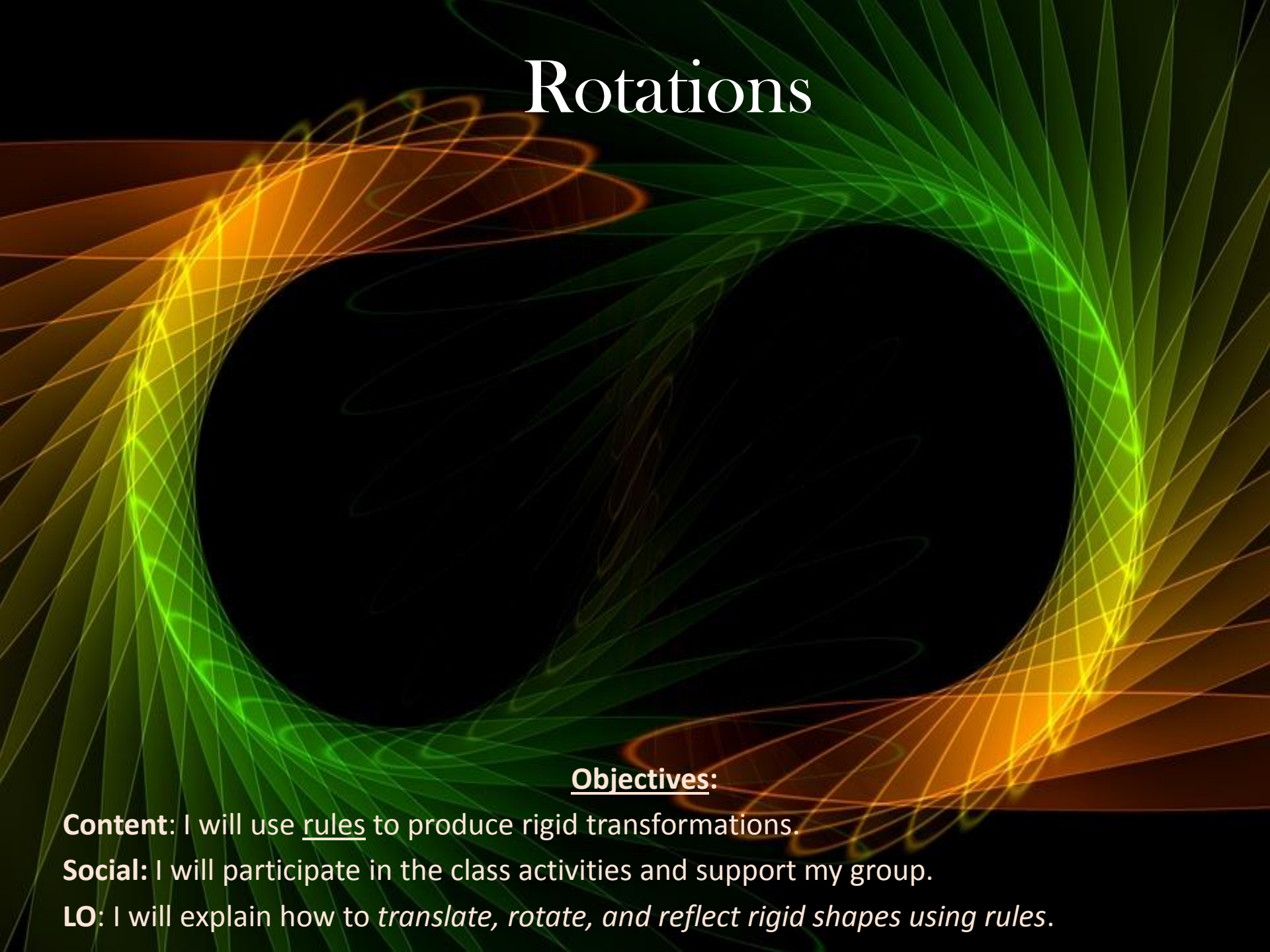
Rotations



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Let's Complete the Transformation Rules Table

Geometric Idea	Coordinate Model
Translation (oblique)	$(x, y) \rightarrow (x+h, y+k)$
Reflection across x-axis	
Reflection across y-axis	
Reflection across line y = x	
Reflection across line y = -x	
90° counterclockwise rotation	
180° rotation	
270° counterclockwise rotation	

h = horizontal
k = vertical

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Line ℓ is graphed in the xy-plane below.

If line ℓ is translated up 5 units and right 7 units, then what is the slope of the new line?

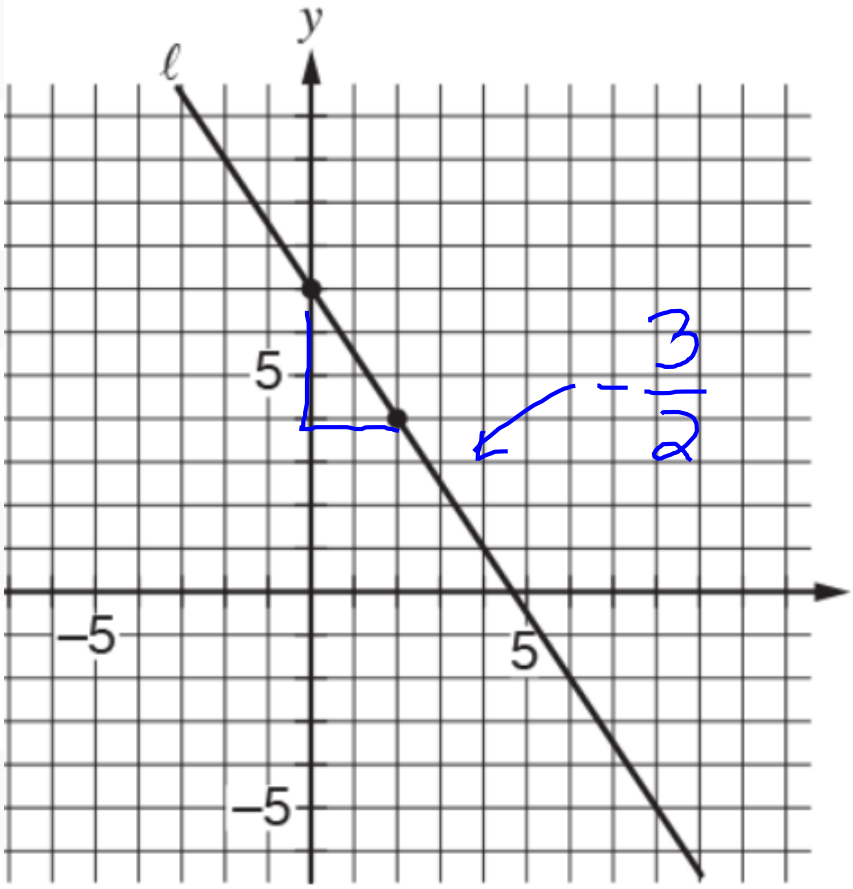
Select an Answer

(A) $-\frac{2}{5}$

(B) $-\frac{3}{2}$

(C) $-\frac{8}{9}$

(D) $-\frac{11}{14}$



Exit Slip

- Choose an answer
- Explain your reasoning.
- Choose an incorrect answer, explain the mistake someone who chose that one made.