

# TRANSFORMATIONS

## Flip Book

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# TRANSFORMATIONS

## ••••• Flip Book •••

**Objective:** This flip book was created to use as a review of transformations, including: translations, reflections, rotations, and dilations. Translations include both coordinate and vector notation. Reflection lines include the x-axis, y-axis,  $y = x$ ,  $y = -x$ , and other vertical and horizontal lines. Rotations include  $90^\circ$ ,  $180^\circ$ , and  $270^\circ$  (both counterclockwise and clockwise) rotations about the origin as well as other fixed points. Dilations use the origin as the center of dilation as well as other fixed points. In total, there are 39 practice problems in this book.

### PC Printing Directions:

- 1) Click **File-> Print**
- 2) Choose **Pages 3-10**
- 3) Click "**Print on Both Sides of Paper**" -> Choose "**Flip on Short Edge**"
- 4) Click "**Print**"

### MAC Printing Directions:

- 1) Click **File-> Print**
- 2) Choose **Pages 3-10**
- 3) Click "**Custom Scale**" and type in **97%**
- 4) Click "**Printer**" in the lower left corner
- 5) Select "**Media and Quantity**" and drop down to select "**Layout**"
- 6) Under "**Two Sided**", choose "**Short-Edge binding**"
- 7) Click "**Print**"
- 8) Click "**Print**"

**Once Printed:** Layer the pages as shown below. Flip the top over, then staple.

**TO ROTATE A FIGURE ABOUT ANY FIXED POINT:**

- Draw vectors from the center of rotation to each point of the pre-image.
- Write the component form of each vector.
- Use the rotation rules about the origin rewrite each vector.
- Use the rotated vectors to plot each point of the image.

Graph and label each figure after the given rotation about  $P$ . Give the points of the image.

16  $90^\circ$  counterclockwise      17  $180^\circ$

18  $270^\circ$  counterclockwise      19  $90^\circ$  clockwise      20  $270^\circ$  clockwise

**ROTATIONS** (about any fixed point)

**DILATIONS** (centered at the origin)

**DILATIONS** (using any point as the center)

**SEQUENCES OF TRANSFORMATIONS**



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**TRANSLATIONS**

**REFLECTIONS**

**ROTATIONS** (about the origin)

**ROTATIONS** (about any fixed point)

**DILATIONS** (centered at the origin)

**DILATIONS** (using any point as the center)

**SEQUENCES OF TRANSFORMATIONS**