Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_

**2.4B NOTES – Rotations about the Origin**

*OBJECTIVE: rotate the figures 90 degrees clockwise, 180 degrees, 270 degrees clockwise, 90 degrees counterclockwise about the origin. CCSS: 8.G.1, 2 and 3*

*HW: 2.4B Homework (handout)*

90o Clockwise: 90o Counterclockwise:

(x, y) ↦ (x, y) ↦

180o About the Origin: 270o Clockwise:

(x, y) ↦ (x, y) ↦

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Rotate ABCD 90o Clockwise about the origin   |  |  |  | | --- | --- | --- | | **Figure ABCD** | **Work space** | **Figure A’B’C’D’** | | A (-3, 1) |  | A’ | | B (-5, 1) |  | B’ | | C (-6, 4) |  | C’ | | D (-2, 4) |  | D’ | | Image result for graphing |
|  |  |
| 2. Rotate ABCD 180o about the origin   |  |  |  | | --- | --- | --- | | **Figure ABCD** | **Work space** | **Figure A’B’C’D’** | | A (-3, 1) |  | A’ | | B (-6, 1) |  | B’ | | C (-5, 3) |  | C’ | | D (-2, 3) |  | D’ | | Image result for graphing |
| 3. Rotate ABCD 270o Clockwise about the origin   |  |  |  | | --- | --- | --- | | **Figure ABCD** | **Work space** | **Figure A’B’C’D’** | | A (0, 4) |  | A’ | | B (2, 6) |  | B’ | | C (6, 4) |  | C’ | | D (2, 2) |  | D’ | | Image result for graphing |
|  |  |
| 4. Rotate ABCD 90o Counterclockwise about the origin   |  |  |  | | --- | --- | --- | | **Figure ABCD** | **Work space** | **Figure A’B’C’D’** | | A (0, 4) |  | A’ | | B (2, 6) |  | B’ | | C (6, 4) |  | C’ | | D (2, 2) |  | D’ | | Image result for graphing |

What did you notice about #3 and #4? Why did this occur?

|  |
| --- |
| **WARM UP (2.4B)**  **Give the ordered pair of the prime coordinates.**   1. Translate 2 units right and 3 units down: (4, -1) 2. Translate 3 units left and 5 units up: (-3, 7) 3. Reflect in the x-axis: (3, -4). 4. Reflect in the y-axis: (3, -4).   5. Rotate 180o: (-5, 1) 6. Rotate 90o Counterclockwise: (-5, 1) |

