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) |

