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| Learning Card # \_\_\_\_\_\_ | Name:  |
| Facts!Translations are \_\_\_\_\_\_\_\_\_\_\_\_ transformations. Meaning, the \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_ are not affected, only the \_\_\_\_\_\_\_\_\_\_\_\_\_\_. | Notation:$$(x\pm a, y \pm b)$$ |
| Example:The quadrilateral ABCD is translated up 5 and left 3.A(-1, 3) B(2, -1) C(5, 4) D(-5, -7). State A’B’C’D’  |  A (2, 5)B (-3, 6) C (5, -2)Graph the image if it was translated (x + 2, y + 3) |
| Translations |

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| Learning Card # \_\_\_\_\_\_ | Name:  |
| Facts!Reflections are the \_\_\_\_\_\_\_\_\_\_ distance from the “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”. | X-axis Y-axisReflect A(-2, 3) B(4,1) C(0, -5) |
| $y=x$ $y=-x$Reflect A(-2, 3) B(4,1) C(0, -5) | Horizontal and Vertical LinesY =X =  |
| Reflections |
| Learning Card # \_\_\_\_\_\_ | Name:  |
| Facts!Rotating 180 is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ no matter which direction.Rotating 90 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the same as 270 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Rotating 90 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the same as 270 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | RULES!180 90 CW 90CCW |
| Rotate A(-2, 3) B(4,1) C(0, -5)180 270 CW | Graph and rotate 90 CWA(3, 6) B(1, -5) C(-2, 0) |
| Rotations |