**Intro to Geometry** (G.GPE.B.4/5) Name: \_\_\_\_\_\_\_\_\_\_\_Key\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
**Unit One B: Coordinate Geometry Formulas Graphic Organizer** Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_

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| **Slope** | **Distance/Length** | **Midpoint** |
| *m = rise*  (use with graph)  *run***1.***m* = y2 – y1 (use with points)  *x2 – x1***2.**Parallel lines have the SAME slope.**3.**Perpendicular lines have the OPPOSITE and RECIPROCAL slopes.**4.** | $a^{2}+b^{2}=c^{2}$ *(Right triangle)***1.**$$d= \sqrt{(x\_{2}-x\_{1})^{2}+(y\_{2}-y)^{2}} $$**2.** Use with points | $(\frac{x\_{1}+x\_{2}}{2}$ ,$ \frac{y\_{1}+y\_{2}}{2}$ )\* Average of the endpoints |

Ex. y = mx + b → y = ½ x + 5

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| **Writing Equations of Lines:** |
| **Step One:**Find the slope (using one of the 4 methods)or solve the equation for yEx. 2x - 3y = 6 - 3y = -2x + 6 y = 2/3x – 2 → slope = 2/3 | **Step Two:**Plug the slope and an ordered pair of the line into y = mx + b and solve for b |

**Geometry** (G.CO.11) **Unit One B: Parallelograms Graphic Organizer**

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| **Properties of Parallelograms:** |
| **1.** $∥$gram 🡪 opposite sides parallel (definition of parallelogram) |  |
| **2.** $∥$gram 🡪 opposite sides congruent | \*\*oo |
| **3.** $∥$gram 🡪 opposite angles congruent |  |
| **4.** $∥$gram 🡪 consecutive angles supplementary | \* + o = 180$°$\*\*oo |
| **5.** $∥$gram 🡪 diagonals bisect each other |  |

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| **Proving Quadrilaterals are Parallelograms:** |
| 1. If quad has both pairs of opposite sides parallel 🡪 $∥$gram

(definition of parallelogram) |  |
| 1. If quad has both pairs of opposite sides congruent 🡪 $∥$gram
 |  |
| **3.** If quad has both pairs of opposite angles congruent 🡪 $∥$gram | \*\*oo |
| **4.** If quad has diagonals that bisect each other 🡪 $∥$gram |  |
| **5.** If quad has one pairs of opposite sides **both** parallel & congruent 🡪 $∥$gram  |  |