Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| **Use the following to review for you test. Work the Practice Problems on a separate sheet of paper.** | | | |
| **What you need to know & be able to do** | **Things to remember** | **Problem** | **Problem** |
| **Midpoint** |  | 1. Find the midpoint of (5, 1) and (6, 7). | 1. Find the coordinates of the **other endpoint** of a segment with an endpoint of (-2, 2) and a midpoint (8, 3). |
| **Distance and Applications** | * Find the distance between two people. * Pay attention to Direction: North and East are positive, South and West are negative | 1. Brandy and Mandy are in the pool playing a game of Marco Polo. Brandy swims 10 ft south and 7 ft east of base. Mandy swims 6 ft north and 5 ft west from where they started together in the middle of the pool. How far apart are Brandy and Mandy? | |
| * Decide if a point lies on a circle: Find the length of the radius and see if the other distance is the same. | 1. Determine whether Point A (-5, 8) lies on the circle whose center is Point C (1, 2) and which contains the Point P (7, -4). | |
| * Use Slope and Distance to prove that a shape is a specific type of quadrilateral or triangle * Parallel and Perpendicular: Use Slope * Congruent: Use Distance | 1. Given that a rhombus has **4 congruent sides** and **opposite sides parallel**, prove the following is a rhombus.   **Lengths**  **A**  **C**  **B**  **D**  **AB**: **BC**:  **CD**: **DA**:  **Slopes**  **AB**: **BC**:  **CD**: **DA**: | |
| **Perimeter and Area** | * Perimeter: Distance Around an Object * Area of a Parallelogram:   Length \* Height   * Area of a Triangle:   ½ (base)(height)   * Area of a Trapezoid:   ½(b1 + b2)h | 1. Find the area and perimeter of the figure. | 1. Find the area and perimeter of the figure. |
| **Writing the Equation of a Line** | * Two Points: Find the slope, plug in slope and one point into y=mx+b and solve for b, then sub m and b into slope intercept form * Parallel: Use the slope and solve for b * Perpendicular: Use the opposite reciprocal slope and solve for b | 1. Write the equation of line that passes through the points (-5, -1) and (-3, 1). | 1. Write the equation of line that passes through the points (2, 5) and (0, -1). |
| 1. Write an equation of the line that passes through   (-3, 4) and is parallel to  Y = -3x – 1. | 1. Write an equation of the line that passes through (5, -3) and is perpendicular to y = -5/2x+1. |
| **Partitions** | * Use the formula | 1. Find a point P on the segment with endpoints **A(-1, -3)** and **B(7, 1)** that partitions it in a 3:1 ratio. | 1. Find a point T on the segment with endpoints **C(-4, -6)** and **D(2, 3)** that partitions it in a 2:1 ratio. |
| **Circles**  **Standard Form**    **General Form** | Converting standard to general form   * Multiply the binomials out by separating the terms that are square * Combine like terms * Set equal to 0 | 1. Write the equation of the circle in standard form.   [image] | 1. Convert your answer from #14 to the General Form. |