|  |  |  |
| --- | --- | --- |
| **STATION 1: PARALLEL AND PERPENDICULAR LINES** | | |
| 1) | | 2) |
| **STATION 2: MIDPOINT AND DISTANCE FORMULA** | | |
| JK \_\_\_\_\_\_\_\_\_\_ JL \_\_\_\_\_\_\_\_\_\_  KL \_\_\_\_\_\_\_\_\_\_ JM \_\_\_\_\_\_\_\_\_\_  MK \_\_\_\_\_\_\_\_\_\_  Midpoint of segment JK = \_\_\_\_\_\_\_\_\_\_\_  ***Conclusion Questions:***   * Do you notice anything interesting about the lengths of segments JL and KL? * What is special about the point M? | | |
| **STATION 3: ROTATION, TRANSLATION, AND REFLECTION** | | |
| Write the new coordinates of *A’B’C’D’* below after the translation of ( x + 1, y – 7)  *A’:\_\_\_\_\_\_\_\_\_ B’:\_\_\_\_\_\_\_\_*  *C’:\_\_\_\_\_\_\_\_ D’:\_\_\_\_\_\_\_\_*  Write the new coordinates of *A”B”C”D”* below after reflecting over the **y-axis**  *A’’:\_\_\_\_\_\_\_\_\_ B’’:\_\_\_\_\_\_\_\_*  *C’’:\_\_\_\_\_\_\_\_ D’’:\_\_\_\_\_\_\_\_*  Write the new coordinates of *A’’’B’’’C’’’D’’’* below after the **270⁰ clockwise rotation**  *A’’’:\_\_\_\_\_\_\_\_\_ B’’’:\_\_\_\_\_\_\_\_*  *C’’’:\_\_\_\_\_\_\_\_ D’’’:\_\_\_\_\_\_\_\_* | | |
| **STATION 4: DILATIONS** | | |
| **Rule:** where *f* represents the scale factor. This can also be represented as  1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  2. ***Scale Factor:*** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  ***New Vertices:***  *A’:\_\_\_\_\_\_\_\_\_ B’:\_\_\_\_\_\_\_\_ C’:\_\_\_\_\_\_\_\_* | | |
| **3.** **Graph for (a) and (d)**   1. Scale Factor: \_\_\_\_\_\_\_\_\_\_\_ 2. New coordinates   *P’:\_\_\_\_\_\_\_\_\_ Q’:\_\_\_\_\_\_\_\_*  *R’:\_\_\_\_\_\_\_\_ S’:\_\_\_\_\_\_\_\_* | | |
| **STATION 5: PROOFS** | | |
| Write a two-column proof:  **Given:** ,  **Prove**: | Write a proof for the following:  **Given:** *, D* is the midpoint of *.*  **Prove:** | |