Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ www.danielselements.weebly.com

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| **Key Concepts** | **Notes** |
| GeoGebra | <http://www.geogebra.org>Experiment with creating points, lines, segments, angles, etc. |
| Perpendicular |  |
| Perpendicular bisector |  |
| Midpoint formula | On a number line In the coordinate plane |
| **Problem 1** | a. $\overbar{AB}$ has endpoints at -4 and 9. What is the coordinate at its midpoint?b. $\overbar{EF}$ has endpoints *E*(7, 5) and *F*(2, -4). What are the coordinates of its midpoint *M*? |
| **Problem 2** | The midpoint of $\overbar{CD}$ is *M*(-2, 1). One endpoint is *C*(-5, 7). What are the coordinates of the other endpoint *D*? |
| Distance formula |  |
| **Problem 3** | What is the distance between *U*(-7, 5) and *V*(4, -3)? Round to the nearest tenth. |

APPLICATION

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| 1. $\overbar{RS}$ has endpoints *R*(2, 4) and *S*(-1, 7). What are the coordinates of its midpoint *M*? |  |
| 2. The midpoint of $\overbar{BC}$ is (5, -2). One endpoint is *B*(3, 4). What are the coordinates of endpoint *C*? |  |
| 3. What is the distance between points K(-9, 8) and L(-6, 0)? |  |

 COMPREHENSION