Lesson 7: Distance on the Coordinate Plane

Mrs. Faour/Lesson Notes

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| * Use the absolute value to determine the distance between integers on the coordinate plane in order to find side lengths of polygons.
* All of the segments are *all either vertical or horizontal.*
* *If the -coordinates were the same for both points, then the segment was vertical.*
* *If the -coordinates were the same, then the segment was horizontal.*
* How did you calculate the length of the segments given the coordinates of the endpoints?

*\*If the coordinates that were not the same had the same sign, we subtracted the absolute values of the coordinates.**\*If the coordinates that were not the same had different signs, we added the absolute values of the coordinates.* |

You are required to submit the following:

* Copy Notes/Math notebook
* Complete the Problem-Set (1-6)
* Exit Ticket

Classwork

Example

Determine the lengths of the given line segments by determining the distance between the two endpoints.

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| **Line Segment** | **Point** | **Point** | **Distance** | **Proof** |
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| **Line Segment** | **Point** | **Point** | **Distance** | **Proof** |
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Exercise

Complete the table using the diagram on the coordinate plane.



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| Line Segment | Point | Point | Distance | Proof |
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Problem Set

1. Given the pairs of points, determine whether the segment that joins them is horizontal, vertical, or neither.
	1. and
	2. and
	3. and
2. Complete the table using absolute value to determine the lengths of the line segments.

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| **Line Segment** | **Point** | **Point** | **Distance** | **Proof** |
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1. Complete the table using the diagram and absolute value to determine the lengths of the line segments.



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| **Line Segment** | **Point** | **Point** | **Distance** | **Proof** |
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| **Line Segment** | **Point** | **Point** | **Distance** | **Proof** |
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1. Complete the table using the diagram and absolute value to determine the lengths of the line segments.

1. Name two points in different quadrants that form a vertical line segment that is units in length.
2. Name two points in the same quadrant that form a horizontal line segment that is units in length.