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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_**Lesson 49** Geometry |

**Opening Exercise**

Given: Quadrilateral ABCD with coordinates A , B , C  and D 

## Plot quadrilateral ABCD

1. Find the following slopes:

 *m*AB =

 *m*BC =

 *m*CD =

 *m*DA =

1. Find the length of the following sides:

AB =

 BC =

CD =

DA =

## What do you notice about quadrilateral ABCD?

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| **Parallelogram**: a quadrilateral with two pairs of opposite sides parallel**Properties of Parallelograms**Opposite sides of a parallelogram are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Opposite angles of a parallelogram are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Consecutive angles of a parallelogram are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Diagonals of a parallelogram \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. In ,  is exceeds twice the 2. In ,  and

measure of  by 15. Find . . Find .

1. In ,  and 4. In , diagonal , 

. Find the length of . and . Find *x*.