Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Table #: \_\_\_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

**7.1A Adjacent and Vertical Angles\_Classwork**

*Objective: identify adjacent and vertical angles; find angle measures using adjacent and vertical angles. CC.SS.7.G.5*

*HW: 7.1A worksheet*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **ADJACENT ANGLES**  Two angles are adjacent angles when they \_\_\_\_\_\_\_\_\_\_\_\_\_\_ a common side and have the \_\_\_\_\_\_\_\_\_\_\_\_\_ vertex.   |  |  | | --- | --- | | **EXAMPLE 1** | Two examples for adjacent angles:  Two examples for non-adjacent angles: |   ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++  **VERTICAL ANGLES**  Two angles are vertical angles when they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles formed by the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of two lines. Vertical angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ angles, meaning they have the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ measure.   |  |  | | --- | --- | | **EXAMPLE 2** | Two examples for vertical angles:  Two examples for non-vertical angles: |   ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++  **LINE:**  *A straight line that as a measurement of \_\_\_\_\_\_\_\_\_. Two angles that form a straight line is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.*   |  |  | | --- | --- | | **EXAMPLE 3** | Two examples for linear pairs  Two examples for non-linear pairs: | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **EXAMPLE 4** | *There are different ways to write angle notation:*   |  |  |  |  | | --- | --- | --- | --- | |  | *or* | *is adjacent to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_* | *and \_\_\_\_\_\_\_\_\_\_\_\_\_ are vertical angles* | |  |  |  |  | |  |  |  |  | |  |  |  |  | |

|  |  |
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|  | Image result for perpendicular lines |

**EXAMPLE 5** Name two pairs of adjacent angles and two pairs of vertical angles in the figure.

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Adjacent Angles:  \*  \*  Vertical Angles  \*  \* | 2. | Adjacent Angles:  \*  \*  Vertical Angles  \*  \* |

**EXAMPLE 6** Draw a pair of adjacent angles with the given description.

|  |  |  |
| --- | --- | --- |
| 1. Both angles are acute | 1. One angle is acute, and one is obtuse. | 1. The sum of the angle measures is 135°. |

**EXAMPLE 7** Use the diagram below to determine whether the statement is ALWAYS, SOMETIMES, or NEVER TRUE. Explain why.

|  |  |
| --- | --- |
|  | 1. When the measure of ∠1 is 70°, the measure of ∠3 is 110°. 2. When the measure of ∠4 is 120°, the measure of ∠1 is 60°. 3. ∠2 and ∠3 are congruent. 4. The measure of ∠1 plus the measure of ∠2 equals the measure of ∠3 plus the measure of ∠4. |

