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| Vocabulary  Ex. 1 Using Definitions  Checkpoint  Ex. 2 Rewriting a Biconditional Statement  Ex. 3 Analyzing a Biconditional Statement  Ex. 4 Writing a Biconditional Statement  Checkpoint | Biconditional Statement -  Perpendicular Lines –  Line perpendicular to a plane -  Decide whether each statement about the diagram is true. Explain your answer using definitions.   1. <KLJ and <KJL are complementary 2. Line KL and line LJ are perpendicular 3. <MKJ is a right angle      1. <KJL is an acute angle 2. Point N is in the interior of <KLJ.   Rewrite the following biconditional statement as a conditional and its converse.  *An angle is a straight angle if and only if its measure is 120°.*  Conditional:  Converse:  Consider the following statement:  *x = 2 if and only if 3x + 5x = 10 x – 2x*   1. Is this a biconditional statement? b. Is the statement TRUE?   Each of the following statements is TRUE. Write the converse of each and decide whether the converse is true or false. If the converse is true, combine the statements to form a true biconditional statement. If false, state a counterexample.   1. If = 1, then x = 1. 2. If two angles are vertical angles, then they are congruent. 3. Converse:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   True or False  Biconditional:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. Converse:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  True or False  Biconditional:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. Two angles are supplementary if and only if the sum of their measures is 180°.   Conditional:  Converse:   1. Two segments are congruent if and only if they have the same length.   Is this a biconditional? True or False ……………Why? |