Name_____ Class_____ Date _____

Practice 2-2

Biconditionals and Definitions

Each conditional statement is true. Consider each converse. If the converse is true, combine the statements and write them as a biconditional.

1. If two angles have the same measure, then they are congruent.
2. If $2x - 5 = 11$, then $x = 8$.
3. If $n = 17$,then $|n| = 17$.
4. If a figure has eight sides, then it is an octagon.

Write the two conditional statements that make up each biconditional.

5. A whole number is a multiple of 5 if and only if its last digit is either a 0 or a 5.
6. Two lines are perpendicular if and only if they intersect to form four right angles.
7. You live in Texas if and only if you live in the largest state in the contiguous United States.

Explain why each of the following is not an acceptable definition.

8. An automobile is a motorized vehicle with four wheels.
9. A circle is a shape that is round.
10. The median of a set of numbers is larger than the smallest number in the set and smaller than the largest number in the set.
11. Cricket is a game played on a large field with a ball and a bat.
12. A rectangle is a very pleasing shape with smooth sides and very rigid corners.

Some figures that are *piggles* are shown below, as are some *nonpiggles.*

piggles nonpiggles

Tell whether each of the following is a *piggle.*

13.

14.

15.

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