Name_____ Date_____

1.A – Analyzing Conditional Statements

State the hypothesis and the conclusion of each conditional.

1) If $2x-1=5$, then $x=3$.

2) $8y=40$ implies $y=5$.

3) $\angle 1 \cong \angle 2$ if $m\angle 1 = m\angle 2$

Rewrite the conditional statements in if-then form.

4) When $x=6, x^2=36$.

5) The measure of a straight angle is $180°$.

6) Only people who are registered are allowed to vote.

For the given statements, write the if-then form, the converse, the inverse, and the contrapositive.

7) The complementary angles add up to $90°$.

If-then -

Converse -

Inverse -

Contrapositive -

8) $3x+10=16$, because $x=2$.

If-then -

Converse -

Inverse -

Contrapositive -

Decide whether the statement is true or false. If false, provide a counterexample.

9) If a polygon has five sides, then it is a regular polygon.

10) If $m\angle A$ is $85°$, then the measure of the complement of $\angle A$ is $5°$.

11) Supplementary angles are always linear pairs.

12) If a number is an integer, then it is rational.

12) If a number is a real number, then it is irrational.

Rewrite the definitions as a biconditional statement.

14) An angle with a measure between $90°$ and $180°$ is called obtuse.

15) Coplanar points are points that lie in the same plane.

Determine whether the statement is a valid definition (Answer: Valid or Not Valid).

16) If two rays are opposite rays, then they have a common endpoint.

17) If an angle is a right angle, then its measure is greater than that of an acute angle.

Write the converse of each true statement. Tell whether the converse is true. If false, explain why.

18) If $x > 4$, then $x > 0$.

19) If $x < 6$, then $-x > -6$.

20) If $x \leq -x$, then $x \leq 0$.