

Name _____ Date _____ Period _____

Deductive Reasoning***Underline the hypothesis, and circle the conclusion of each conditional statement.***

1. If the anchor gets loose, then the boat will drift.
2. If you study hard, then you will make a good grade on the test.
3. If $3x - 10 = 23$, then $x = 11$.

Write each statement in if-then form.

4. All music lovers buy cds.
5. An obtuse angle has a measure greater than 90° .

Write the converse, inverse, and contrapositive of each conditional statement.

6. If it is Saturday, then school is closed.

Converse: _____.

Inverse: _____.

Contrapositive: _____.

7. If two angles are adjacent, then they have a common vertex.

Converse: _____.

Inverse: _____.

Contrapositive: _____.

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Deductive Reasoning***Let p represent "Math is fun", and let q represent "Math is difficult."******Translate the following into symbolic form.***

8. Math is not fun. _____

9. Math is fun or math is difficult. _____

10. Math is not fun and math is difficult. _____

Translate the following from symbolic form to written form.11. $p \wedge \sim q$

_____.

12. $\sim q \vee p$

_____.

Write the converse of each of the following conditional statements, and then write the biconditional.13. If an angle is acute, then its measure is less than 90° .

converse: _____.

biconditional: _____.

14. If the measure of an angle is 180° , then it is a straight angle.

converse: _____.

biconditional: _____.