Geometry Name: _____
2.1-2.3 Review bookwork

Fill complete each statement and then use a core vocabulary term that is defined by the statement.

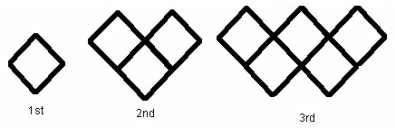
Word bank

biconditional statement		deductive reasoning	observations	conjecture
hypothesis	inductive reasoning	facts	counterexample	conclusion
negation	If-then form	converse	$q \rightarrow p$	$\sim p \rightarrow \sim q$
logical	If *p*, then *q*	exchanged	$p \rightarrow q$	$\sim q \rightarrow \sim p$
negate	contrapositive	inverse	conditional statement	

Definition	Vocabulary term
1. A _____ statement that has two parts, a _____ *p*, and a _____ *q*. In words _____ and with symbols _____.	
2. A related conditional statement in which the hypothesis and the conclusion are _____. In words: If __*q*, then *p*.__ and with symbols _____.	
3. A related conditional statement in which the hypothesis and the conclusion are negated. In words: If __not *p*, then not *q*.__ and with symbols _____.	
4. A related conditional statement in which first write the _____. Then, _____ both the hypothesis and the conclusion. In words: If __not *q*, then not *p*.__ and with symbols _____.	
5. When the _____ _____ and its _____ are both true, you can write "it as *p* if and only if *q*."	
6. Unproven statement based on _____.	
7. Reasoning based on patterns and _____.	
8. Reasoning based on _____, definitions, accepted properties and the laws of logic.	
9. Specific cases for which a statement is proven false.	

Describe the pattern. Then write or draw the next two numbers or figures.

1. 3, 5, 9, 15, 23 **Describe:** **Next two Numbers:**

2. 

Describe: **Next two Figures:**

p. 90

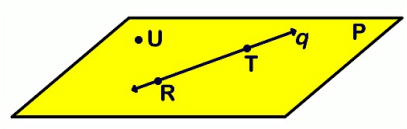
1. Write: Hypothesis, p: Conclusion, q:	2. Write: Hypothesis, p: Conclusion, q:
a. the conditional statement $p \rightarrow q$	a. the conditional statement $p \rightarrow q$
b. the converse $q \rightarrow p$	b. the converse $q \rightarrow p$
c. the inverse $\sim p \rightarrow \sim q$	c. the inverse $\sim p \rightarrow \sim q$
d. the contrapositive $\sim q \rightarrow \sim p$	d. the contrapositive $\sim q \rightarrow \sim p$

4.	5.

8.	9.	10.
11.	12.	

14. a.
14. b.

Use the diagram to write an example of each of the given postulate.



A. Two Point Postulate	
B. Line-Point Postulate	
C. Plane-point Postulate	
D. Plane-Line Postulate	
E. Three Point Postulate	

Decide whether <u>inductive</u> reasoning or <u>deductive</u> reasoning is used to reach the conclusion.

F. Every time you study for at least 1 hour for a quiz, you earn an A on the Quiz. So, yesterday, you studied for 90 minutes, and you assume that you will get an A on this quiz.

G. In an isosceles triangle, the base angles are congruent. The angles of ΔABC and $\angle A = 40°, \angle B = 40°, \angle C = 100°$. Therefore, ΔABC is an isosceles triangle.

Use the Law of Detachment to determine what you can conclude from the given information, if possible.

H. If <1 and <2 are vertical angles, then they are equal.
<1 and <2 are equal.
Conclusion: _____

I. If Chris is a sophomore, he takes English II.
Chris is a sophomore.
Conclusion: _____

Use the Law of Syllogism to draw a conclusion to write a new conditional statement that follows from the pair statements.

J. If I pass geometry, I won't have to go to summer school.
If I don't go to summer school, I'll get a job.
If I get a job, I'll make money.
Conclusion: _____