Chapter 2 Geometry

2024 - Sept 25-27

Week Sept 23-27, 2024 Overview

Monday	**- Review --- see previous slideshow for objectives & examples**
Tuesday	- TEST on Chapter 1
Wednesday	- NOTES for section 1 of Chapter 2 on Conditional Statements
Thursday	- Notes for section 2 of Chapter 2 on Reasoning: inductive vs deductive
Friday	- Practice Day/Makeup day

Wednesday - Friday learning targets from Chapter 2

		Learning Target	Success Criteria
Chapter 2: Reasoning and Proofs			
Chapter Learning Target Understand reasoning and proofs. **Chapter Success Criteria** • I can use inductive and deductive reasoning. • I can justify steps using algebraic reasoning. • I can explain postulates using diagrams.	2.1 Conditional Statements	Understand and write conditional statements.	• I can write conditional statements. • I can write biconditional statements. • I can determine if conditional statements are true by using truth tables.
	2.2 Inductive and Deductive Reasoning	Use inductive and deductive reasoning.	• I can use inductive reasoning to make conjectures. • I can use deductive reasoning to verify conjectures. • I can distinguish between inductive and deductive reasoning.
	2.3 Postulates and Diagrams	Interpret and sketch diagrams.	• I can identify postulates represented by diagrams. • I can sketch a diagram given a verbal description. • I can interpret a diagram.

Anchor Descriptor - G.1.3.2 Write formal proofs and/or use logic statements to construct or validate arguments.

Activities for week

Monday - Review all notes and create study guide for Chapter 1

Tuesday - TEST

Wednesday -

Use Handout from Resource pack on Reteaching pg 53-58 for notes.

*pg 57 is enrichment page

Use the Differentiation Handout for activity 2.1 in groups of rearranging statements for inverse and converse. It is a hands-on activity.

Thursday -

Use Handout from Resource pack on Reteaching pg 60-64 for notes.

*pg 63 is enrichment page

Use Dynamic Classroom “Explore IT” for examples and discussion on patterns and deductive reasoning from diagrams.

Friday -

Use Handouts from notes on Extra Practice 2.1 and 2.2. Then progress to the Black Practice Book pg 19 & 21 for more practice work - use a work paper as needed.

Section 1 of Ch. 2

The hypothesis is the statement following the “if”.

The conclusion is the statement following the “Then”.

The true conditional statement is only false if the conclusion is false following a true hypothesis.

Key Idea

Related Conditionals

Consider the conditional statement below.

Words If p, then q. **Symbols** $p \rightarrow q$

Converse To write the **converse** of a conditional statement, exchange the hypothesis and the conclusion.

Words If q, then p. **Symbols** $q \rightarrow p$

Inverse To write the **inverse** of a conditional statement, negate both the hypothesis and the conclusion.

Words If not p, then not q. **Symbols** $\sim p \rightarrow \sim q$

Contrapositive To write the **contrapositive** of a conditional statement, first write the converse. Then negate both the hypothesis and the conclusion.

Words If not q, then not p. **Symbols** $\sim q \rightarrow \sim p$

A conditional statement and its contrapositive are either both true or both false. Similarly, the converse and inverse of a conditional statement are either both true or both false. In general, when two statements are both true or both false, they are called **equivalent statements**.

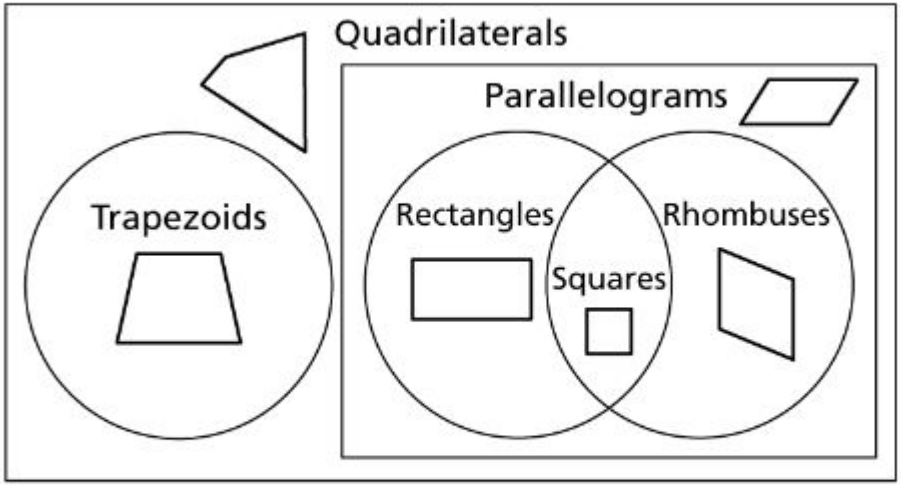
Section 2 Chapter 2 Notes

Inductive Reasoning uses PATTERNS to make a conjecture statement. A counterexample can prove it FALSE.

Deductive reasoning is based on linking true statements together based on FACTS.

Different Diagrams such as this Venn Diagram help to organize and show relationships.

Use the Venn diagram to determine whether each statement is true or false. Justify your answer.



i. If a quadrilateral is a square, then it is a rectangle.

ii. If a quadrilateral is a rhombus, then it is a square.

iii. If a quadrilateral is a rectangle, then it is a parallelogram.