Chapter 2 Geometry

2024 - Sept 25-Oct 4

Week Sept 30-Oct 4 2024 Overview

Monday - Use Diynamic Classroom 2.1 Practice Section #1-27 (matching mostly)

- Notes on patterning 2.2 and laws of logic using pg 21 as additional and then assign handout extra practice work for homework.

Tuesday - Use pg 21 Black Practice Workbook (BPW) as checking HW handout.

- Notes on Postulates 2.3 in handout and complete pg 23 BPW

Wednesday - Use Dynamic Classroom 2.2 Practice Section #1-28

Thursday -Use Dynamic Classroom 2.3 Practice Section # 1-21

Friday - Makeup Day/ Use handout of practice Quiz A to assess

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. • I can prove	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.

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** $\sim p \rightarrow \sim q$

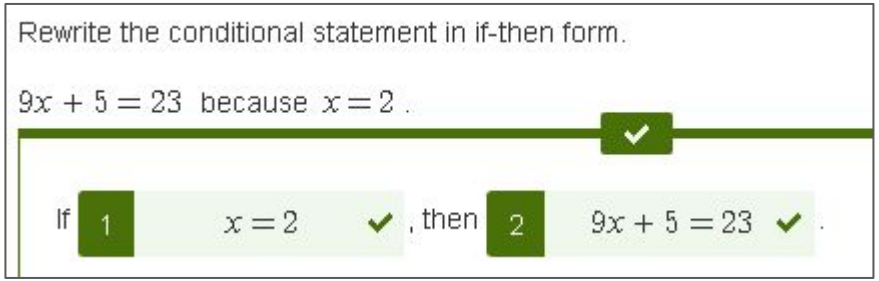
Contrapositive To write the **contrapositive** of a conditional statement, first write the converse. Then negate both the hypothesis and the conclusion.

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 2.1 Assignment

#5 careful - need to correct



Online Monday practice work seems like many problems but the dynamic classroom, multiple choice responses, and the odds with self check gives students the ability to work at their own pace so Mrs. Pletcher can focus on helping those struggling students.

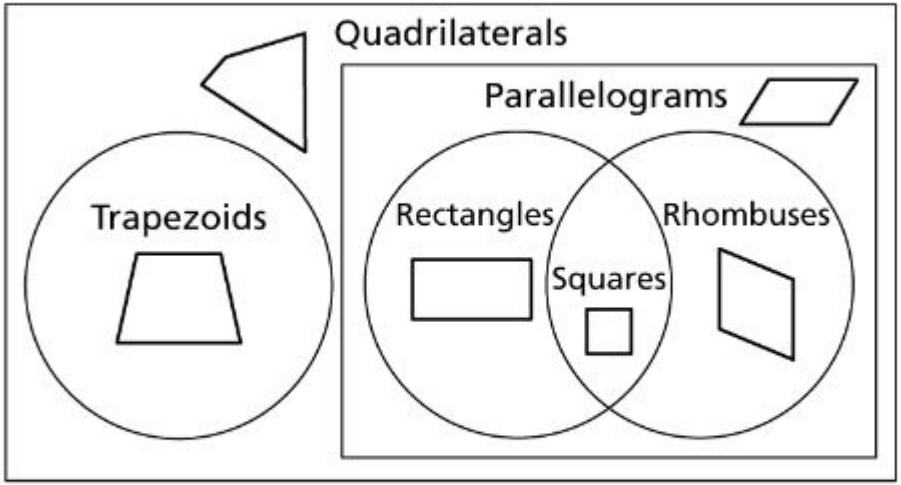
Section 2 Chapter 2 Notes

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.

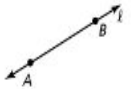
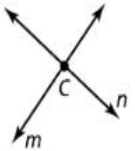
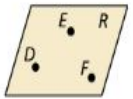
ii. If a quadrilateral is a rhombus, then it is a square.

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

Section 2.3 Notes

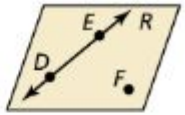
Postulates

Point, Line, and Plane Postulates

Postulate	Example
2.1 Two Point Postulate Through any two points, there exists exactly one line.	 Through points A and B, there is exactly one line ℓ. Line ℓ contains at least two points.
2.2 Line-Point Postulate A line contains at least two points.	
2.3 Line Intersection Postulate If two lines intersect, then their intersection is exactly one point.	 The intersection of line m and line n is point C.
2.4 Three Point Postulate Through any three noncollinear points, there exists exactly one plane.	
2.5 Plane-Point Postulate A plane contains at least three noncollinear points.	Through points D, E, and F, there is exactly one plane, plane R. Plane R contains at least three noncollinear points.

2.6 Plane-Line Postulate

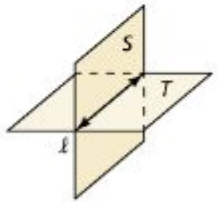
If two points lie in a plane, then the line containing them lies in the plane.



Points D and E lie in plane R, so $\overleftrightarrow{DE}$ lies in plane R.

2.7 Plane Intersection Postulate

If two planes intersect, then their intersection is a line.



The intersection of plane S and plane T is line ℓ.