Geometry

Feb 19-23, 2024
Chapter 7 Polygons Continue

Week Overview

Monday - Teacher Inservice - no school for students

Tuesday - Review Friday's Lesson on Parallelograms Ch 7.2 Section

Wednesday - Section 7.3 Proving Parallelograms

Thursday - Section 7.4 Special Parallelograms

Friday - Practice with parallelograms

This week's objectives from Sections 2-4 of Chapter 9.

Essential Question: What are the properties of parallelograms?		
Lesson Objective(s): Students will use properties to find side lengths and angles of parallelograms. Students will use parallelograms in the coordinate plane. **Previous Learning:** Students previously learned the Midpoint Formula and the slope formula. **New Vocabulary:** parallelogram **Previous Vocabulary:** quadrilateral, diagonal, interior angles, segment bisector	**CC State Standards** HSG-CO.C.11 HSG-SRT.B.5	**CC Mathematical Practice Focus** MP1, MP3, MP6, MP8

Essential Question: How can you prove that a quadrilateral is a parallelogram?		
Lesson Objective(s): Students will identify and verify parallelograms. Students will show that a quadrilateral is a parallelogram in the coordinate plane. **Previous Learning:** There are four theorems presented in this lesson, three of which are converses of theorems in the last lesson. **Previous Vocabulary:** diagonal, parallelogram	**CC State Standards** HSG-CO.C.11 HSG-SRT.B.5 HSG-MG.A.1	**CC Mathematical Practice Focus** MP2, MP3, MP8

Essential Question: What are the properties of the diagonals of rectangles, rhombuses, and squares?		
Lesson Objective(s): Students will use properties of special parallelograms. Students will use properties of diagonals of special parallelograms. Students will use coordinate geometry to identify special types of parallelograms. **Previous Learning:** Students have learned the properties of parallelograms in previous lessons. **New Vocabulary:** rhombus, rectangle, square **Previous Vocabulary:** quadrilateral, parallelogram, diagonal	**CC State Standards** HSG-CO.C.11 HSG-SRT.B.5 HSG-MG.A.1 HSG-MG.A.3	**CC Mathematical Practice Focus** MP2, MP3, MP6, MP8

Tuesday

Student Journal complete pg. 204 as warmup on parallelograms.

Review worksheet on Polygons and Angles (Kuta) from Friday

Check for the notes - colored coded parallelogram (Edpuzzle)

Do worksheet from Kuta on Parallelograms Pg 7 & 8

1-10 do as directed

#11-22 WRITE the equation = to solve for the variable, t

hen if time solve and answer questions

Do pg. 4

- 7.2 Puzzletime from packet -
- remember to write on the blank_____ and
- # 6- 10 are individual new problems just referencing the diagram.

Wednesday: 7.3 Core Concepts to prove parallelograms

Pg 208 SJ

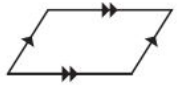
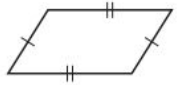
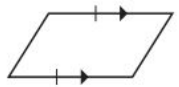
Do pg. 5 the

7.3 Puzzletime

CP students

HW; Pg. 209

Ways to Prove a Quadrilateral Is a Parallelogram

1. Show that both pairs of opposite sides are parallel. *(Definition)*	
2. Show that both pairs of opposite sides are congruent. *(Parallelogram Opposite Sides Converse)*	
3. Show that both pairs of opposite angles are congruent. *(Parallelogram Opposite Angles Converse)*	
4. Show that one pair of opposite sides are congruent and parallel. *(Opposite Sides Parallel and Congruent Theorem)*	
5. Show that the diagonals bisect each other. *(Parallelogram Diagonals Converse)*	

Thursday

Google Form - homework/review parallelograms Enter pg 209 into google form check

Drawing on Grid paper

Make Parallelogram

- Horizontal side 8 units long by an altitude (vertical height & perpendicular) of 4 units long.
- You make yours any slant length you want but must be not be a rectangle.
- DRAW FOUR of the on the grid paper
  - Extension: Find the slant side length. (Hint Right triangle breakdown, so use formulas)
  - Extension: Find the interior angles (Hint Right triangle breakdown, so use formulas)

Make Parallelogram into a rectangle of horizontal side 8 units long by 4 units

Make Parallelogram into a rhombus of sides 5 units horizontal side long ---

- How are you going to determine the slant length of 5 long? Hint - think of right triangle

Make Parallelogram into a Square of 5 units side long

Thursday - Add notes each of the following:

Properties of ***Rectangle***

Side Angle Diagonal Intersection of Diagonals Describe triangle breakdown

Properties of ***Rhombus***

Side Angle Diagonal Intersection of Diagonals Describe triangle breakdown

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Properties of ***Square*** ---- REGULAR Quadrilateral definition

Side Angle Diagonal Intersection of Diagonals Describe triangle breakdown

After 7.4 lesson - answer these questions (pg. 212 top)

Work with your group to determine whether the statement is sometimes, always, or never true.

1. Squares are rhombuses.
2. Rectangles are rhombuses.
3. Parallelograms are squares.
4. Squares are parallelograms.
5. Rectangles are squares.
6. Trapezoids are parallelograms.

Student Journal pg. 214 Complete with students

Friday

Warmup: Finish Student Journal pg. 214 Complete with students

Add to our BOARD flowchart/property list on the back of pg 2 in your packet

Practice with 7.4 Practice A worksheet (pg 8 in packet)

1-5 Use diagram to place each answer in its place,

also put answer beside #

#6-7 Write the equation, then solve and give final answer

#8-9 Graph on postnote/graph paper

10 CP students only: Complete on paper the proof

11 ALL do the problems ---

explain with a characteristic such as the interior angles are 90 and ._

Practice with online assignment BIM 7.4