

# Geometry

March 4- 8, 2024  
Chapter 7 Polygons Continue

# This week's objectives from Chapter 7.

7.5

**Lesson Objective(s):** Students will use properties of trapezoids.  
Students will use the Trapezoid Midsegment Theorem to find distances.  
Students will use properties of kites.  
Students will identify quadrilaterals.

**Previous Learning:** Students have learned the properties of parallelograms, rectangles, rhombuses, and squares in previous lessons. Students should also already be familiar with trapezoids and kites.

**New Vocabulary:** trapezoid, bases, base angles, legs, isosceles trapezoid, midsegment of a trapezoid, kite

CC State Standards	CC Mathematical Practice Focus
HSG-CO.C.11 HSG-SRT.B.5 HSG-MG.A.1 HSG-MG.A.3	MP2, MP3, MP6, MP8

## Week Overview: March 4-8, 2024

- Monday - Review the quiz 25 pts - parallelogram properties
- Tuesday - Lesson on 7.5 section OTHER special QUADs  
KITE  
TRAPEZOID and its isosceles version
- Wednesday - Practice 7.5 with BIM and worksheet “Puzzletime 7.5”
- Thursday - Review for TEST on Chapter 7
- Friday - TEST on Chapter 7 (2 out for field trip)

# Monday

Warmup from next slide 1 and 2

Review Thursday test:

- Have students color boxes with crayons on properties that are true and write on the test the reasons why the statements are false
- Have students draw the figures with the correct values on another sheet of paper - discuss the folding of symmetry on parallelograms or the cutting apart of the triangles to rotate to form the figure.

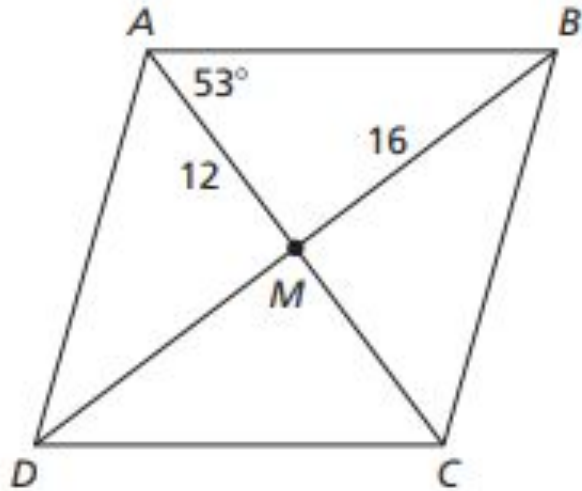
Assign the rhombus worksheet - kuta for homework, yet students only write the equations for the algebra problems

Discuss by drawing perpendicular lines the difference between  
a rhombus and a kite

# Monday Warmup

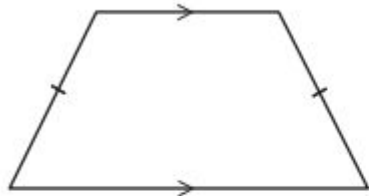
In Exercises 3–7, the diagonals of rhombus  $ABCD$  intersect at  $M$ . Given that  $m\angle MAB = 53^\circ$ ,  $MB = 16$ , and  $AM = 12$ , find the indicated measure.

3.  $m\angle AMD$
4.  $m\angle ADM$
5.  $m\angle ACD$
6.  $DM$
7.  $AC$

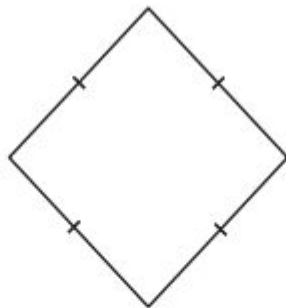


# Identify Shape - Monday Warmup

7)



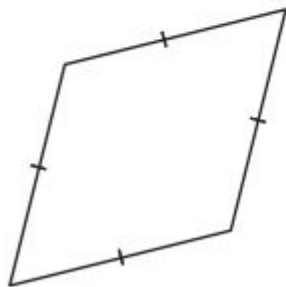
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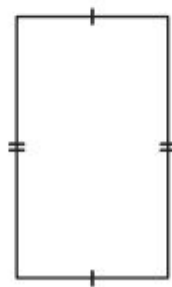
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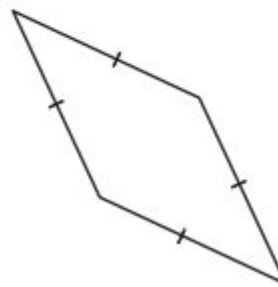
10)



11)



12)

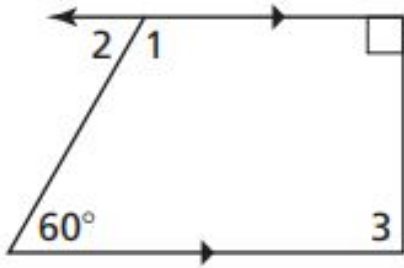




## Tuesday - Warmup #2

### 7.5 Warm Up

Use the diagrams to determine the measure of the angle.

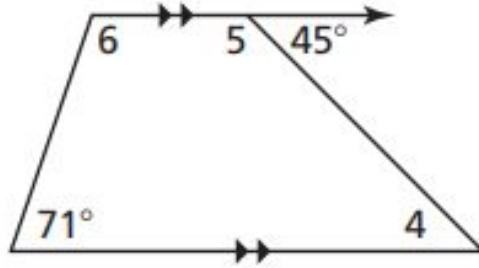


1.  $m\angle 1$

2.  $m\angle 2$

4.  $m\angle 4$

5.  $m\angle 5$



3.  $m\angle 3$

6.  $m\angle 6$



# Wednesday - practice day

Warmup - Packet 7.5 Practice A - start and will finish for homework

Review last night's homework questions

Use student journal on pg 219 on MIDSEGMENT of a trapezoid calculation

- Add it to formula sheet

Finish the Practice A worksheet

# Thursday - practice day

Warmup - Worksheet: Describing Quad Pretask Questions

Assign online BIM 7.5 Practice - only the darkened textbook problems

1	2	3*	4	5*	6	7*	8	9*	10
11	12	13*	14	15*	16	17*	18	19	20
21*	22	23*	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

# Friday

Do the **Describing and Defining Activity** as teacher led giving each row of students a strip to solve

Teacher starts with **example E, A**

Each student row gets one of the following strips and 5-10 minutes to discuss and draw a sketch B,C,D,F and prepare to present findings.

Review answers

If time, give the PostTask Questionnaire to complete for homework collection Monday.

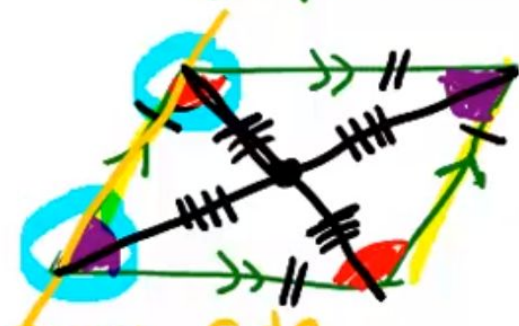


# PARALLELOGRAM --- defined by 2 pairs of parallel sides

EdPuzzle notes:

ck-12 Parallelograms: Lesson (Geometry Concepts)

→ a quadrilateral with 2 pairs of parallel sides



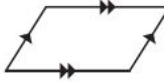
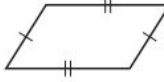
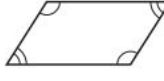

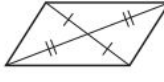
Same side interior angles

- ① opposite sides are  $\cong$
- ② opposite angles are  $\cong$
- ③ consecutive angles are supplementary
- ④ diagonals bisect each other

copy link

YouTube

## Ways to Prove a Quadrilateral Is a Parallelogram

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

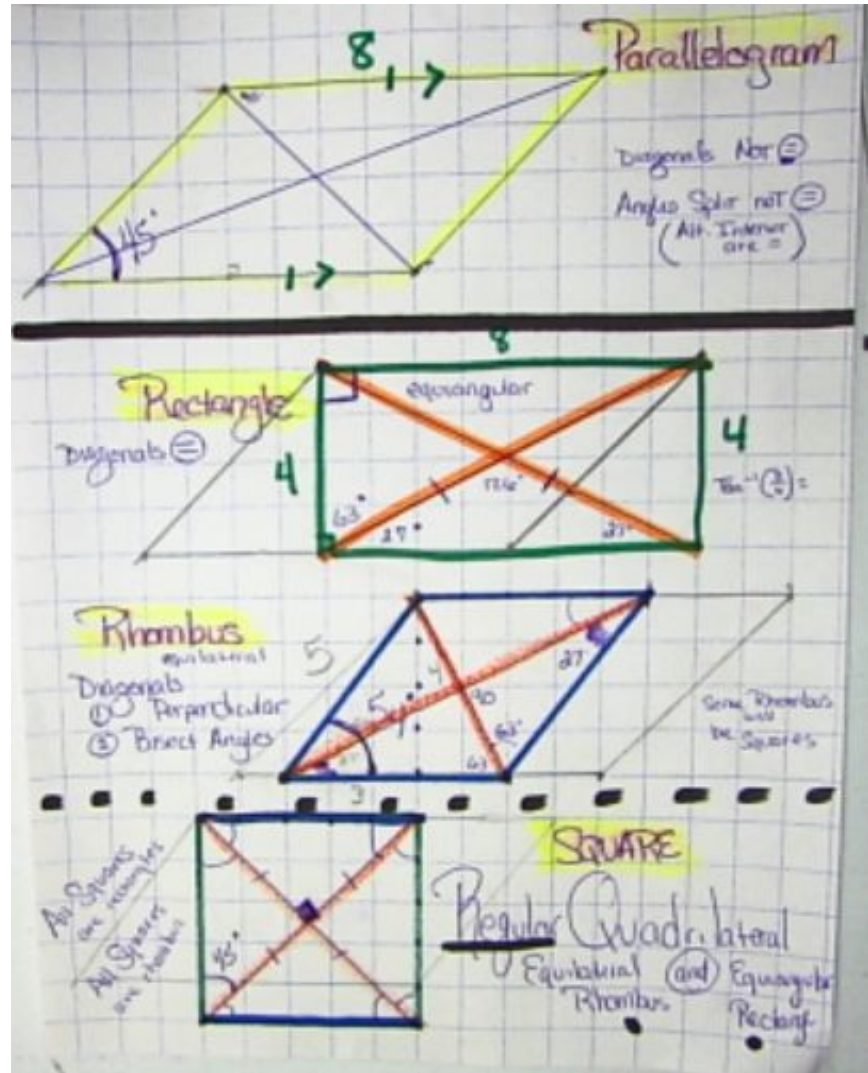
NOTES: focus on DIAGONALS relationships

Finishing Drawing Notes for use on TEST and a grade.

Due at time of formal unit test  
TBA

(10) points total

- Label shape and measures for sides, at least 2 angles at diagonal and polygon vertex intersection. (5)
- Have some notes on diagonals characteristics as properties of the shape. (3)
- Color (2)



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. *Always*

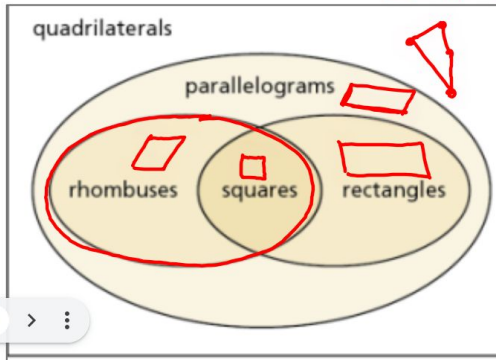
3. Parallelograms are squares. *Sometimes*

5. Rectangles are squares. *Sometimes*

2. Rectangles are rhombuses. *Sometimes (if square)*

4. Squares are parallelograms. *Always*

6. Trapezoids are parallelograms. *Never*

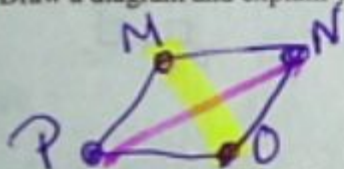




**7.4** Notetaking with Vocabulary (continued)

**Extra Practice**

1. For any rhombus  $MNOP$ , decide whether the statement  $\overline{MO} \cong \overline{NP}$  is *always* or *sometimes* true. Draw a diagram and explain your reasoning.



length  
**Diagonals**  
 Sometimes as a SQUARE

2. For any rectangle  $PQRS$ , decide whether the statement  $\angle PQS \cong \angle RSQ$  is *always* or *sometimes* true. Draw a diagram and explain your reasoning.



Always (alternating interior angles =)

In Exercises 3–5, the diagonals of rhombus  $ABCD$  intersect at  $E$ . Given that  $m\angle BCA = 44^\circ$ ,  $AB = 9$ , and  $AE = 7$ , find the indicated measure.

3.  $BC$  9

4.  $AC$

5.  $m\angle ADC$  92

all sides =  
 diagonal 7+7

Rhombus

