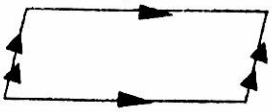
Geometry
Mr. Leon

Unit 6 Test Outline

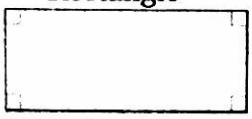
Things you should study for the test.

*The types of Quadrilaterals, along with their properties:

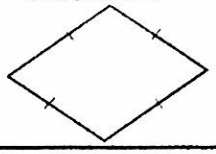
Parallelogram



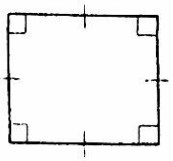
Rectangle



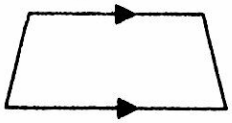
Rhombus



Square



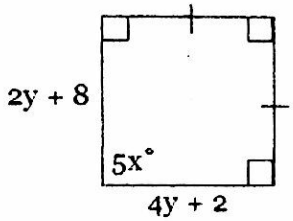
Trapezoid



Use the Checklist to practice the similar and different properties between the Parallelograms, Rectangles, Rhombuses and Squares.

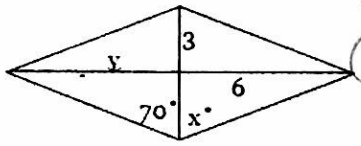
*Use the properties of these shapes to solve for variables in problems, as well as briefly explain your steps:

1.)



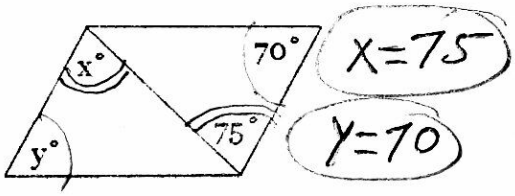
$5X = 90$
$X = 18$
$4y + 2 = 2y + 8$
$2y = 6$
$y = 3$

2.)



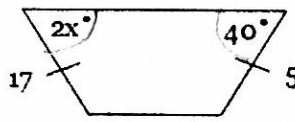
$X = 70$
$Y = 6$

3.)



$X = 75$
$Y = 70$

4.)



$2X = 40$
$X = 20$
$5Y + 2 = 17$
$5Y = 15$
$Y = 3$

Use the propeties to also fill in statements for these quadrilaterals:

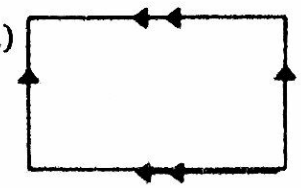
5.) All parallelograms have two pairs of opposite sides that are congruent and parallel.

6.) In an isosceles trapezoid, two pairs of angles and one pair of sides are congruent.

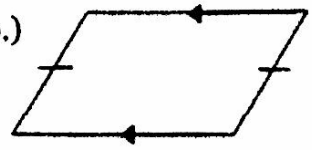
7.) The diagonals of a rectangle are congruent and bisect each other.

Given a quadrilateral with specific markings, state whether it is a parallelogram or not. Explain your reasoning on each.

8.)



Yes; both pairs of opp. sides are //.

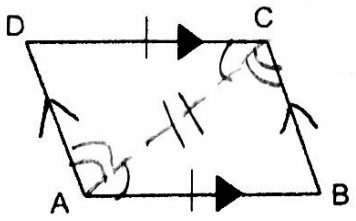
9.) 

No; The pair of opp. sides that are ≅ and //.

*Make sure you are prepared for more proofs:

Given: $\overline{AB} \cong \overline{DC}$; $\overline{AB} \parallel \overline{DC}$

Prove: Quad ABCD is a Parallelogram



Statements	Reasons
1. $\overline{AB} \cong \overline{DC}$; $\overline{AB} \parallel \overline{DC}$	1. Given
2. Draw $\overline{AC}$	2. 2 pts. determine exactly 1 line.
3. $\angle DCA \cong \angle BAC$	3. If // lines ACBAT, then alt. int. $\angle$'s are ≅
4. $\overline{AC} \cong \overline{AC}$	4. Reflexive
5. $\Delta DAC \cong \Delta BCA$	5. SAS Postulate
6. $\angle DAC \cong \angle BCA$	6. CPCTC
7. $\overline{AD} \parallel \overline{BC}$	7. If 2 lines ACBAT and Alt Int. $\angle$'s are ≅, then the lines are //.
8. Quad. ABCD is a $\square$	8. Def. of parallelogram

Lastly, remember the theorems for parallel lines and triangle congruence:

***Note**: These are only to be used in the proof, an NOWHERE ELSE.

-SSS

-SAS

-ASA

-AAS

-(R) HL

-CPCTC

-If // lines ACBAT, then Alt. Int. <'s are ≅

-If lines ACBAT and Alt. Int. <'s are ≅, then the lines are //.