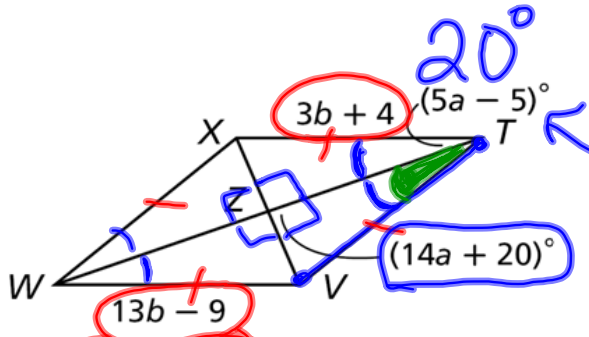
Warm Up



***TVWX* is a rhombus. Find *TV*. Find m∠*VTZ*.** = 20

$TV = 7.9$

$14a + 20 = 90$

$14a = 70$

$a = 5$

7.9

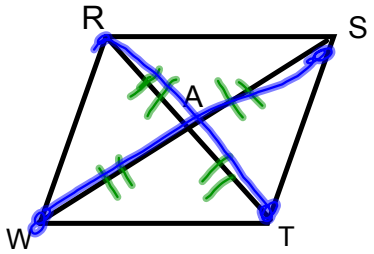
$3b + 4 = 13b - 9$

$b = 1.3$

HW Solutions p. 465 # 1-9,11-14

1. rhombus m<1 = m<2 = m<3 = m<4 = 38°
2. rectangle m<1 = 59°, m<2 = 31°, m<3 = 118°, m<4 = 31°
3. rectangle m<1 = 56°, m<2 = 68°, m<3 = 112°, m<4 = 56°
4. rhombus m<1 = 32°, m<2 = 90°, m<3 = 58°, m<4 = 32°
5. 26.8 in.
6. LB = 15, BP = 15, LM = 17
7. LB = 10, BP = 5, LM = 8
8. LB = 14, BP = 7, LM = $7\sqrt{5}/2 = 7.83$
9. LB = 12, BP = 12, LM = $2\sqrt{11} = 6.63$

11.



In quad RSTW, RT and SW bisect each other at A and RA = WA. RSTW must be a:

I. parallelogram

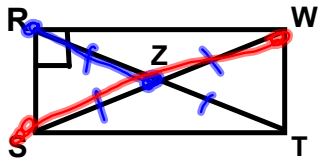
II. rectangle

III. square

A. I only **B. II only** **C. I and II**

D. II and III **E. I, II, and III**

12. x = 30



RZ = 2x + 5

SW = 5x - 20

rectangle

$2(2x+5) = 5x-20$

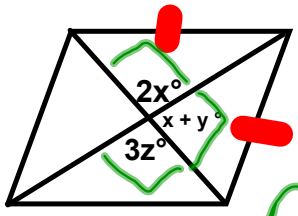
$4x + 10 = 5x - 20$

$-4x \qquad -4x$

$10 = x - 20$

$x = 30$

13. x = 45, y = 45, z = 30



rhombus

$2x = 90$

$x = 45$

$x + y = 90$

$3z = 90$

$z = 30$

$y = 45$

x = 5, y = 32, z = 7.5

14.

Square

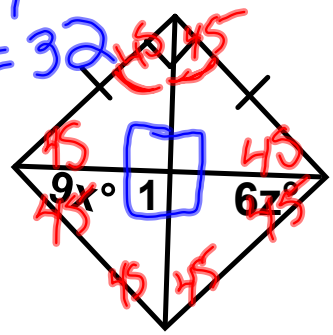
rhombus + rectangle

m < 1 = 3y - 6 = 90

+6 +6

3y = 96

y = 32



9x = 45

x = 5

6z = 45

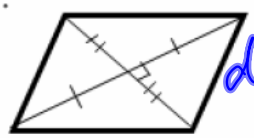
z =

Objective:
Review properties of
parallelogram, rectangle, rhombus, and square.

Prepare for 9.1 - 9.3 quiz.

Each figure is a **parallelogram** identify what special type it is

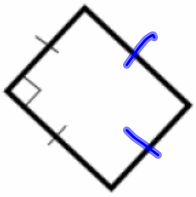
1.



diag ⊥

rhombus

2.

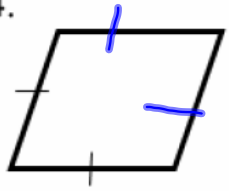


square

3.

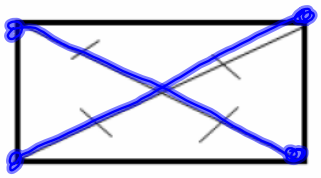
rectangle

4.



rhombus

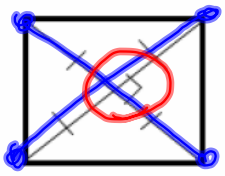
5.



rectangle

diag ≅

6.



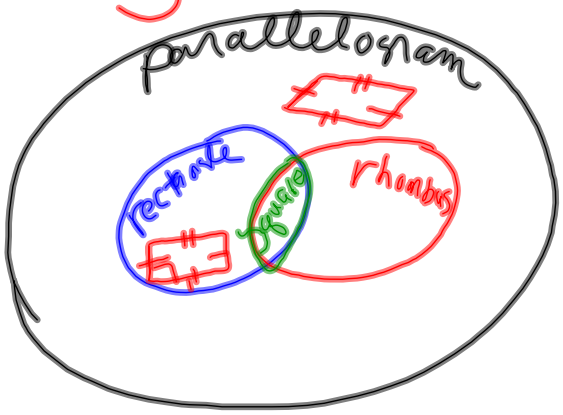
rectangle

rhombus

square

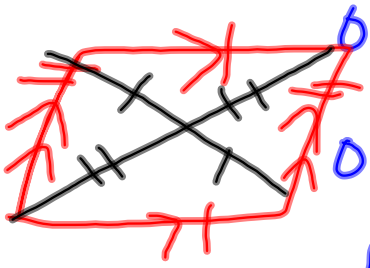
Determine whether the given statements are ALWAYS, SOMETIMES, or NEVER true.

1. A square is a rhombus. A
2. A rhombus is a square. S
3. A rectangle is a square. S
4. A parallelogram is a rectangle. S
5. A rhombus is a rectangle. S
6. A square is a parallelogram. A



List all properties of:

Parallelogram



opp sids parallel

opp sides ≅

opp ∠s ≅

diags bisect each other

consecutive ∠s supp

Rectangle

- 4 rt ∠s
- diags ≅

opp sids parallel

opp sides ≅

opp ∠s ≅

diags bisect each other

consecutive ∠s suppl

Rhombus

- 4 ≅ sides
- diags ~~opp~~ sids parallel
- diag bisect ∠s
- opp sides ≅
- opp ∠s ≅
- diags bisect each other
- consecutive ∠s supp

Square

opp sids parallel

opp sides $\cong$

opp $\angle$s $\cong$

diags bisect each other

consecutive $\angle$s suppl

- 4 $\cong$ sides
- diags $\perp$
- diag bisect $\angle$s

- 4 rt $\angle$s
- diags $\cong$

Name a condition which is sufficient to prove that a quadrilateral is a parallelogram.

HW # 99

Practice 9-3 # 1 - 6, 8 - 10

** Study for Quiz