Name __Key__   Date _____   Pd ____

7.4 Rectangles CYU

CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Classifying quadrilaterals	1, 2		
Properties of rectangles	3 - 8	15	16 - 22
Rectangle or NOT?	9, 10		
Rectangle diagonals	11 - 14		

Classify the quadrilateral. Explain your reasoning with properties.
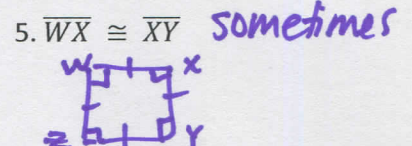
1.
rectangle
opp sides ≅
& ∡'s R 90°
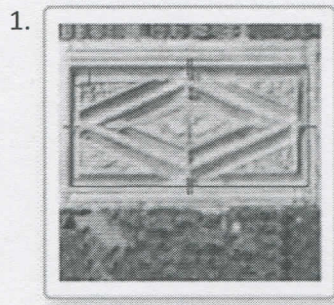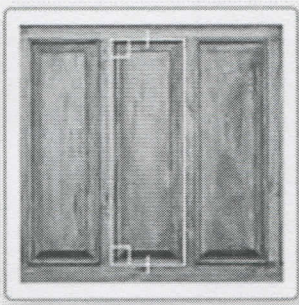
2.
rectangle
opp sides R //
∡'s R 90°

For any rectangle WXYZ, decide whether the statement is always or sometimes true. Draw a diagram and explain your reasoning.

3. ∠W ≅ ∠X   **always**

4. $\overline{WX} \cong \overline{YZ}$ **always**

5. $\overline{WX} \cong \overline{XY}$ **sometimes**

6. $\overline{WY} \cong \overline{XZ}$ **always**

7. $\overline{WY} \perp \overline{XZ}$ **sometimes**

8. ∠WXZ ≅ ∠YXZ   **sometimes**
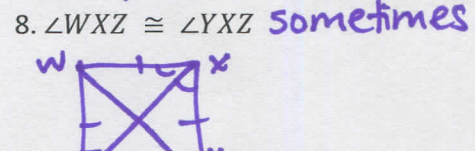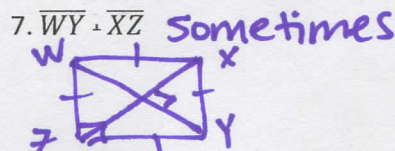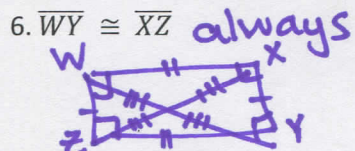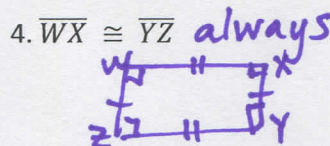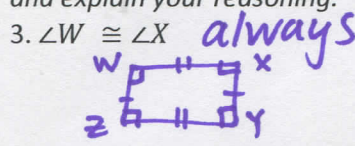
Determine whether the quadrilateral is a rectangle.

9.
not a
rectangle

10.
32 m
21 m
21 m
32 m
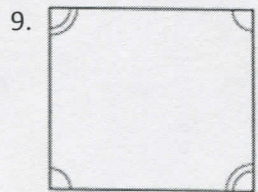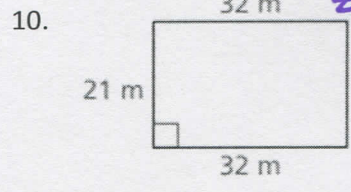
is a
rectangle
opp sides R ≅
& ∡'s R 90°

Find the lengths of the diagonals of the rectangle WXYZ.

11. WY = 6x − 7, XZ = 3x + 2

$X=3$

$WY=11=XZ$

12. WY = 14x + 10, XZ = 11x + 22

$X=4$

$WY=66=XZ$

13. WY = 24x − 8, XZ = − 18x + 13

$x=\frac{1}{2}$

$WY=4=XZ$
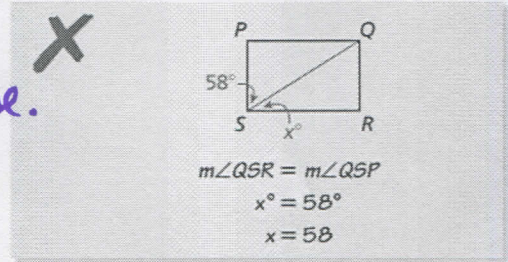
14. WY = 16x + 2, XZ = 36x − 6

$x=\frac{2}{5}$

$WY=8.4=XZ$

15. **ERROR ANALYSIS** Quadrilateral PQRS is a rectangle. Describe and correct the error in finding the value of x.

Diagonals do not necessarily bisect opp. ∡'s of a rectangle.

$X=32$

$m\angle QSR = m\angle QSP$

$x° = 58°$

$x = 58$

The diagonals of rectangle QRST intersect at P. Given that m∠PTS = 34° and QS = 10, find the indicated measure.

16. m∠QTR $= 56°$

17. m∠QRT $= 34°$

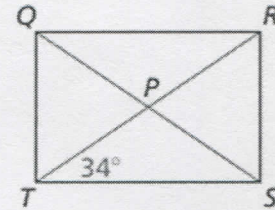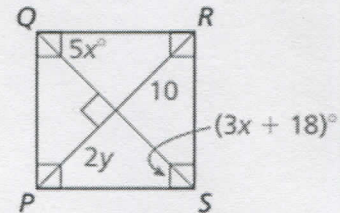18. m∠SRT $= 56°$

19. QP $= 5$

20. RT $= 10$

21. RP $= 5$

22. **MATHEMATICAL CONNECTIONS** Classify the quadrilateral. Explain your reasoning. Then find the values of x and y.

square; all 4 ∡'s R 90°; diagonals are ⊥; x=9; y=5

CYU Reflection: *How far can you go: basic, intermediate, or advanced?*
Rate your mastery level!
How confident are you with the skills this CYU covered? Circle the score you would give yourself.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

Basic — Intermediate — Advanced — Solved ALL!