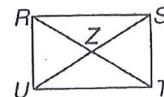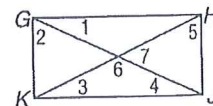NAME _key_ DATE _____ PERIOD _____

8-4 Practice

Rectangles

ALGEBRA *RSTU* is a rectangle.

1. If $UZ = x + 21$ and $ZS = 3x - 15$, find US.   78

2. If $RZ = 3x + 8$ and $ZS = 6x - 28$, find UZ.   44

3. If $RT = 5x + 8$ and $RZ = 4x + 1$, find ZT.   9

4. If $m\angle SUT = 3x + 6$ and $m\angle RUS = 5x - 4$, find $m\angle SUT$.   39

5. If $m\angle SRT = x^2 + 9$ and $m\angle UTR = 2x + 44$, find x.   -5 or 7

6. If $m\angle RSU = x^2 - 1$ and $m\angle TUS = 3x + 9$, find $m\angle RSU$.   24 or 3

GHJK is a rectangle. Find each measure if $m\angle 1 = 37$.

7. $m\angle 2$ 53

8. $m\angle 3$ 37

9. $m\angle 4$ 37

10. $m\angle 5$ 53

11. $m\angle 6$ 106

12. $m\angle 7$ 74

COORDINATE GEOMETRY Determine whether *BGHL* is a rectangle given each set of vertices. Justify your answer.

13. $B(-4, 3)$, $G(-2, 4)$, $H(1, -2)$, $L(-1, -3)$

yes   opp sides || consecutive sides ⊥

14. $B(-4, 5)$, $G(6, 0)$, $H(3, -6)$, $L(-7, -1)$

yes   diagonals are ≅

15. $B(0, 5)$, $G(4, 7)$, $H(5, 4)$, $L(1, 2)$

No, Diagonals NOT ≅

16. **LANDSCAPING** Huntington Park officials approved a rectangular plot of land for a Japanese Zen garden. Is it sufficient to know that opposite sides of the garden plot are congruent and parallel to determine that the garden plot is rectangular? Explain.

No; it is a Parrallelogram. More information needed.