7.4 Square CYU

Use when you get it right all by yourself

 ${old S}$ Use when you did it all by yourself, but made a silly mistake

 $\textit{\textbf{H}}$ Use when you could do it alone with a little help from teacher or peer

 ${\it G}$ Use when you completed the problem in a group

 \pmb{X} Use when a question was attempted but wrong (get help)

 $\pmb{\textit{N}}$ Use when a question was not even attempted

| CONCEPTS | BASIC | INTERMEDIATE | ADVANCED |
|--------------------------------|--------|--------------|----------|
| Vocabulary | 1 | | |
| Classifying quadrilaterals | 2 | 3 - 8 | 15 - 22 |
| Applying properties of squares | 9 - 14 | 23, 24 | |
| Distance formula | | | 15 - 16 |
| Perpendicular slopes | | | 15 - 16 |

1. VOCABULARY What is another name for an equilateral rectangle?

2. Classify the quadrilateral. Explain your reasoning.



Name each quadrilateral – parallelogram, rectangle, rhombus, or square – for which the statement is always true.

- 3. It is equiangular.
- 5. The diagonals are perpendicular.

- 4. It is equiangular and equilateral.
- 6. Opposite sides are congruent.

7. The diagonals bisect each other.

8. The diagonals bisect opposite angles.

The diagonals of square LMNP intersect at K. Given that LK = 1, find the indicated measure.9. m \angle MKN10. m \angle LMK

- 11. m∠LPK 12. KN
- 13. LN 14. MP



Pd

Date_____

Decide whether parallelogram JKLM is a rectangle, a rhombus, or a square. Give all names that apply. Explain your reasoning. 15. J(- 4, 2), K(0, 3), L(1, - 1), M(- 3, -2) 16.J(5, 2), K(2, 5), L(- 1, 2), M(2, -1)

Complete each statement with ALWAYS, SOMETIMES, or NEVER. Explain your reasoning.

- 17. A square is ______ a rhombus.
- 18. A rectangle is ______a square.
- 19. A rectangle _____ has congruent diagonals.
- 20. The diagonals of a square ______ bisect its angles.
- 21. A rhombus ______ has four congruent angles.
- 22. A rectangle _____ has perpendicular diagonals.
- 23. **ABSTRACT REASONING** Will a diagonal of a square ever divide the square into two equilateral triangles? Explain your reasoning.

24. **REASONING** Are all rhombuses similar? Are all squares similar? Explain your reasoning.

