

7.4 Square CYU

Use when you get it right all by yourself
S Use when you did it all by yourself, but made a silly mistake
H Use when you could do it alone with a little help from teacher or peer
G Use when you completed the problem in a group
X Use when a question was attempted but wrong (get help)
N Use when a question was not even attempted

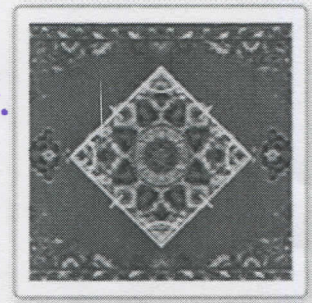
CONCEPTS	BASIC	INTERMEDIATE	ADVANCED
Vocabulary	1		
Classifying quadrilaterals	2	3 - 8	15 - 22
Applying properties of squares	9 - 14	23, 24	
Distance formula			15 - 16
Perpendicular slopes			15 - 16

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

Square

2. Classify the quadrilateral. Explain your reasoning.

Square; All sides $R \cong \frac{1}{2}$ all X 's $R \cong$.



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

3. It is equiangular.

rectangle, square

4. It is equiangular and equilateral.

square

5. The diagonals are perpendicular.

rhombus, square

6. Opposite sides are congruent.

parallelogram, rhombus, square

7. The diagonals bisect each other.

parallelogram, rectangle, rhombus, square

8. The diagonals bisect opposite angles.

rhombus, square

The diagonals of square LMNP intersect at K. Given that $LK = 1$, find the indicated measure.

9. $m\angle MKN = 90^\circ$

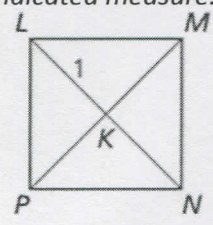
10. $m\angle LMK = 45^\circ$

11. $m\angle LPK = 45^\circ$

12. $KN = 1$

13. $LN = 2$

14. $MP = 2$



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)

rectangle, rhombus, square
Diagonals $R \cong \frac{1}{2} L$

16. J(5, 2), K(2, 5), L(-1, 2), M(2, -1)

rectangle, rhombus, square
Diagonals $R \perp \frac{1}{2} L$

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

17. A square is always a rhombus.

18. A rectangle is sometimes a square.

19. A rectangle always has congruent diagonals.

20. The diagonals of a square always bisect its angles.

21. A rhombus sometimes has four congruent angles.

22. A rectangle sometimes has perpendicular diagonals.

23. **ABSTRACT REASONING** Will a diagonal of a square ever divide the square into two equilateral triangles? Explain your reasoning.

no, diagonals always create 2 Rt Δ 's

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

yes. If the \angle 's of a rhombus R $60^\circ, 120^\circ, 60^\circ, 120^\circ$ then the diagonals bisect the opposite $120^\circ \angle$'s will divide the rhombus into 2 equilateral Δ 's.

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.

