

WB 6.5 Skills 1-6
prac 1-12

Geometry 6.5

Recognize and apply the properties of rhombi and squares

Determine whether a given quadrilateral is a rectangle, rhombus or square

rhombus (*diamond is not a geometry term!*)

square

diagonal

perpendicular

converse

little book--parallelogram, rectangle, rhombus, square

Quiz 6.3-6.4 today

Turn in HW after finishing FMC

will staple ET later (if any)

Quadrilateral Book

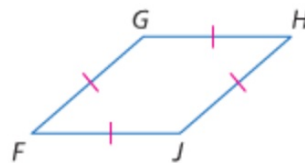
p1

p2

p3

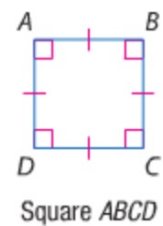
p4

1 Properties of Rhombi and Squares A **rhombus** is a parallelogram with all four sides congruent. A rhombus has all the properties of a parallelogram and the two additional characteristics described in the theorems below.



1. Diagonals of a rhombus are perpendicular.
2. Diagonals of a rhombus form congruent triangles.
3. Diagonals of a rhombus bisect opposite angles.

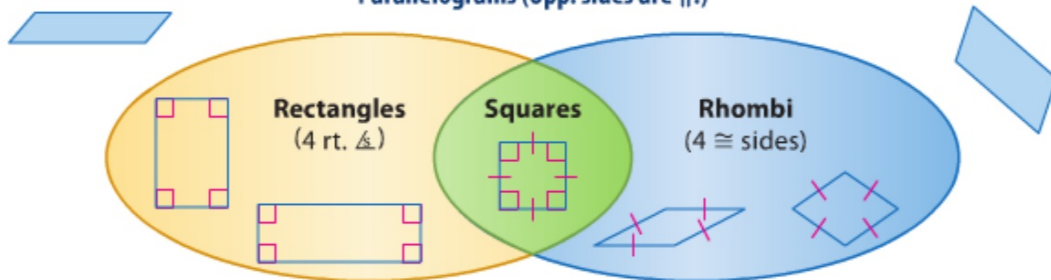
A **square** is a parallelogram with four congruent sides and four right angles. Recall that a parallelogram with four right angles is a rectangle, and a parallelogram with four congruent sides is a rhombus. Therefore, a parallelogram that is both a rectangle and a rhombus is also a square.



ConceptSummary Parallelograms



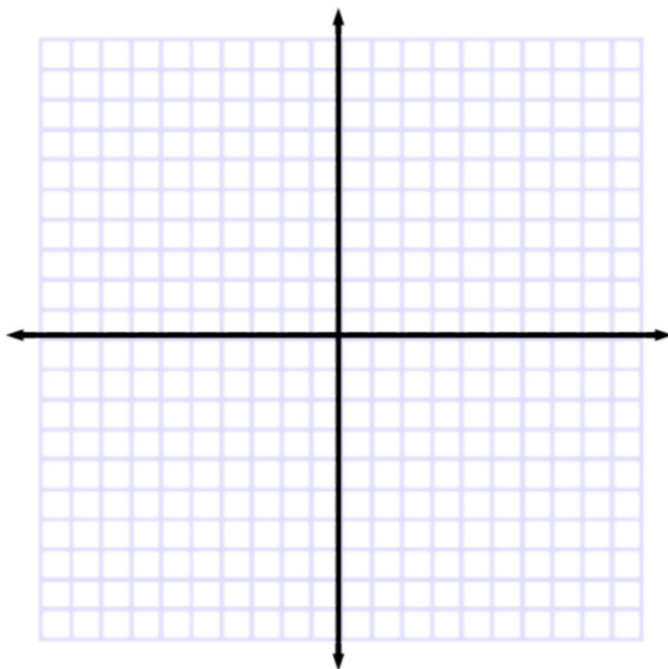
Parallelograms (Opp. sides are \parallel .)





Example 4 Classify Quadrilaterals Using Coordinate Geometry

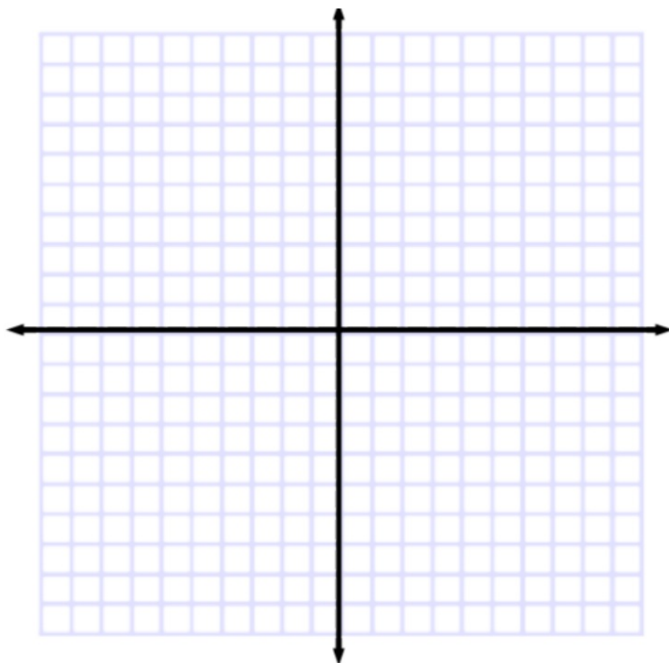
COORDINATE GEOMETRY Determine whether $\square JKLM$ with vertices $J(-7, -2)$, $K(0, 4)$, $L(9, 2)$, and $M(2, -4)$ is a *rhombus*, a *rectangle*, or a *square*. List all that apply. Explain.



Graph and make a preliminary decision. Do the math and prove it. (Can't go by eyeball)

Guided Practice

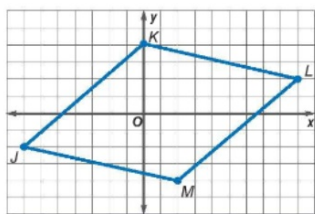
4. Given $J(5, 0)$, $K(8, -11)$, $L(-3, -14)$, $M(-6, -3)$, determine whether parallelogram $JKLM$ is a *rhombus*, a *rectangle*, or a *square*. List all that apply. Explain.



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Guided Practice

4. Given $J(5, 0)$, $K(8, -11)$, $L(-3, -14)$, $M(-6, -3)$, determine whether parallelogram $JKLM$ is a *rhombus*, a *rectangle*, or a *square*. List all that apply. Explain.

