

6.4 Rhombuses, Rectangles, and Squares

Goal: To be able to use the properties of special quadrilaterals

Warm Up

Tell whether the quadrilateral is a parallelogram. Explain your reasoning.

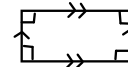
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A **rhombus** is a parallelogram with four congruent sides.



A **rectangle** is a parallelogram with four right angles.



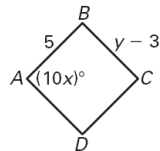
A **square** is a parallelogram with four congruent sides and four right angles.



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In the diagram, $ABCD$ is a square.

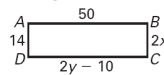
Find the values of x and y .



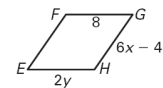
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Find the values of the variables.

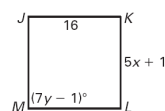
1. rectangle $ABCD$



2. rhombus $EFGH$



3. square $JKLM$

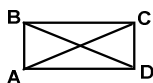


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The diagonals of a rhombus are perpendicular.



The diagonals of a rectangle are congruent.



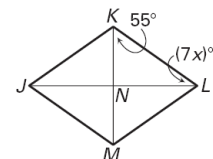
$$\overline{AC} \cong \overline{BD}$$

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Use Diagonals of a Rhombus

$JKLM$ is a rhombus.

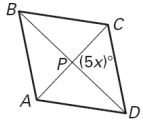
Find the value of x .



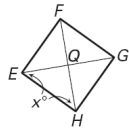
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Find the value of x .

4. rhombus $ABCD$



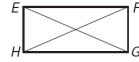
5. rhombus $EFGH$



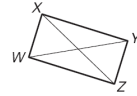
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Find the value of x .

6. rectangle $EFGH$, $EG = 48$, $HF = 6x$



7. rectangle $WXYZ$, $XZ = 37$, $WY = 5x + 2$



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