

WS 2.5-B Practice with Quadrilaterals

Check off the properties applying to each of the following quadrilaterals

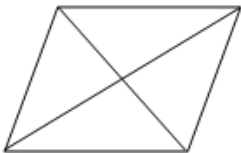
Properties of Special Quadrilaterals	Parallelograms	Rectangles	Rhombus	Square
Both pairs of opposite sides are parallel				
Both pairs of opposite sides are congruent				
All four sides are congruent				
Sum of interior angles is 360°				
Both pairs of opposite angles are congruent				
Consecutive angles are supplementary				
All four angles are right angles				
Diagonals bisect each other				
Diagonals are congruent				
Diagonals are perpendicular				
Diagonals bisect the opposite angles				

Label each of the diagrams **BEFORE** attempting to answer the questions.

1. In parallelogram $ABCD$, $m\angle A = (2x + 40)^\circ$ and $m\angle C = (6x - 100)^\circ$ find the degree measures for $\angle A$ and $\angle B$.



2. In rhombus $ABCD$, diagonals \overline{AC} and \overline{BD} intersect at E . If $m\angle DCE = 20^\circ$, find $m\angle ADC$.



3. In parallelogram $ABCD$, $AB = 5x - 4$ and $CD = 2x + 14$. Find the value x .



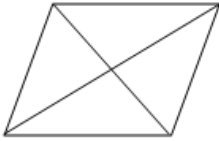
4. In parallelogram $ABCD$, $m\angle B = 75^\circ$, find $m\angle A$.



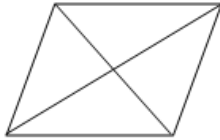
5. In parallelogram $ABCD$, $m\angle A$ is 30° more than twice $m\angle B$, find $m\angle A$.



6. In rhombus $ABCD$, $AB = 5x - 10$ and $BC = 2x + 50$. Find x .



7. In rhombus $ABCD$, diagonals \overline{AC} and \overline{BD} intersect at E . If $AC = 18$ and $BE = 12$, find the length of side \overline{AB} .



8. Parallelogram $ABCD$ has altitude \overline{DE} drawn to side \overline{AB} . If $DE = AE$, find $m\angle A$.



9. In quadrilateral $ABCD$, $m\angle A = (x - 10)^\circ$, $m\angle B = (2x + 10)^\circ$, $m\angle C = (2x - 70)^\circ$ and $m\angle D = (3x - 50)^\circ$. What kind of quadrilateral is $ABCD$? Explain why.

10. In parallelogram $ABCD$, $AB = 3x + 2$, $DC = 10x - 12$ and $AD = 5x - 2$. What kind of parallelogram is $ABCD$? Explain why.

