Grade 8 Math Formulas

Quadrilaterals Formulas

Based on Maharashtra Board Syllabus (NEP 2025-26)

Note:

This document contains key concepts and formulas related to Quadrilaterals for Grade 8.

Properties of Quadrilaterals (General)

- A quadrilateral is a polygon with four sides and four angles.
- The sum of the interior angles of any quadrilateral is 360 degrees.

Properties and Formulas for Specific Quadrilaterals

Parallelogram

- Opposite sides are equal and parallel.
- Opposite angles are equal.
- Consecutive angles are supplementary (sum to 180 degrees).
- Diagonals bisect each other.
- Area of a Parallelogram = base multiplied by height
- Perimeter of a Parallelogram = 2 multiplied by (side1 + side2)

Rectangle

- All properties of a parallelogram apply.
- All four angles are right angles (90 degrees).
- Diagonals are equal and bisect each other.
- Area of a Rectangle = length multiplied by width
- Perimeter of a Rectangle = 2 multiplied by (length + width)

Square

- All properties of a parallelogram and rectangle apply.
- All four sides are equal.
- Diagonals are equal, bisect each other at 90 degrees, and bisect the angles.
- Area of a Square = side multiplied by side or side squared
- Perimeter of a Square = 4 multiplied by side

Rhombus

- All properties of a parallelogram apply.
- All four sides are equal.
- Diagonals bisect each other at 90 degrees and bisect the angles.
- Area of a Rhombus = (1/2) multiplied by (diagonal1 multiplied by diagonal2)
- Perimeter of a Rhombus = 4 multiplied by side

Trapezium (Trapezoid)

- One pair of opposite sides is parallel.
- Area of a Trapezium = (1/2) multiplied by (sum of parallel sides) multiplied by height

Kite

- Two pairs of adjacent sides are equal.
- One pair of opposite angles is equal (the angles between unequal sides).

- Diagonals are perpendicular.
- One diagonal bisects the other diagonal.
- Area of a Kite = (1/2) multiplied by (diagonal1 multiplied by diagonal2)

End of Formulas - Quadrilaterals