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PERIOD 1

MATHEMATICS

CHAPTER NUMBER :~ 8
CHAPTER NAME :~ QUADRILATERAL

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LEARNING OUTCOME:~

Students will learn about Angle sum property of a Quadrilateral.

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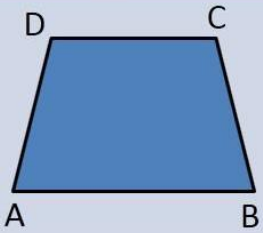
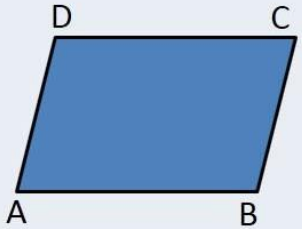
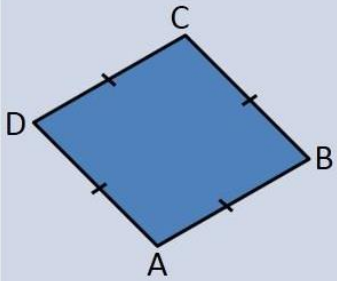
Types of Quadrilaterals

Type	Figure	Property
Trapezium		One pair of parallel sides AB ‖ CD
Parallelogram		Opposite sides are parallel • AB ‖ CD • AD ‖ BC Opposite sides are equal • AB = CD • AD = BC
Rhombus		Parallelogram with all sides equal So, • AB ‖ CD & AD ‖ BC • AB = BC = CD = AD

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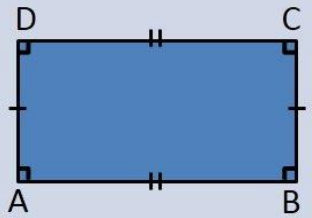
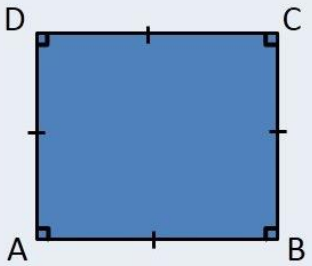
Rectangle		Parallelogram with opposite sides equal & all 4 angles 90° So, • AB ‖ CD & AD ‖ BC • AB = CD & AD = BC • ∠A = ∠B = ∠C = ∠D = 90°
Square		Parallelogram with all sides equal & all 4 angles 90° So, • AB ‖ CD & AD ‖ BC • AB = BC = CD = AD • ∠A = ∠B = ∠C = ∠D = 90°

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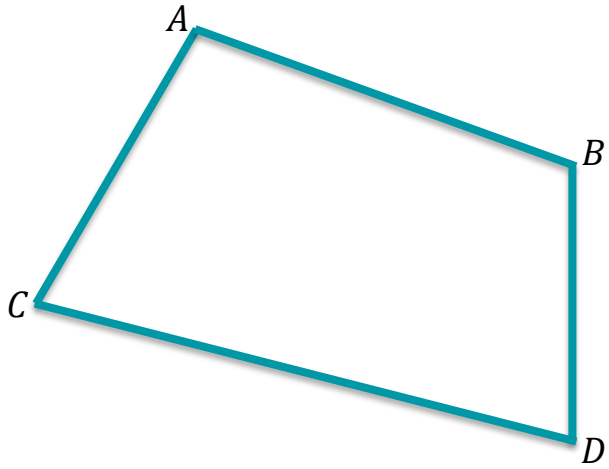
Angle Sum Property Of Quadrilateral-

The sum of the angles of a quadrilateral is 360°.

$\angle A + \angle B + \angle C + \angle D = 360°$



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The angles of quadrilateral are in the ratio 3 : 5 : 9 : 13. Find all the angles of the quadrilateral.

Let angles in the ratio 3: 5: 9: 13 be a, b, c & d

Let a = 3x , b = 5x , c = 9x, d = 13x

where x is any number

We know that

Sum of angles of a quadrilateral is 360° ,

$a + b + c + d = 360°$ *(Angle sum property of quadrilateral)*

$3x + 5x + 9x + 13x = 360°$

$30x = 360°$

$x = \frac{360°}{30}$

$x = 12°$

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Hence, the angles are

$a = 3x = 3 \times 12° = 36°$

$b = 5x = 5 \times 12° = 60°$

$c = 9x = 9 \times 12° = 108°$

$d = 13x = 13 \times 12° = 156°$

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HOMEWORK ASSIGNMENT

Exercise 8.1
Question number 1

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AHA

1. If one angle of a parallelogram is twice of its adjacent angle, find the angles of the parallelogram.

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THANKING YOU

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