# EduSahara™ Learning Center Assignment

**Grade : Class IX, ICSE**
**Chapter : Quadrilaterals**
**Name : Quadrilateral Properties**

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1. Which of the following statements are true?
   a) All quadrilaterals are parallelograms
   b) All quadrilaterals are trapeziums
   c) All trapeziums are parallelograms
   d) The set of parallelograms is a subset of the set of trapeziums
   e) A parallelogram is a trapezium

   (i) {c,a,d} (ii) {a,d} (iii) {d,e} (iv) {b,e,d} (v) {b,e}

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2. The sum of the interior angles of a quadrilateral is

   (i) 360° (ii) 270° (iii) 90° (iv) 180°

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3. If ABCD is an isosceles trapezium, $\angle A =$

   (i) $\angle B$ (ii) $\angle C$ (iii) 90° (iv) $\angle D$

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4. In which of the following are the diagonals equal ?

   (i) rectangle (ii) None of these (iii) rhombus (iv) parallelogram (v) trapezium

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5. If one of the angles of a rhombus is a right angle, it is a

   (i) square (ii) None of these (iii) rectangle (iv) parallelogram (v) trapezium

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6. If the two diagonals of a parallelogram are equal and right bisectors of each other, it is a

   (i) None of these (ii) trapezium (iii) square (iv) rhombus (v) rectangle

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7. DEFG is a rhombus in which $\angle D = 120°$ . $\overline{DF}$ is the diagonal. Then $\triangle DEF$ is

   (i) an acute angled triangle (ii) an equilateral triangle
   (iii) a scalene triangle (iv) None of these
   (v) an isosceles triangle

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8. OPQR is a rhombus in which $\angle O = 136°$ . $\overline{OQ}$ is the diagonal. Then $\triangle OPQ$ is

   (i) an acute angled triangle (ii) an isosceles triangle
   (iii) None of these (iv) an equilateral triangle
   (v) a scalene triangle

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9. Which of the following statements are true?
   a) Every rectangle is a parallelogram
   b) Every square is a rectangle
   c) Every rectangle is a rhombus

d) Every parallelogram is a rectangle
e) Every rhombus is parallelogram

(i) {c,d,e} (ii) {c,a} (iii) {d,b} (iv) {a,b,e} (v) {c,a,b}

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10. Which of the following have point symmetry ?
    a) trapezium
    b) parallelogram
    c) square
    d) quadrilateral
    e) rectangle
    f) rhombus

    (i) {d,c} (ii) {a,d,e} (iii) {b,c,e,f} (iv) {a,f,b} (v) {a,b}

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11. Which of the following statements are true?
    a) A parallelogram is a trapezium
    b) A square is a rectangle
    c) A rhombus is a square
    d) A rectangle is a parallelogram
    e) A parallelogram is a rhombus
    f) A square is a rhombus
    g) A trapezium is a parallelogram

    (i) {a,b,d,f} (ii) {g,c,d} (iii) {e,f,a} (iv) {c,a} (v) {e,b}

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12. Which of the following is a regular polygon with four sides?

    (i) trapezium (ii) rhombus (iii) parallelogram (iv) rectangle (v) square

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13. Sum of the interior angles in a quadrilateral is

    (i) 365° (ii) 360° (iii) 390° (iv) 375° (v) 370°

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14. How many diagonals does a quadrilateral have?

    (i) 3 (ii) 2 (iii) 5 (iv) 1 (v) 0

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15. Which of the following are true?
    a) A rhombus is a square
    b) A rectangle is a square
    c) A square is a rhombus
    d) A parallelogram is a square
    e) A square is a rectangle

    (i) {d,a,c} (ii) {b,e} (iii) {c,e} (iv) {a,c} (v) {b,e,c}

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16. Which of the following are true?
    a) A square is a parallelogram
    b) A rectangle is a square
    c) A parallelogram is a rectangle
    d) A rectangle is a parallelogram
    e) A parallelogram is a square

(i) {b,a} (ii) {a,d} (iii) {c,d} (iv) {e,b,a} (v) {c,d,a}

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17. Which of the following are true?

a) A trapezium is a parallelogram
b) A trapezium is a rhombus
c) A rhombus is a trapezium
d) A parallelogram is a trapezium
e) A rectangle is a square

(i) {b,d,c} (ii) {b,d} (iii) {a,c} (iv) {c,d} (v) {e,a,c}

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18. Which of the following are true?

a) A rhombus is a kite
b) A trapezium is a parallelogram
c) A rhombus is a parallelogram
d) A kite is a rhombus
e) A parallelogram is a rhombus

(i) {d,c} (ii) {d,c,a} (iii) {e,b,a} (iv) {b,a} (v) {a,c}

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19. Which of the following are true?

a) A rectangle is a rhombus
b) A trapezium is a square
c) A square is a trapezium
d) A square is a rectangle
e) A parallelogram is a rhombus

(i) {c,d} (ii) {a,c} (iii) {b,d,c} (iv) {b,d} (v) {e,a,c}

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20. The quadrilateral whose diagonals are equal and are perpendicular bisectors is a

(i) trapezium (ii) parallelogram (iii) rectangle (iv) rhombus (v) square

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21. The diagonals do not divide the quadrilateral into congruent triangles in which figure?

(i) trapezium (ii) rhombus (iii) parallelogram (iv) rectangle (v) square

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22. Name all quadrilaterals whose diagonals are equal

(i) parallelogram,square,rhombus,rectangle
(ii) square,rhombus
(iii) square,parallelogram
(iv) rectangle,rhombus
(v) square,rectangle

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23. Name all quadrilaterals whose diagonals bisect each other

(i) parallelogram,square,rhombus,rectangle
(ii) square,parallelogram
(iii) rectangle,rhombus
(iv) square,rhombus
(v) square,kite

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24. Name all quadrilaterals whose diagonals are perpendicular and bisect each other

(i) square,parallelogram
(ii) parallelogram,square,rhombus,rectangle
(iii) square,rectangle
(iv) rectangle,rhombus
(v) square,rhombus

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25. Name all quadrilaterals whose opposite sides are equal

(i) parallelogram,square,rhombus,rectangle
(ii) square,rhombus
(iii) square,parallelogram
(iv) rectangle,rhombus
(v) square,rectangle

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26. Name all quadrilaterals whose opposite sides are parallel

(i) square,kite
(ii) parallelogram,square,rhombus,rectangle
(iii) rectangle,rhombus
(iv) square,rhombus
(v) square,rectangle

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27. Name all quadrilaterals whose all sides are equal

(i) square,rhombus
(ii) square,kite
(iii) square,rectangle
(iv) rectangle,rhombus
(v) square,parallelogram

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28. Name all quadrilaterals whose all angles are right angles

(i) square,parallelogram
(ii) square,rectangle
(iii) rectangle,rhombus
(iv) square,rhombus
(v) square,kite

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29. Name all quadrilaterals whose opposite angles are equal

(i) square,rectangle
(ii) square,parallelogram
(iii) rectangle,rhombus
(iv) square,kite
(v) parallelogram,square,rhombus,rectangle

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30. Name all quadrilaterals whose all angles are equal

(i) square,parallelogram

(ii) rectangle,rhombus

(iii) parallelogram,square,rhombus,rectangle

(iv) square,rectangle

(v) square,kite

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31. Name all quadrilaterals whose adjacent angles are supplementary

(i) rectangle,rhombus

(ii) square,kite

(iii) square,rectangle

(iv) square,rhombus

(v) parallelogram,square,rhombus,rectangle

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32. Which of the following statements are true?

a) In a parallelogram, both adjacent angles can be right angles
b) In a parallelogram, both adjacent angles can be obtuse
c) In a parallelogram, both adjacent angles can be acute
d) In a parallelogram, adjacent angles are complementary
e) In a parallelogram, adjacent angles are supplementary

(i) {d,b,a} (ii) {a,e} (iii) {b,a} (iv) {c,e,a} (v) {c,e}

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33. Which of the following properties apply for a parallelogram ?

a) Opposite angles are equal
b) Opposite sides are equal
c) Diagonals are equal to each other
d) Diagonals bisect each other
e) Adjacent angles are supplementary
f) Diagonals are perpendicular to each other

(i) {a,b,d,e} (ii) {c,e,a} (iii) {c,a} (iv) {f,b} (v) {c,f,d}

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34. Which of the following properties apply for a trapezium ?

(i) One pair of opposite sides are parallel

(ii) Diagonals are perpendicular to each other

(iii) Diagonals are equal

(iv) Diagonals bisect each other

(v) Both adjacent angles are obtuse

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35. Which of the following properties apply for a kite ?

(i) Diagonals are equal

(ii) Opposite angles are parallel

(iii) Adjacent angles are equal

(iv) Diagonals are perpendicular

(v) Opposite sides are equal

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36. Which of the following properties apply for a rhombus ?

a) Opposite sides are equal
b) Diagonals are equal

c) Opposite sides are parallel
d) Opposite angles are equal
e) Adjacent sides are equal
f) Diagonals bisect each other
g) Adjacent angles are equal

(i) {g,c}
(ii) {b,a}
(iii) {a,c,d,e,f}
(iv) {b,e,f}
(v) {b,g,d}

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37. Which of the following properties apply for a rectangle ?

a) Opposite sides are equal
b) Diagonals bisect each other
c) Adjacent angles are equal
d) Opposite angles are equal
e) Opposite sides are parallel
f) Diagonals are equal
g) Adjacent sides are equal

(i) {g,d,e}
(ii) {g,a}
(iii) {g,c}
(iv) {a,b,c,d,e,f}
(v) {g,b}

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38. Which of the following statements are true?

a) Every rectangle is a rhombus
b) Every parallelogram is a trapezium
c) Every rectangle is a parallelogram
d) Every rhombus is a parallelogram
e) Every parallelogram is a rectangle
f) Every square is a rhombus
g) Every square is a rectangle

(i) {a,f,g} (ii) {a,b} (iii) {b,c,d,f,g} (iv) {a,e,d} (v) {e,c}

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39. The figure formed by successively joining the mid-points of the sides of a parallelogram is

(i) rectangle (ii) square
(iii) parallelogram (iv) rhombus

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40. The figure formed by successively joining the mid-points of the sides of a rectangle is

(i) square (ii) rhombus
(iii) rectangle (iv) parallelogram

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41. The figure formed by successively joining the mid-points of the sides of a rhombus is

(i) rectangle (ii) square
(iii) parallelogram (iv) rhombus

# Assignment Key

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2) (i)
3) (i)
4) (i)
5) (i)
6) (iii)
7) (ii)
8) (ii)
9) (iv)
10) (iii)
11) (i)
12) (v)
13) (ii)
14) (ii)
15) (iii)
16) (ii)
17) (iv)
18) (v)
19) (i)
20) (v)
21) (i)
22) (v)
23) (i)
24) (v)
25) (i)
26) (ii)
27) (i)
28) (ii)
29) (v)
30) (iv)
31) (v)
32) (ii)
33) (i)
34) (i)
35) (iv)
36) (iii)
37) (iv)
38) (iii)
39) (iii)
40) (ii)
41) (i)