



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



CLASS 8

SUBJECT – Algebra and Geometry

Work sheet 2 answer key

Marks:15

SPECIAL TYPES OF QUADRILATERALS

Date:8.4.2020

SPECIAL TYPES OF QUADRILATERALS

Answer all the following questions(1×15=15)

1. In which of the following figures are the diagonals equal?
- a) parallelogram
 - b) Rhombus
 - c) trapezium
 - d) rectangle

Answer: d

Explanation: by property of a rectangle

2. If the diagonals of a quadrilateral bisect each other at right angles, then the figure is a
- a) rectangle
 - b) trapezium
 - c) rhombus
 - d) none of these

Answer: c

Explanation:by property of a rhombus

3. ABCD is a parallelogram with two adjacent angles equal, then the parallelogram is a
- a) rhombus
 - b) kite
 - c) rectangle
 - d) none of these

Answer: c

Explanation:angle A+angle B=180°, angle A=angle B, so both are 90°

4. The bisectors of two adjacent angles of A parallelogram intersect at
- a) 30°
 - b) 45°
 - c) 60°
 - d) 90°

Answer: d

Explanation: angle A + angle B = 180°, (angle A + angle B) / 2 = 90°

So angle AOB = 180 - 90 = 90°

5. If an angle of a parallelogram is two-thirds of its adjacent angle, the smallest angle of the parallelogram is
- a) 108°
 - b) 54°
 - c) 72°
 - d) 81°

Answer: c

Explanation: let one angle be x , then $x + \frac{2}{3}x = 180$, $x = 108^\circ$, $\frac{2}{3} \times 108 = 72^\circ$

6. If one angle of a parallelogram is 24° less than twice the smallest angle, then the largest angle of the parallelogram is
- a) 68°
 - b) 102°
 - c) 112°
 - d) 136°

Answer: c

Explanation: $x + (2x - 24) = 180$, $x = 68$, so $2 \times 68 - 24 = 112^\circ$

7. ABCD is a parallelogram in which angle BDC = 45° and angle BAD = 75°. Then angle CBD = ?
- a) 45°
 - b) 55°
 - c) 60°
 - d) 75°

Answer: c

Explanation: angle ABD = angle CBD = 45° (alternate angles), angle ADB = 180 - (75 + 45) = 60, angle CBD = angle ADB = 60°

8. Which of the following is not true for a parallelogram?
- a) opposite sides are equal
 - b) opposite angles are equal
 - c) opposite angles are bisected by the diagonals
 - d) diagonals bisect each other

Answer: c

Explanation: by property of a parallelogram

9. Two equilateral triangles share a common side. Which quadrilateral does the figure form?
- a) square
 - b) rectangle

- c) rhombus
- d) kite

Answer: c

Explanation: by property of rhombus

10. The diagonals of a quadrilateral are congruent and perpendicular bisectors of each other. Name the quadrilateral
- a) rhombus
 - b) rectangle
 - c) trapezium
 - d) square

Answer: d

Explanation: by property of square

11. Name the figure whose diagonals do not bisect at 90°
- a) square
 - b) rectangle
 - c) rhombus
 - d) trapezium

Answer: d

Explanation: by property of trapezium

12. In parallelogram ABCD, AC and BD intersect at O. If $AC = 13.4$ cm, then OC is
- a) 6.7 cm
 - b) 13.4 cm
 - c) 6 cm
 - d) none of these

Answer: a

Explanation: $OC = AC/2$

13. What would you call a figure having four sides out of which two opposite sides are parallel?
- a) square
 - b) kite
 - c) rhombus
 - d) trapezium

Answer: d

Explanation: by property of trapezium

14. Isosceles trapezium has
- a) non parallel sides equal
 - b) parallel sides equal
 - c) non parallel sides unequal
 - d) none of these

Answer: a

Explanation: by definition of isosceles trapezium

15. A quadrilateral in which two pairs of adjacent sides are equal is
- a) trapezium
 - b) kite
 - c) square
 - d) rhombus

Answer: b

Explanation: by definition of a kite

Indranil Ghosh