
SECTION – A

Questions 1 to 6 carry 1 mark each.

1. If the three angles of a quadrilateral are 70° , 90° and 120° , then find the measure of the fourth angle.
(a) 100° (b) 75° (c) 80° (d) 60°
2. Find the measure of each interior angle of a regular polygon with 12 sides.
(a) 150° (b) 160° (c) 130° (d) 180°
3. The measure of two adjacent angles of a parallelogram are in the ratio 2:3. Find the measure of each of the angles of a parallelogram.
(a) 72° , 108° (b) 54° , 112° (c) 68° , 99° (d) 86° , 114°
4. A quadrilateral whose all sides, diagonals and angles are equal is a
(a) square (b) trapezium (c) rectangle (d) rhombus
5. Which of the following properties describe a trapezium?
(a) A pair of opposite sides is parallel.
(b) The diagonals bisect each other.
(c) The diagonals are perpendicular to each other.
(d) The diagonals are equal.
6. In the below question, a statement of Assertion (A) is followed by a statement of Reason (R). Mark the correct choice as
Assertion (A): All the parallelograms are rectangles.
Reason(R): All the rhombuses are parallelograms.
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true but R is not the correct explanation of A
(c) A is true but R is false
(d) A is false but R is true

SECTION – B

Questions 7 to 9 carry 2 marks each.

7. One angle of a quadrilateral is 120° and the remaining three angles are equal. Find the measure of each of the three equal angles.
8. How many sides does a regular polygon have, if each of its interior angles is 165° ?
9. One angle of a parallelogram is of measure 70° . Find the measure of the remaining angles of the parallelogram.

SECTION – C

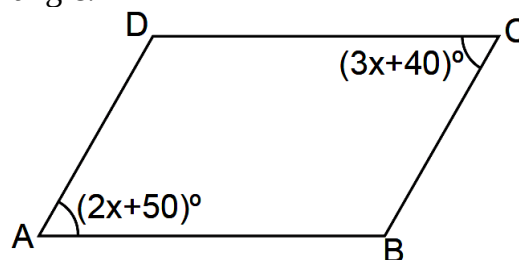
Questions 10 to 13 carry 3 marks each.

10. The sum of the exterior angles of a polygon is one-ninth of sum of the interior angles. Find the number of sides of the polygon.
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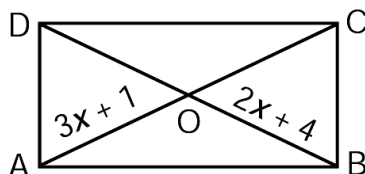
11. ABCD is a parallelogram where $m\angle A = (2x + 50^\circ)$ and $m\angle C = (3x + 40^\circ)$.

(i) Find the value of x

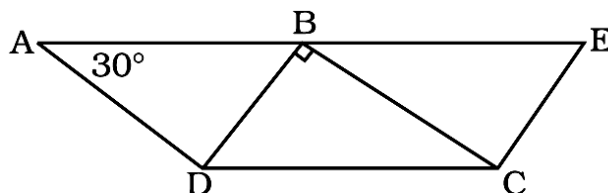
(ii) Find the measure of each angle.



12. In the below figure, ABCD is a rectangle. Its diagonals meet at O. Find x , if $OA = 3x + 1$ and $OB = 2x + 4$.



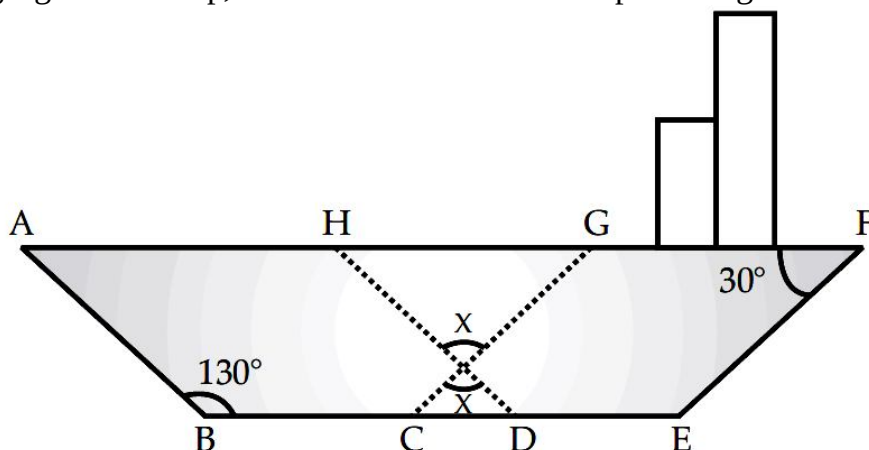
13. In the given figure, ABCD and BDCE are parallelograms with common base DC. If $BC \perp BD$, then find $\angle BEC$.



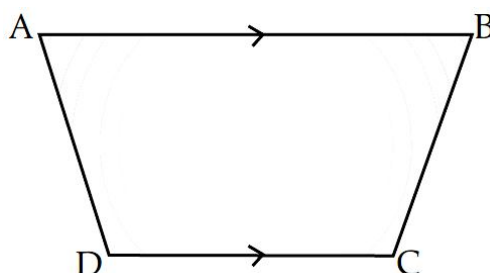
SECTION – D

Questions 14 to 16 carry 4 marks each.

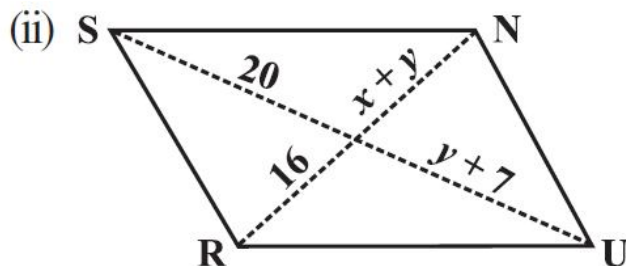
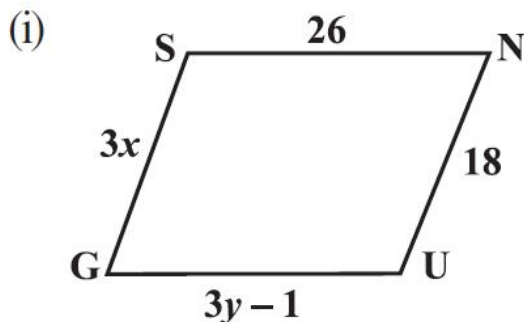
14. In the following figure of a ship, ABDH and CEFH are two parallelograms. Find the value of x .



15. ABCD is a trapezium such that $AB \parallel CD$, $\angle A : \angle D = 2 : 1$, $\angle B : \angle C = 7 : 5$, find the angles of the trapezium.



16. The following figures GUNS and RUNS are parallelograms. Find x and y . (Lengths are in cm)
[2 + 3 marks]

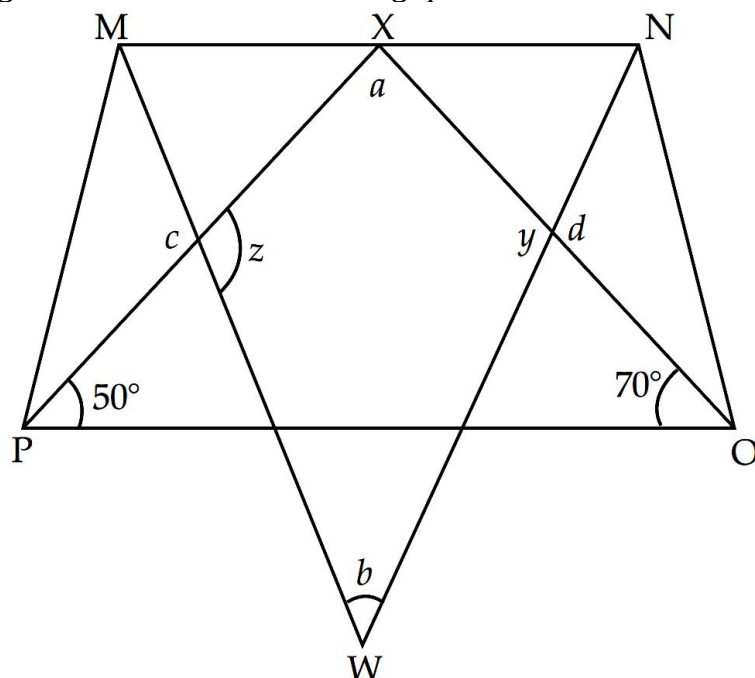


SECTION – E (Case Study Based Question)

Question 17 carry 4 mark

17. There is a trapezium MNOP, angle bisector of $\angle M$ and $\angle N$ meet at point W, and angle bisector of $\angle O$ and $\angle P$ meet at point X on side MN of trapezium MNOP.

By using the figure give the answers of following questions:



- What is the value of a ? (1)
- What is the value of d ? ($1\frac{1}{2}$)
- What is the value of c ? ($1\frac{1}{2}$)