# UNDERSTANDING QUADRILATERALS

### ANGLE SUM PROPERTY

#### EXERCISE

- **Q.1** One angle of a quadrilateral is 78° and the other angles are equal. Find the measure of each of the equal angles.
- **Q.2** The angles of a quadrilateral are 100°, 98° and 92°. Find the fourth angle.
- **Q.3** In a quadrilateral ABCD, the angles A, B, C and D are in ratio 1 : 2 : 3 : 4. Find the measure of each angle of the quadrilateral.
- **Q.4** The measure of two adjacent angles of a quadrilateral are 125° and 35°, the other two angles are equal. Find the measure of each of the angles.
- **Q.5** In the figure, P is a point in the interior of  $\angle AOB$ . PM  $\perp$  OA and PN  $\perp$  OB. If  $\angle AOB = 35^{\circ}$ , what is the measure of  $\angle MPN$ ?



- **Q.6** Three angles of a quadrilateral are equal. The fourth angle is of measure 120°. What is the measure of each of its equal angles?
- **Q.7** Two angles of a quadrilateral are 100° and 80°. If one of the other two is double the other, find their measures.

#### CLASS 8

**Q.8** The sides of a quadrilateral are produced in order. The exterior angles marked as  $w^{\circ}$ ,  $x^{\circ}$ ,  $y^{\circ}$  and  $z^{\circ}$ , are in the ratio 5:6:3:4. Find their measures.



**Q.9** In figure, the bisectors of  $\angle A$  and  $\angle B$  meet at P. If  $\angle C = 100^\circ$ ,  $DD = 50^\circ$ , find  $\angle APB$ .



**Q.10** If three equal angles of a quadrilateral measure 75°, find the fourth angle.

## **ANSWER KEY**

- **1.** 94°
- **2.** 70°
- **3.** 36°, 72°, 108°, 144°
- **4.** 100°
- **5**. 145°
- **6.** 80°
- **7.** 60°, 120°
- **8.** 100°, 120°, 60°, 80°
- **9.** 75°
- **10.** 135°