MATHEMATICS
CLASS VIII
SA-1
Assignment No. 8
Ch 11 Understanding Shapes

1. Tick the correct alternative :

i. Number of diagonals, a regular hexagon has

a) 4 b) 5 c) 8 d) 9

ii. A regular polygon has 24 sides. The measure of its interior angles is

a) 15° b) 30° c) 150° d) 165°

iii. Two adjacent angles of a parallelogram are in the ratio 2 : 3. Then these angles are

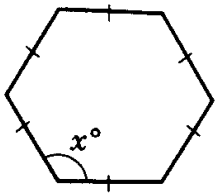
a) 72°, 108° b) 60°, 120° c) 40°, 140° d) 65°, 115°

iv. In a quadrilateral TYPE, if TY = TE and YP = PE, then it is

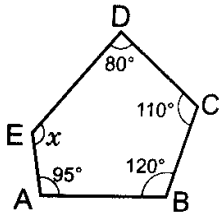
a) parallelogram b) kite c) rectangle d) square

2. Three angles of a quadrilateral are equal and the fourth angle measures 135°. Find the measure of equal angles.
3. The angles of a quadrilateral are in the ratio 1:2:3:4. Find each angle.
4. The sum of the opposite angles of a parallelogram is 150°. Find the angles of the parallelogram.
5. In a parallelogram PORS
   i. $\angle P = (2x + 10)°, \angle R = (3x - 20)°$. Find the value of x.
   ii. $\angle R = (5y)°, \angle S = (2x + 19)°$. Find the value of y.
6. Two adjacent sides of a parallelogram have lengths 5 cm and 4 cm. Find the perimeter of the parallelogram.
7. Find the length of the diagonal of a rectangle whose sides are 4 cm and 3 cm.
8. The sides of a rectangle are in the ratio 4:5. Find its sides if the perimeter is 90 cm.
9. Find the value of x in each of the following cases.

(i)



(ii)



10. The measures of two adjacent angles of a quadrilateral 122° and 38°. The other two angles are equal. Find them.
11. One angle of a quadrilateral is 108°. The other three angles are in the ratio 3 : 4 : 5. Find these angles.
12. Find the number of sides of a regular polygon whose exterior angles measures 40°.
13. Find the number of sides of a regular polygon whose each angle measures 144°.
14. In a parallelogram RICE, $\angle R = (3x - 1)°$ and $\angle C = (50 - x)°$. Find x and all the angles of the parallelogram.
15. The sum of two opposite angles of a parallelogram is 140°. Find all the angles of the parallelogram.
16. PEST is a rectangle whose diagonals meet at O. If OT = $5x + 3$ and PO = $3x + 7$, find x.