# HERON'S FORMULA

#### **APPLICATION OF HERON'S FORMULA IN FINDING**

## AREA OF QUADRILATERAL

### EXERCISE

- Q.1 Two parallel side of a trapezium are 60 cm and 77 cm and other sides are 25 cm and 26 cm. Find the area of the trapezium.
- **Q.2** The sides of a quadrilateral, taken in order are 5, 12, 14 and 15 metres respectively and the angle contained by the first two sides is a right angle. Find its area.
- **Q.3** Find the area of a cyclic quadrilateral whose sides are 40 cm, 75 cm, 77 cm and 36 cm respectively.
- **Q.4** Find the ratio of the area of a square to that of the square drawn on its diagonal.
- Q.5 The adjacent sides of a parallelogram are24 cm and 32 cm. If the distance between the longer sides is 17.4 cm, determine the distance between the shorter sides.
- Q.6 The lengths of the sides of triangle ABC are in the ratio 4 : 3 : 5, and its perimeter is 144 cm. Find the height corresponding to the longest side.
- Q.7 Two parallel sides of a trapezium are 60 cm and 77 cm and other sides are 25 cm and
  26 cm. Find the area of the transmission

26 cm. Find the area of the trapezium.

**Q.8** A field is in the shape of a trapezium whose parallel sides are 50 m and 15 m. The non-parallel sides are 20 m and 25 m. Prove that the area of the trapezium is  $\frac{13006}{7}$  m<sup>2</sup>.

# ANSWER KEY

- **1.** 1644 cm<sup>2</sup>
- **2.** 114 m<sup>2</sup>
- **3.** 2886 cm<sup>2</sup>
- **4.** 1 : 2
- **5.** 23.2 cm
- **6.** 28.8 cm
- **7.** 1644 cm<sup>2</sup>
- 8.  $\begin{cases} \text{Areaof } \Delta \text{ABG=} 2262.4 \text{ Im}^2 \\ \text{Areaof } \Delta \text{ACD=} 38400 \text{m}^2 \end{cases}$