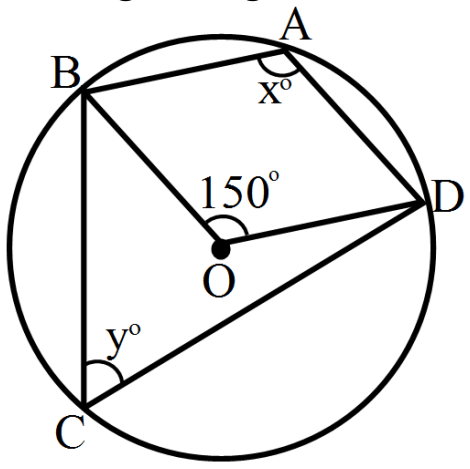
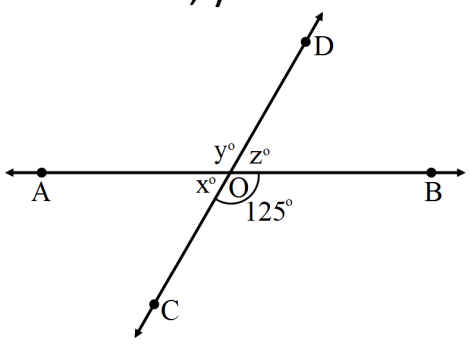
Q1. Express in the form of $\frac{p}{q}$: $0.\overline{38} + 1.\overline{27}$. **5 Marks**

Q2. In the given figure, O is the centre of a circle and $\angle BOD = 150^\circ$. Find the values of x and y. **5 Marks**



Q3. In the given figure, the two lines AB and CD intersect at a point O such that $\angle BOC = 125^\circ$. Find the values of x, y and z. **5 Marks**



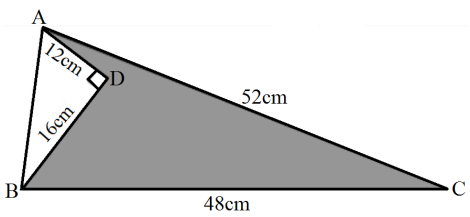
Q4. Express $0.6 + 0.\overline{7} + 0.4\overline{7}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$. **5 Marks**

Q5. Prove that: **5 Marks**

$$\frac{2^{\frac{1}{2}} \times 3^{\frac{1}{3}} \times 4^{\frac{1}{4}}}{10^{-\frac{1}{5}} \times 5^{\frac{3}{5}}} \div \frac{3^{\frac{4}{3}} \times 5^{-\frac{7}{5}}}{4^{-\frac{3}{5}} \times 6} = 10$$

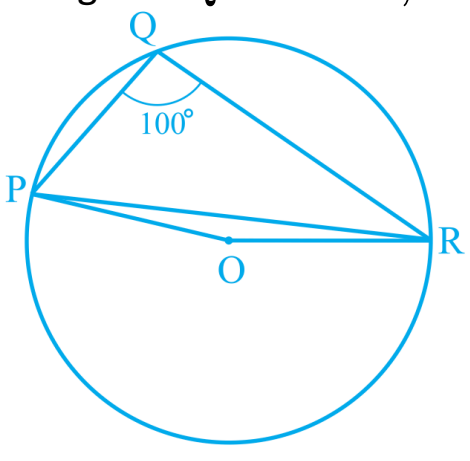
Q6. The surface area of a sphere of radius 5cm is five times the area of the curved surface of a cone of radius 4cm. Find the height of the cone. **5 Marks**

Q7. Find the area of the shaded region in the figure given below. **5 Marks**



Q8. Find the area of a triangular whose sides are 91m, 98m and 105m in length. Find the height corresponding to the longest side. **5 Marks**

Q9. In Fig. $\angle PQR = 100^\circ$, where P, Q and R are points on a circle with centre O. Find $\angle OPR$. **5 Marks**



Q10. A cloth having an area of 165m^2 is shaped into the form of a conical tent of radius 5m. $\left(\text{Use } \pi = \frac{22}{7}\right)$. **5 Marks**

1. How many students can sit in the tent if a student, on an average, occupies $\frac{5}{7}\text{m}^2$ on the ground?
2. Find the volume of the cone.