how many moles are contained in 10.5 L of oxygen?
Solution. We have 10.5 L oxygen. At the same time, the conditions are not specified, therefore, we accept under normal conditions. Then the number of moles of oxygen will be: $n_{O_{2}}=\frac{V_{O_{2}}}{V_{m}}=$ $=\frac{10.5}{22.4}=0.47$ moles .
Answer: 0.47 moles.

