

Magnesium hydroxide is 54.87% oxygen by mass. How much oxygen is in 260 g of the compound?

Answer in units of g

$$m = 260 \cdot (54.87/100) = \mathbf{142.66 \text{ g}}$$

(part 2)

How many moles of oxygen is this? Answer in units of mol

$$v = \frac{m}{M}$$
$$v = \frac{142.66}{16} = 8.92 \text{ mol}$$

8.92 mol