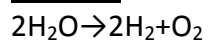


Answer on Question #48937, Chemistry, Other

**Task:**

A 36 g sample of water is decomposed in an electrolysis reaction giving hydrogen and oxygen.  
How many grams of hydrogen are produced?

**Answer:**



$$v = \frac{m}{M}$$

$$M(\text{H}_2\text{O}) = 18 \text{ g/mol}$$

$$v(\text{H}_2\text{O}) = \frac{36}{18} = 2 \text{ mol}$$

$$v(\text{H}_2) = 2v(\text{H}_2\text{O}) = 2 \cdot 2 = 4 \text{ mol}$$

$$M(\text{H}_2) = 2 \text{ g/mol}$$

$$m(\text{H}_2) = v(\text{H}_2) \cdot M(\text{H}_2) = 4 \cdot 2 = 8 \text{ g}$$