

## Answer on Question #55232 – Chemistry – Other

### Question:

Lead(II) carbonate decomposes to give lead (II) oxide and carbon dioxide:



How many grams of lead (II) will be produced by the decomposition of 2.50 g of lead (II) carbonate?

How many moles of CO<sub>2</sub> will be produced?

### Answer:

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

$$v(\text{PbCO}_3) = v(\text{PbO}) = v(\text{CO}_2)$$

$$M(\text{PbCO}_3) = 267.2 \text{ g/mol}$$

$$M(\text{Pb}) = 207.2 \text{ g/mol}$$

$$m(\text{Pb}) = \frac{2.50}{267.2} \cdot 207.2 = 1.94 \text{ g}$$

$$v(\text{CO}_2) = \frac{2.50}{267.2} = 0.01 \text{ mol}$$