Answer on Question#72840 – Chemistry – Organic chemistry

Answer: What is the final temperature in degrees Celsius of the gas in the bubble outside of the volcano if the final volume of the bubble is 125 mL and the final pressure is 380 torr?

Solution:

125 mL = 0.125 L

According to Gas Law:

$$\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$$

$$T_2 = \frac{T_1 P_2 V_2}{P_1 V_1} = \frac{T_1 \times 380 \ torr \times 0.125 L}{P_1 \times V_1}$$

Where T_1, P_1 and V_1 are initial parameters of bubbles.

Answer:

$$T_2 = \frac{T_1 \times 380 \ torr \times 0.125 L}{P_1 \times V_1}$$

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