

Answer on Question 83507 in General Chemistry

$$V(1) = 3.35 \text{ L}$$

$$.t(1) = 13.40^\circ \text{C} = 286.40 \text{ K}$$

$$.p(1) = 1.40 \text{ atm}$$

$$.t(2) = 23.80^\circ \text{C} = 296.80 \text{ K}$$

$$.p(2) = 0.994 \text{ atm}$$

$$V(2) = ?$$

According combined gas law

$$\frac{p(1) \times V(1)}{T(1)} = \frac{p(2) \times V(2)}{T(2)}$$

$$\text{From which } V(2) = \frac{p(1) \times V(1) \times T(2)}{p(2) \times T(1)} = \frac{1.40 \times 3.35 \times 296.80}{0.994 \times 286.40} = 4.89 \text{ L}$$

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