

An ideal monatomic gas originally in state A is taken reversibly to state B along the straight line path shown in figure 4. What is the change in the internal energy of the gas for this process?

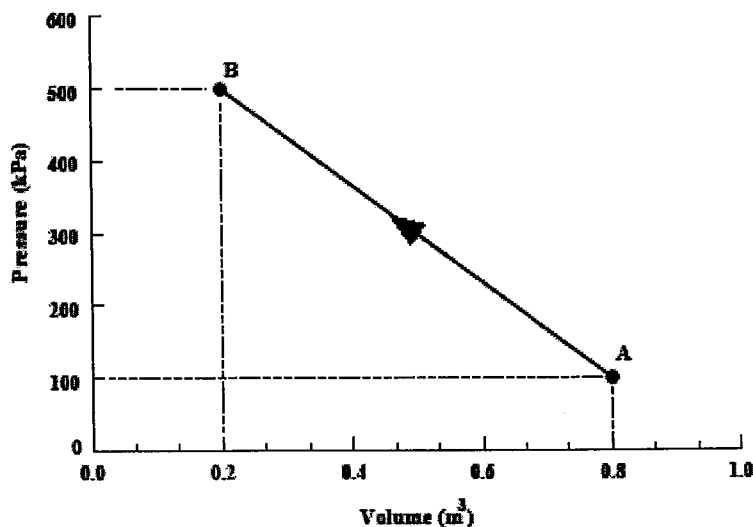


Figure 4

$$\Delta E_{int} = \frac{3}{2} n R \Delta T$$

$$= \frac{3}{2} (n R T_f - n R T_i)$$

$$(P V = n R T)$$

$$= \frac{3}{2} (P_f V_f - P_i V_i)$$

$$= \frac{3}{2} (500 \times 10^3 \times 0.2 - 100 \times 10^3 \times 0.8)$$

$$= 30 \text{ kJ}$$

04 Sep	11 Sep	18 Sep	25 Sep	2 Oct	9 Oct	23 Oct	30 Oct	6 Nov	13 Nov	20 Nov	27 Nov	4 Dec	11 Dec	18 Dec
Solutions of the quizzes can be found on the webpage: http://faculty.kfupm.edu.sa/phys/aljalal/phys102.htm														
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