The relation between the critical and Boyle temperatures of one-component substance. The relation between the critical and Boyle volumes.

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Abstract
The linear relation between the critical temperature of the gas-liquid phase transition of one-component substance and Boyle temperature is obtained on the basis of the Van-der-Waals equation of states. The linear relation between the critical and Boyle volumes is also obtained. It is shown that the relations are valid with a good accuracy for many substances.