

4-5-2 Total differential: Entropy representation 2

Compute the partial derivative $\left(\frac{\partial s}{\partial u}\right)_v$

$$\left(\frac{\partial s}{\partial u}\right)_v = \frac{1}{\left(\frac{\partial u}{\partial s}\right)_v} = \frac{1}{T} \quad (1)$$

Here the reciprocal rule is used::

$$\left(\frac{\partial x}{\partial y}\right)_w = \frac{1}{\left(\frac{\partial y}{\partial x}\right)_w} \quad (2)$$