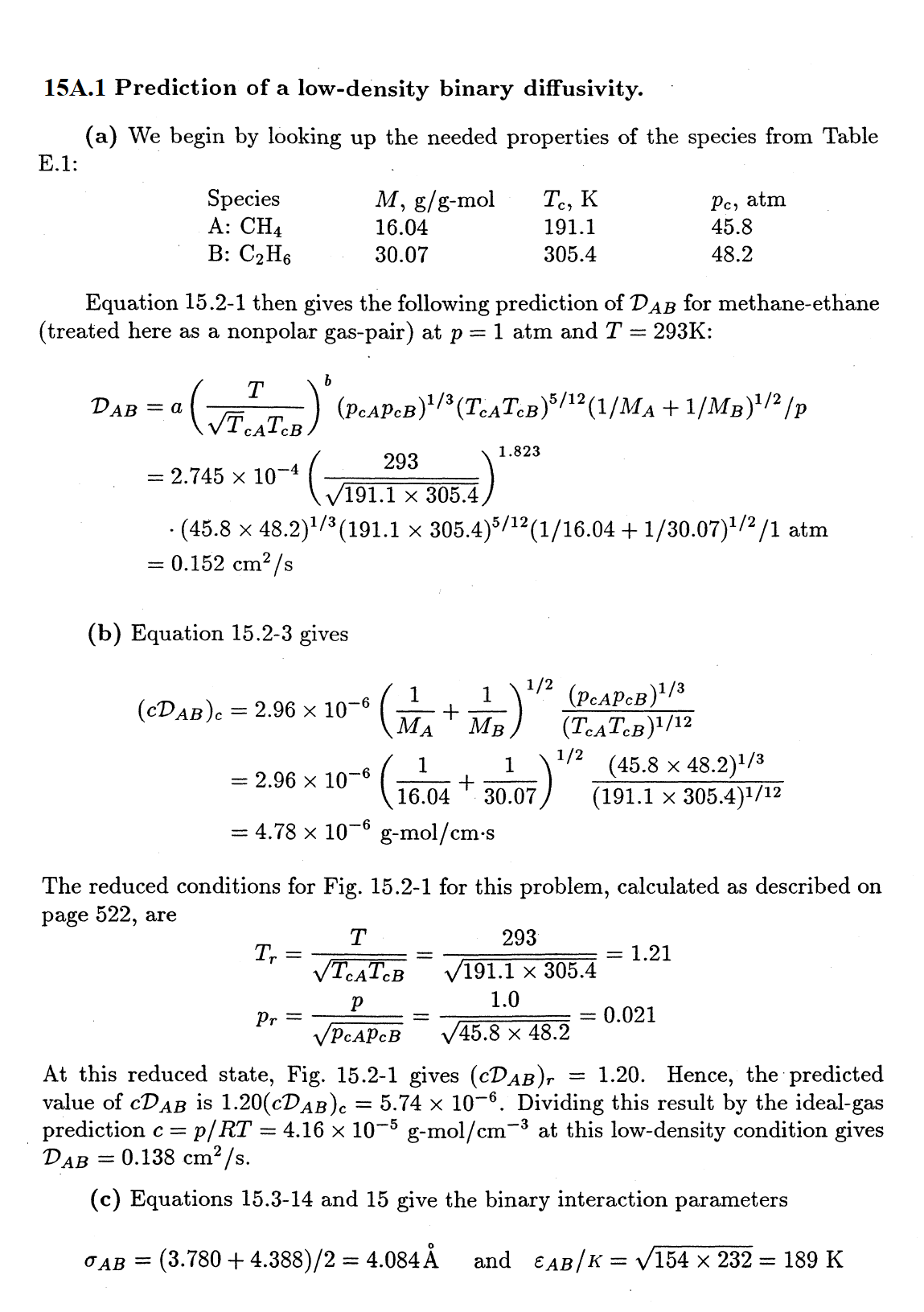
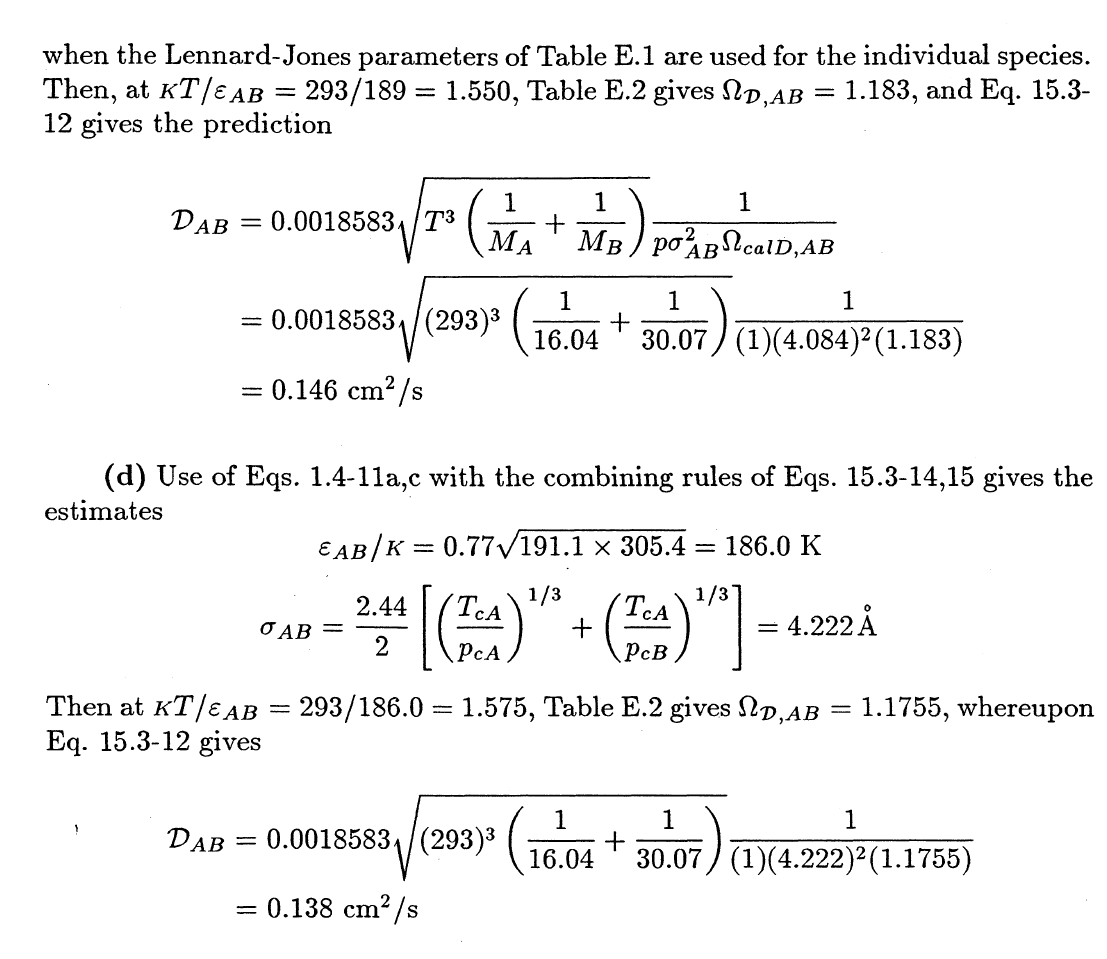
**Solution Manual for Chapter – 15**





**(e)** Using equation 15.2-1

, *b* is 1.823 for nonpolar gas pairs

Using equation 15.3-10 with , predicts

Using equation 15.3-12 and Table E.2, with



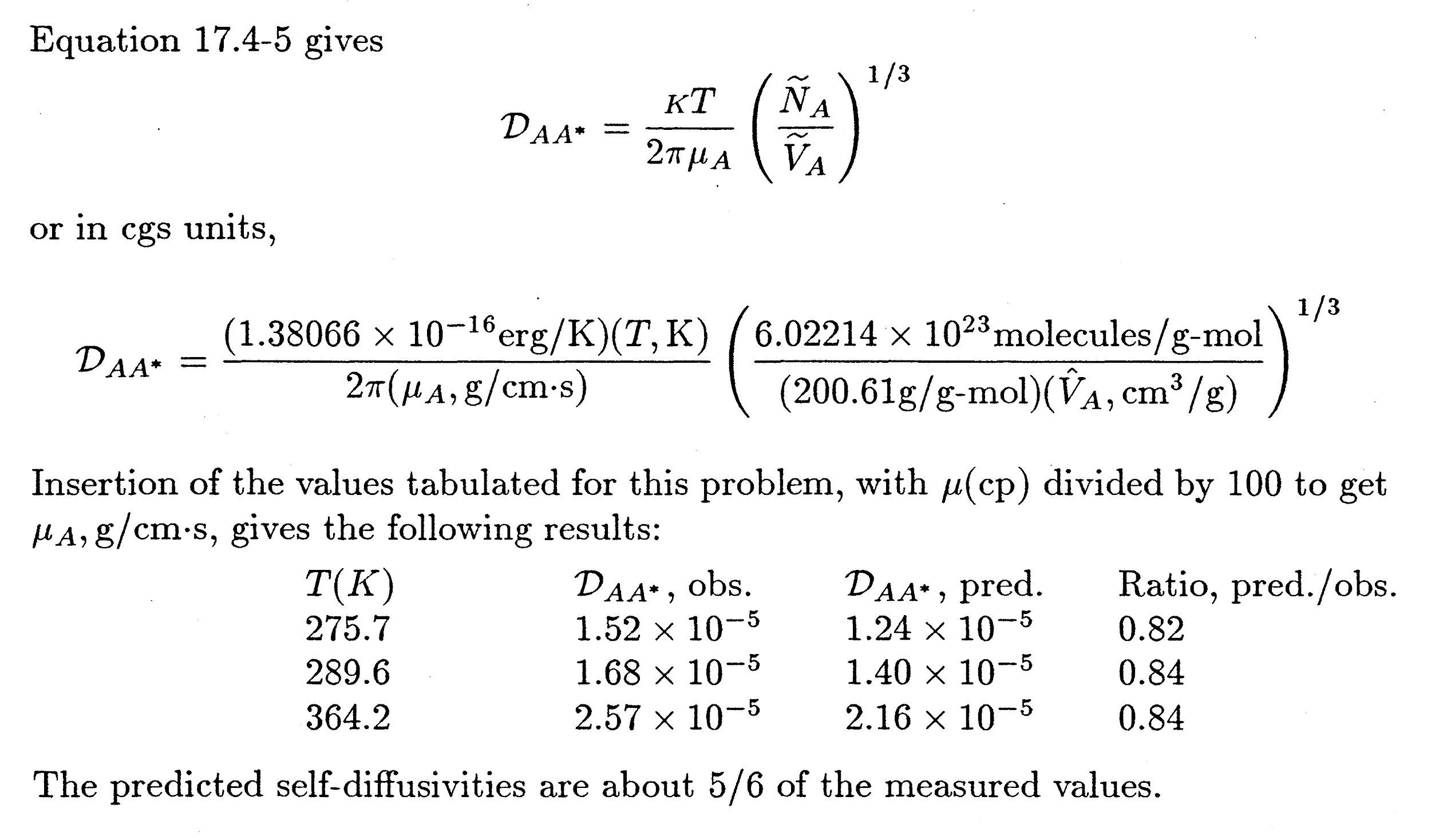
And 

At 293 K, and from Table E.2 gives

At 600 K, and from Table E.2 gives

**15A.2 Self-diffusion in liquid mercury.**

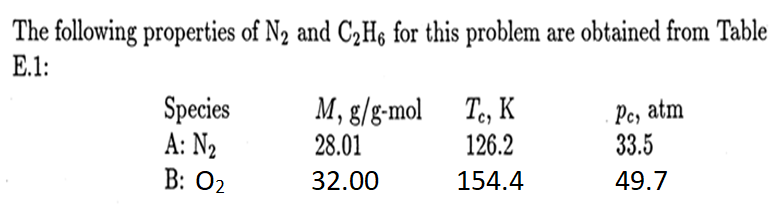
Equation 15.4-5 gives

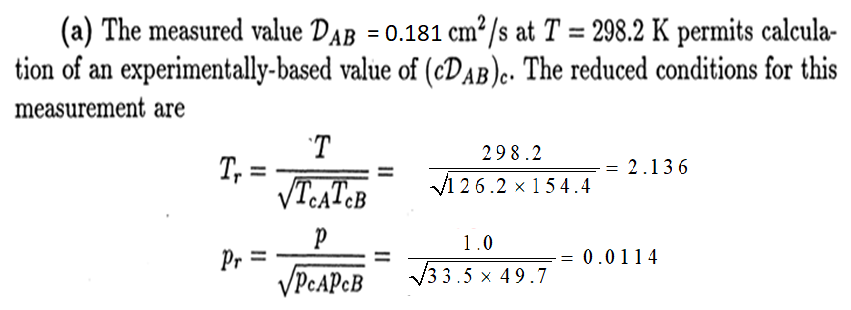
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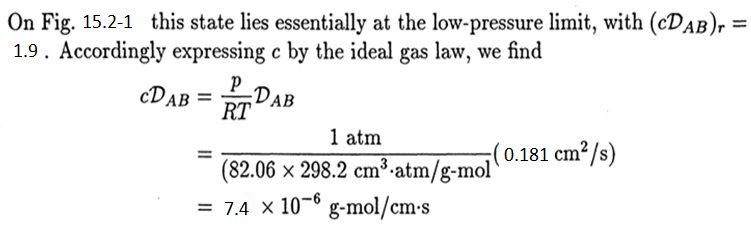
At 473 K, the Eq. 15.4-5 predicts, 3.50 × 10-5

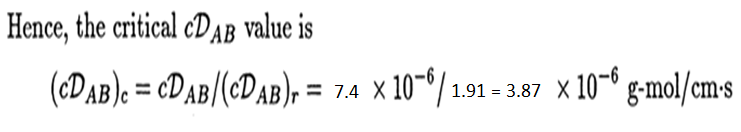
The linear extrapolated value is 3.87 × 10-5

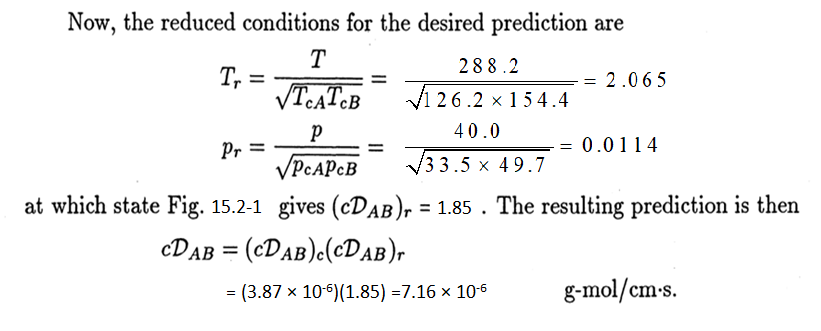
**15A.3 Estimation of diffusivity for a binary mixture at high density.**

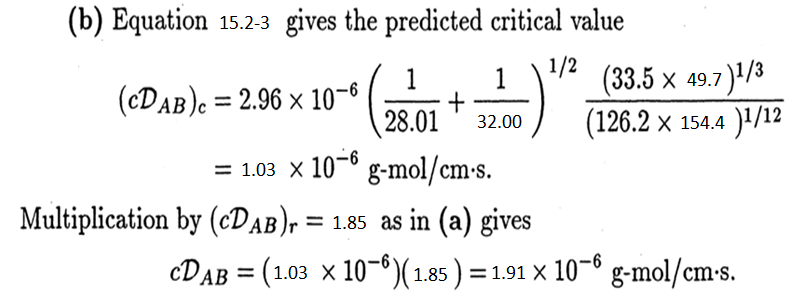
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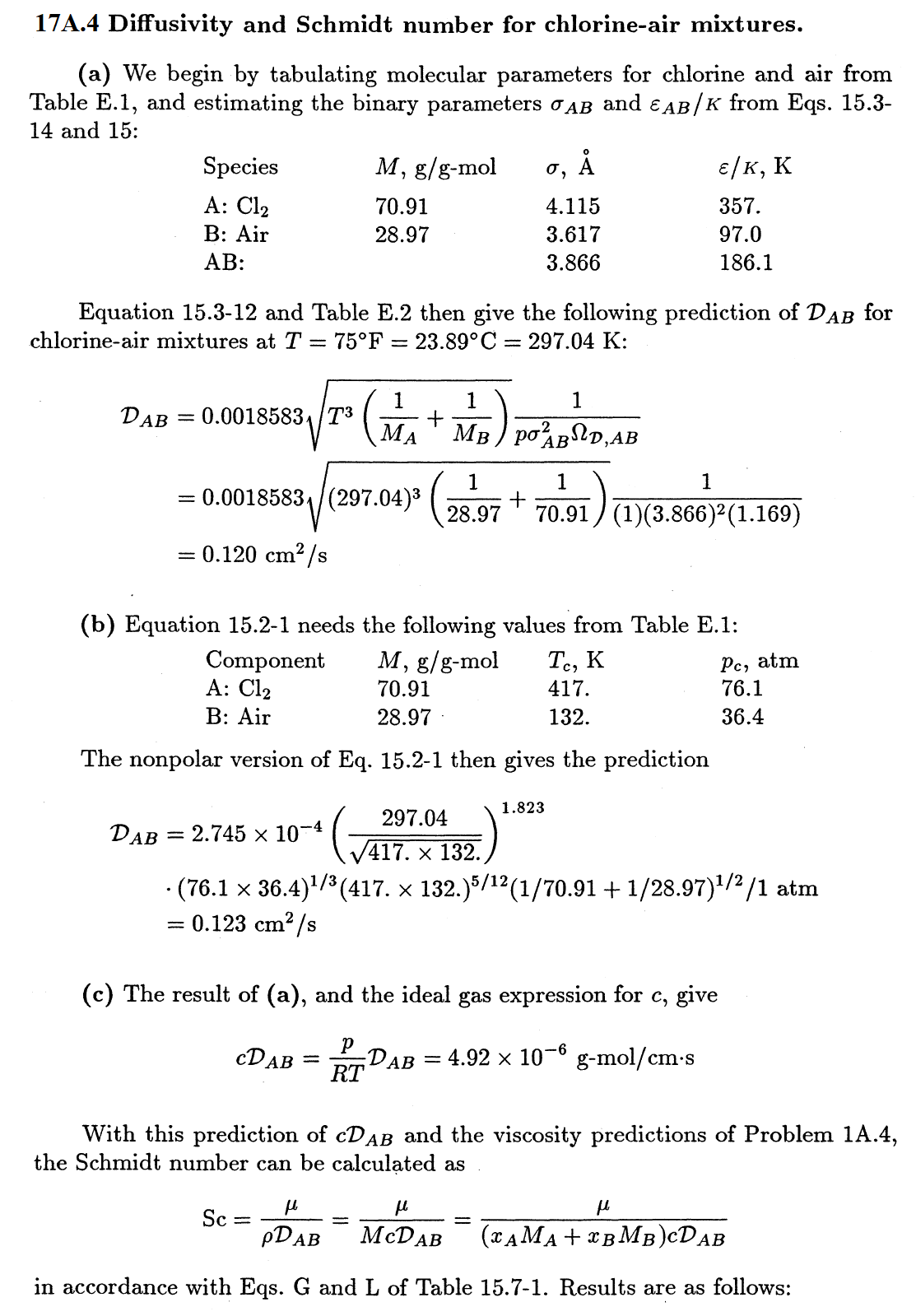
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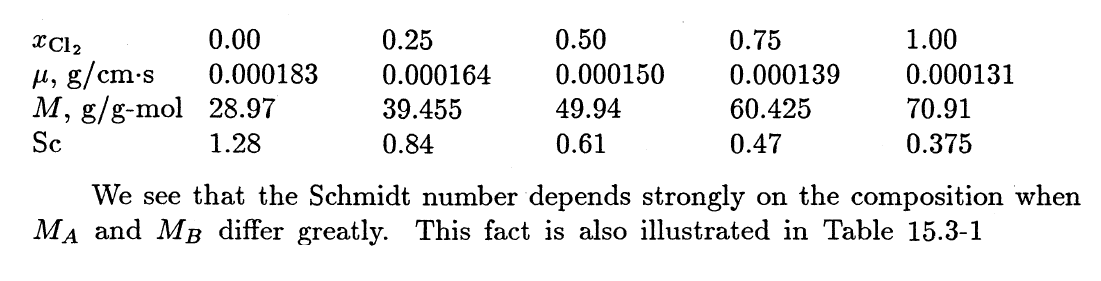
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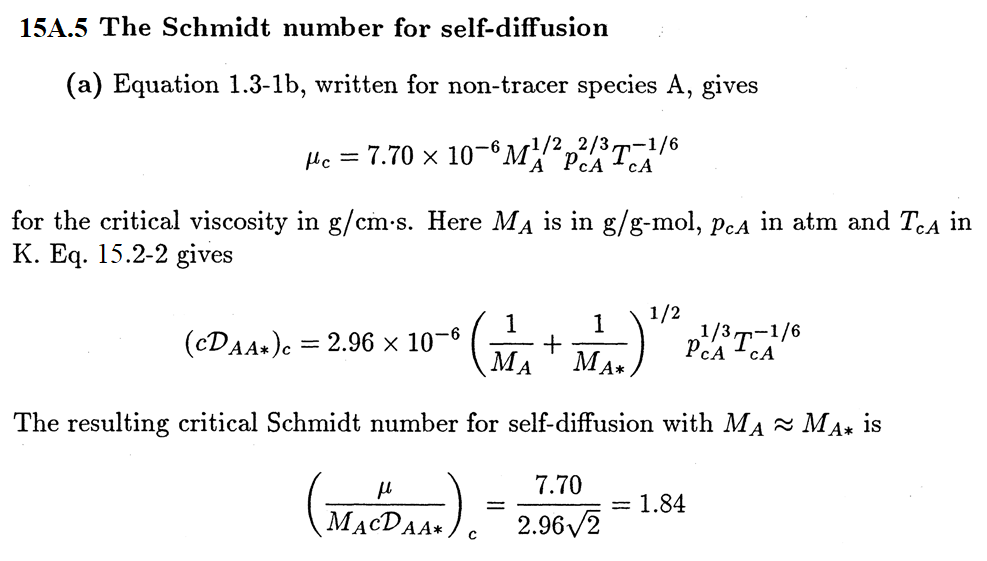
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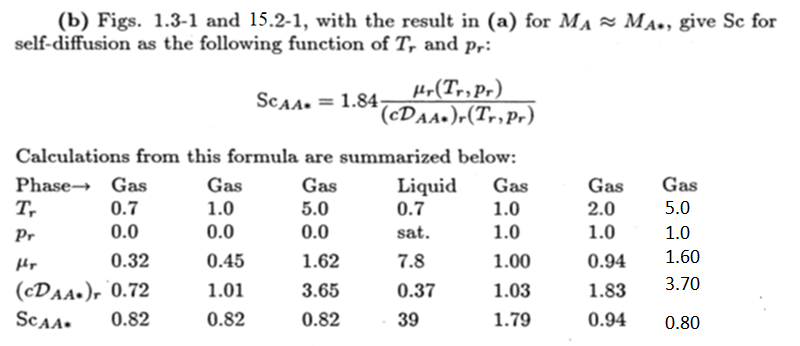
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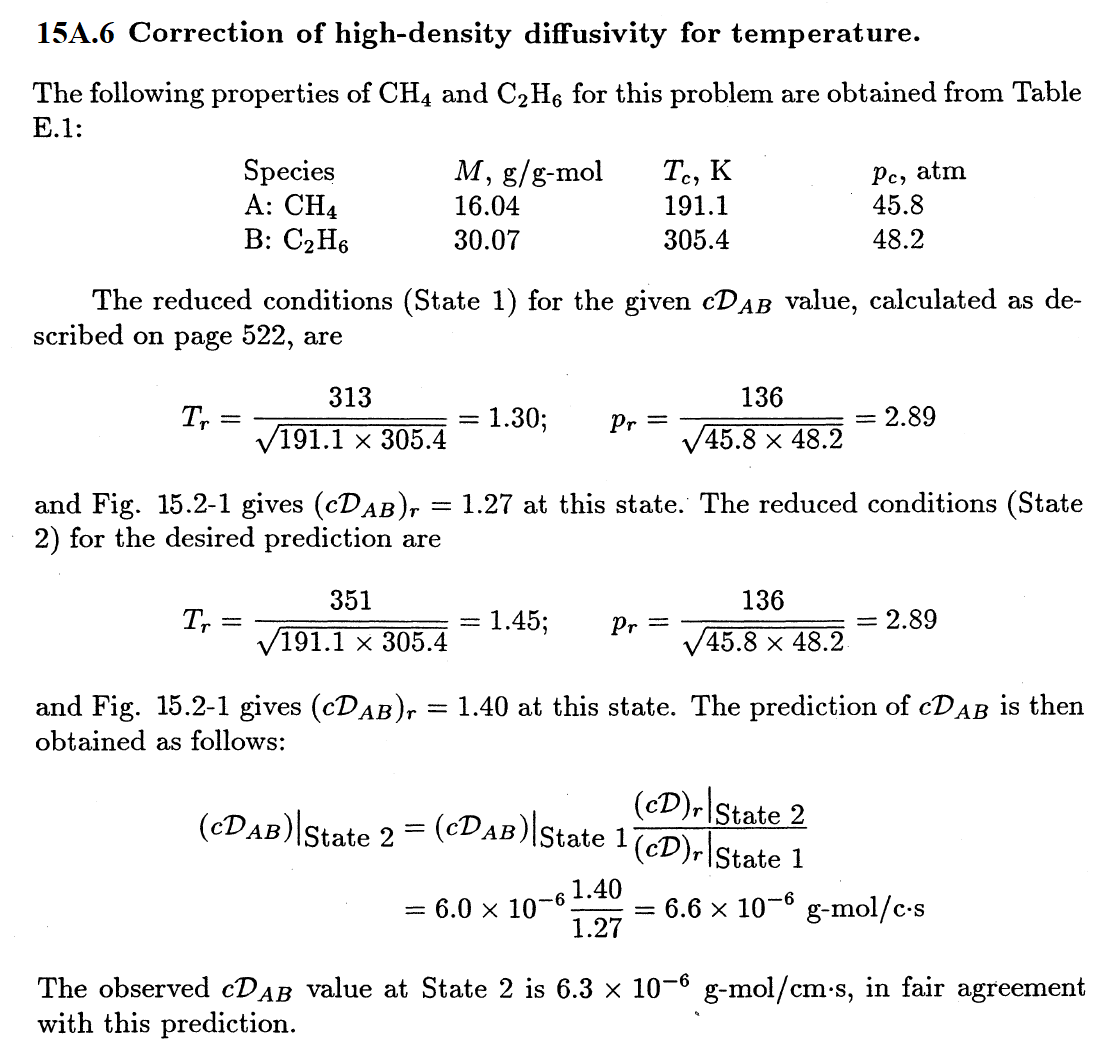
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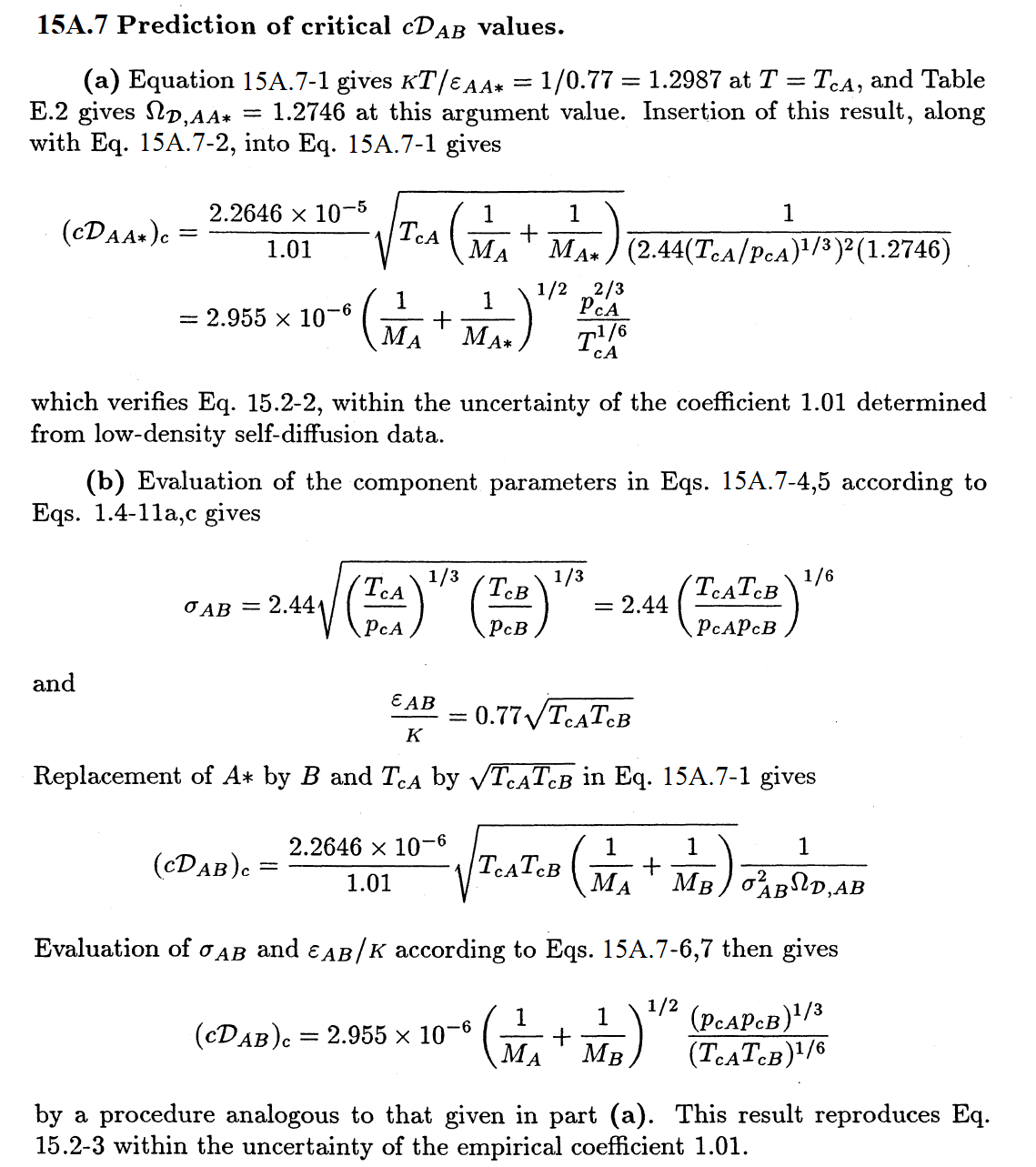
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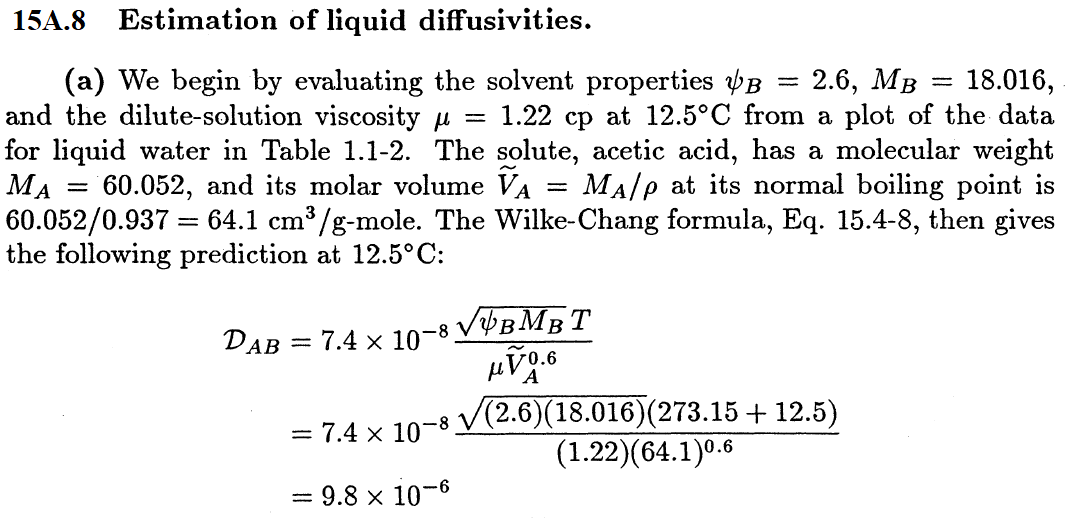
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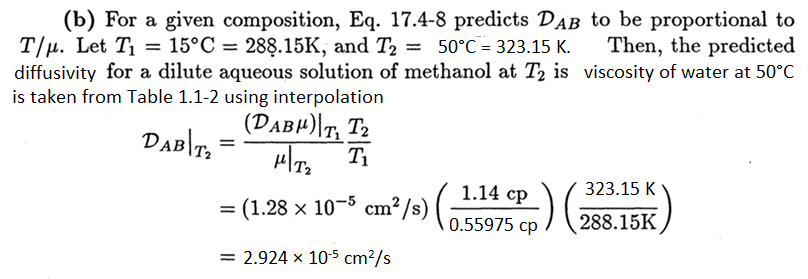
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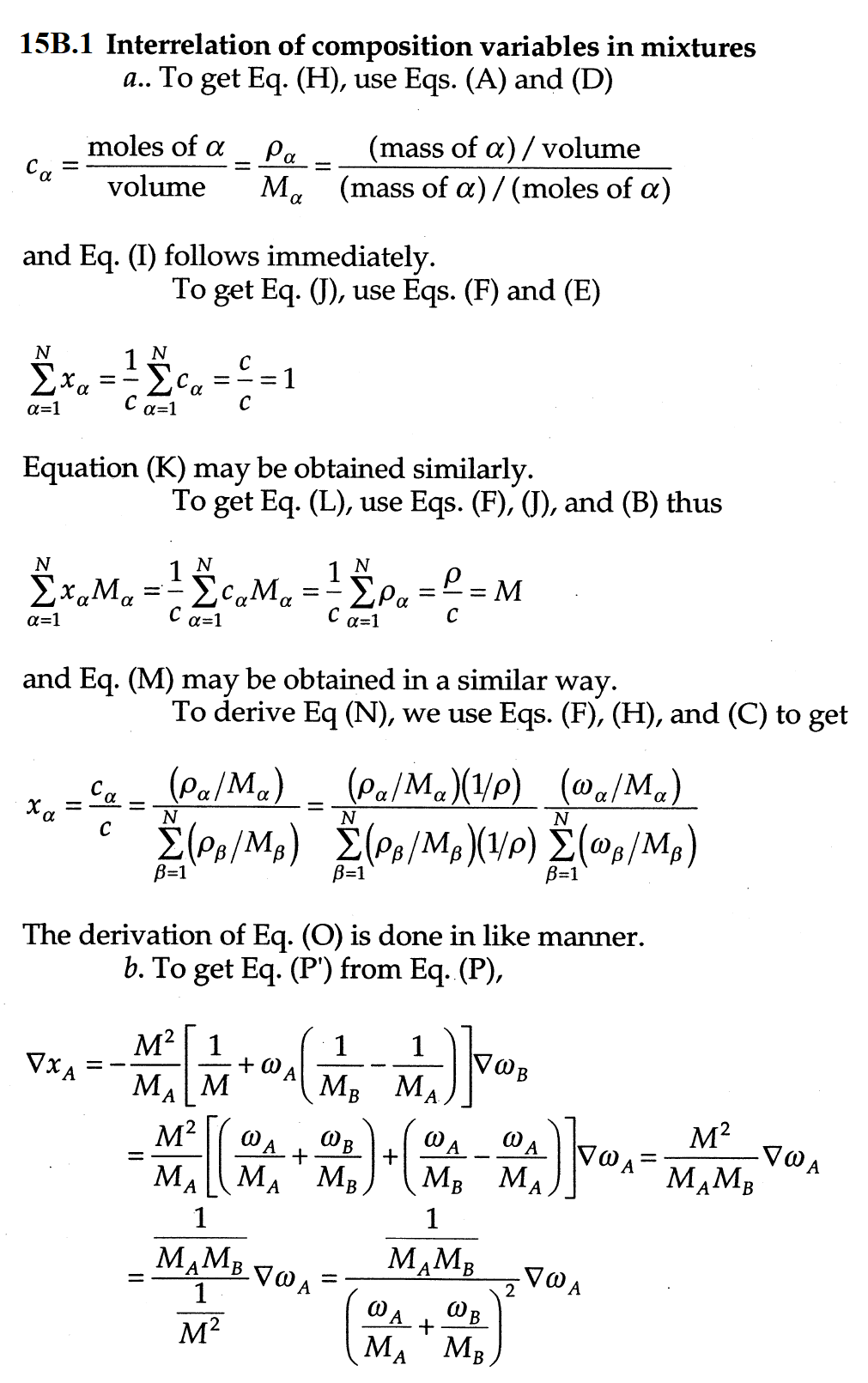
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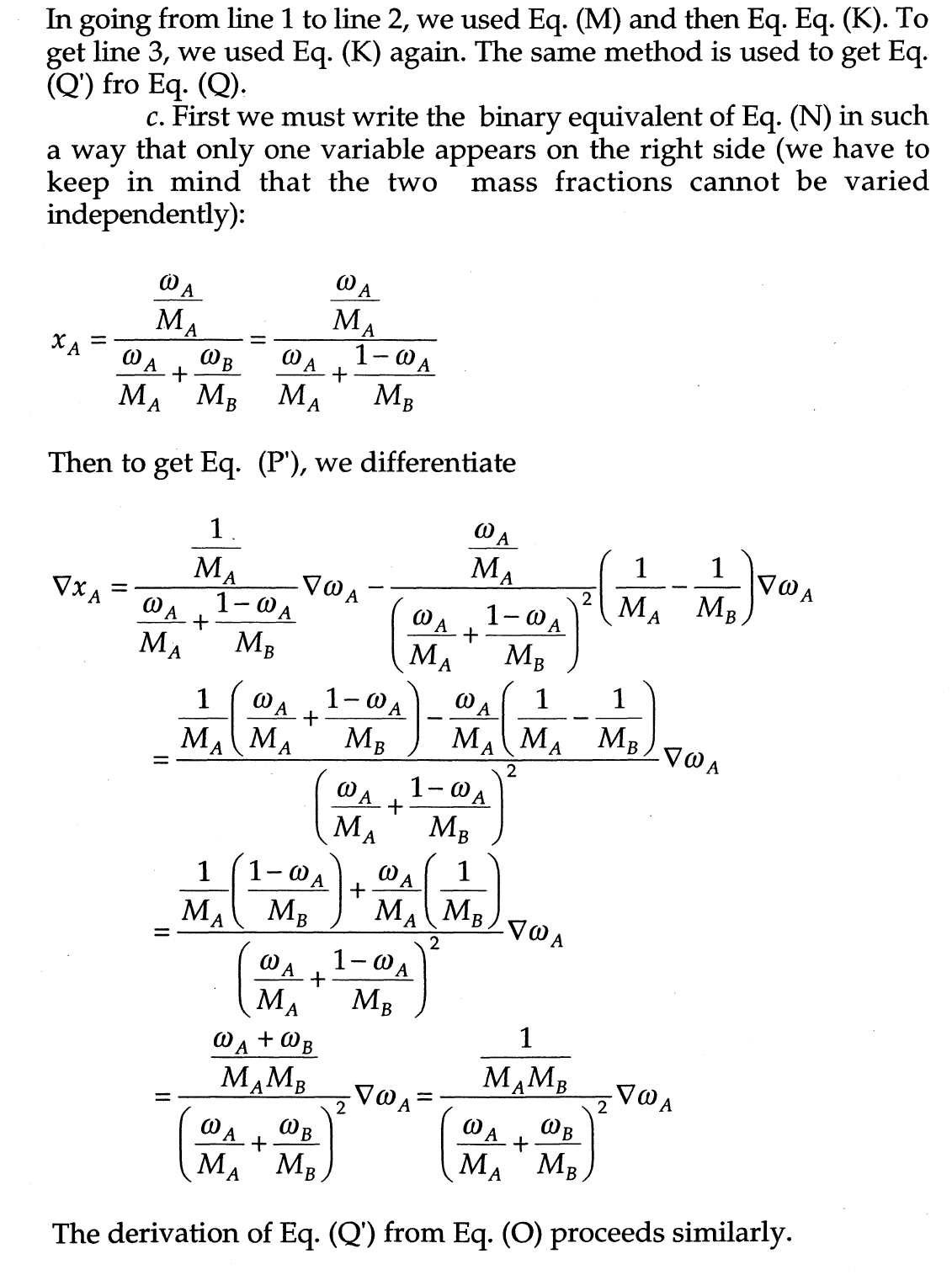
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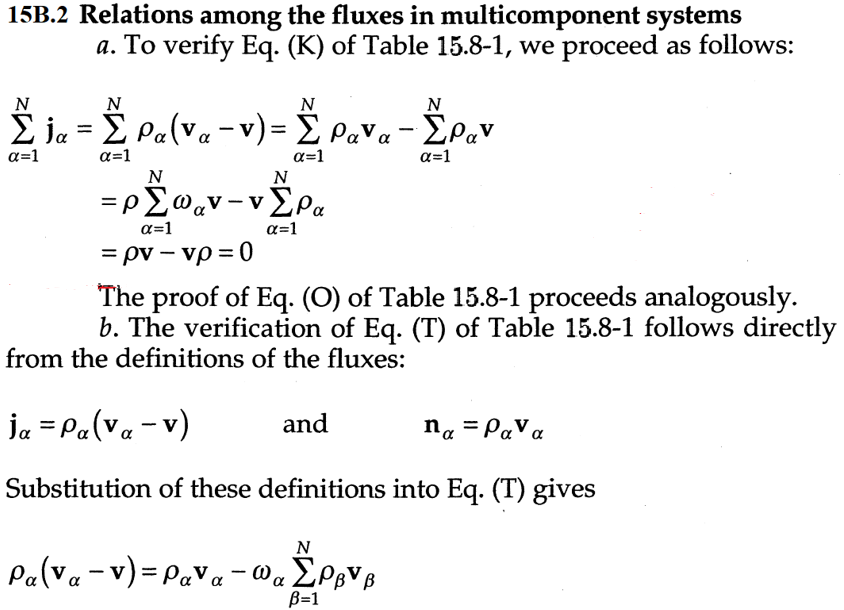
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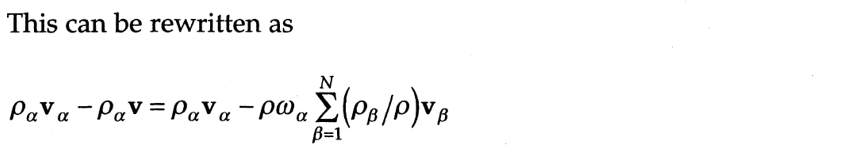
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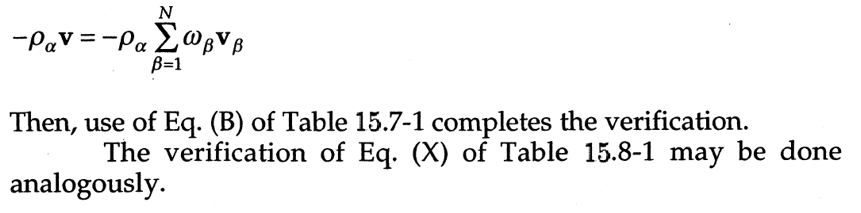
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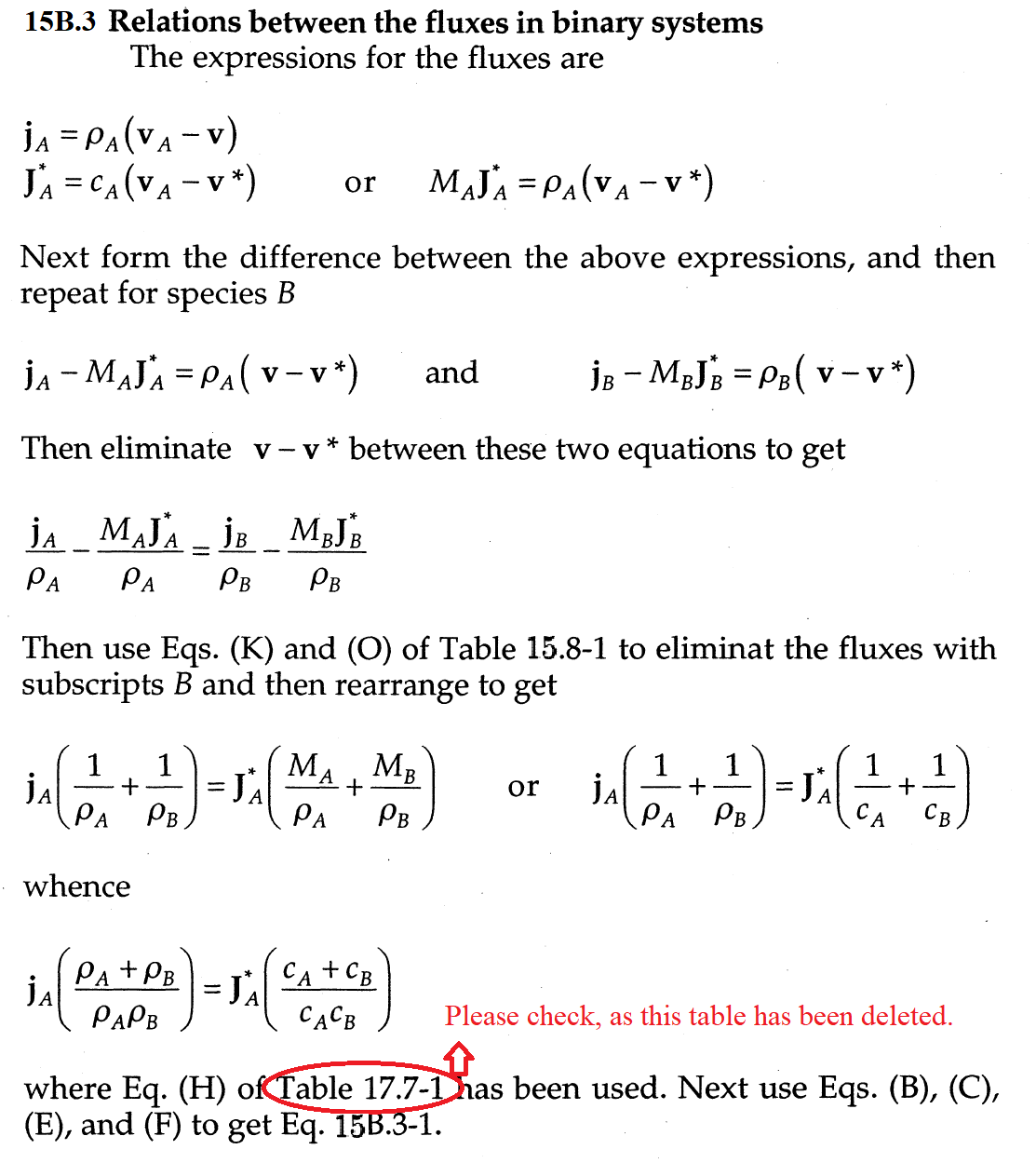
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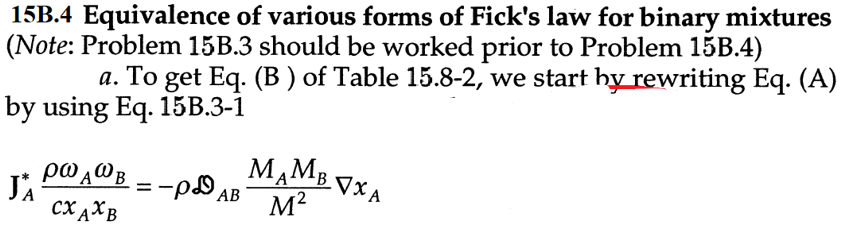
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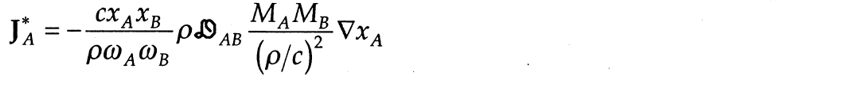
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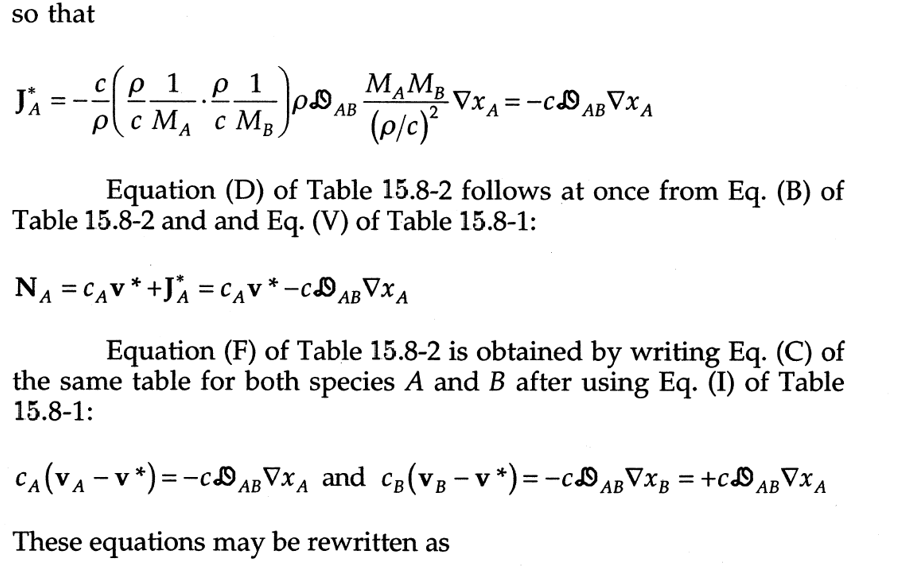
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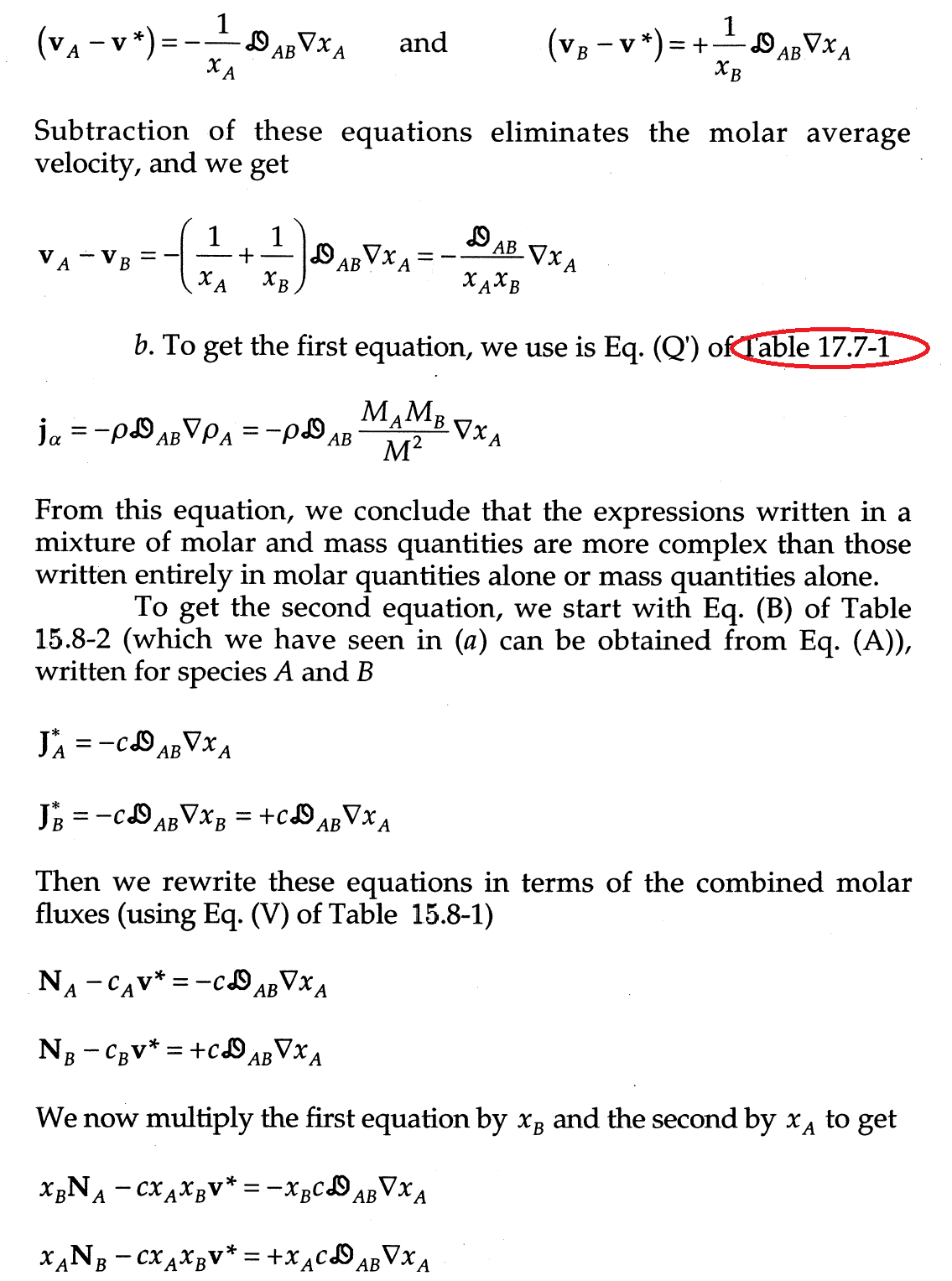
Eqs. (B), (C), (E), and (F) used to get 15B.3-1.

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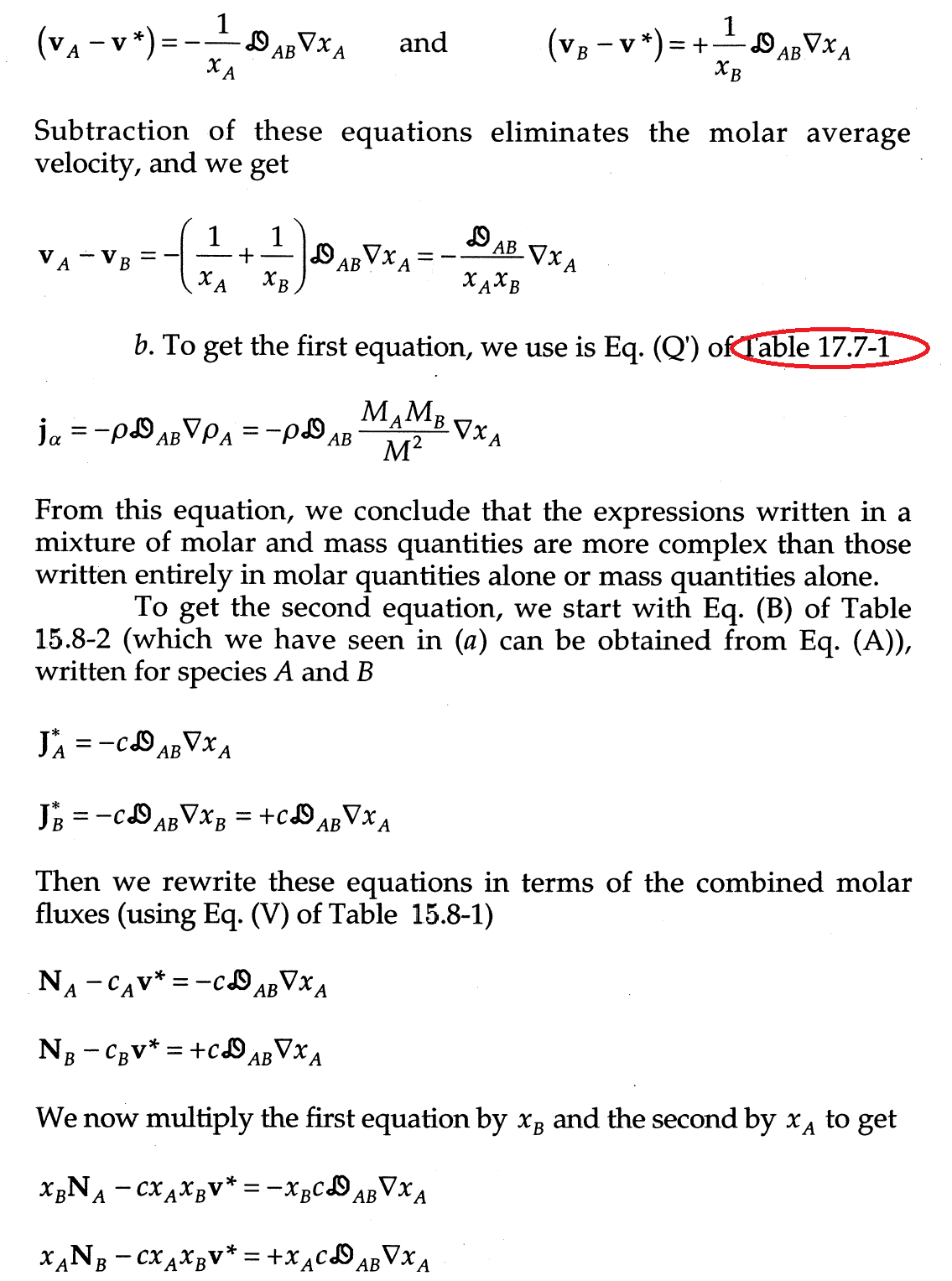
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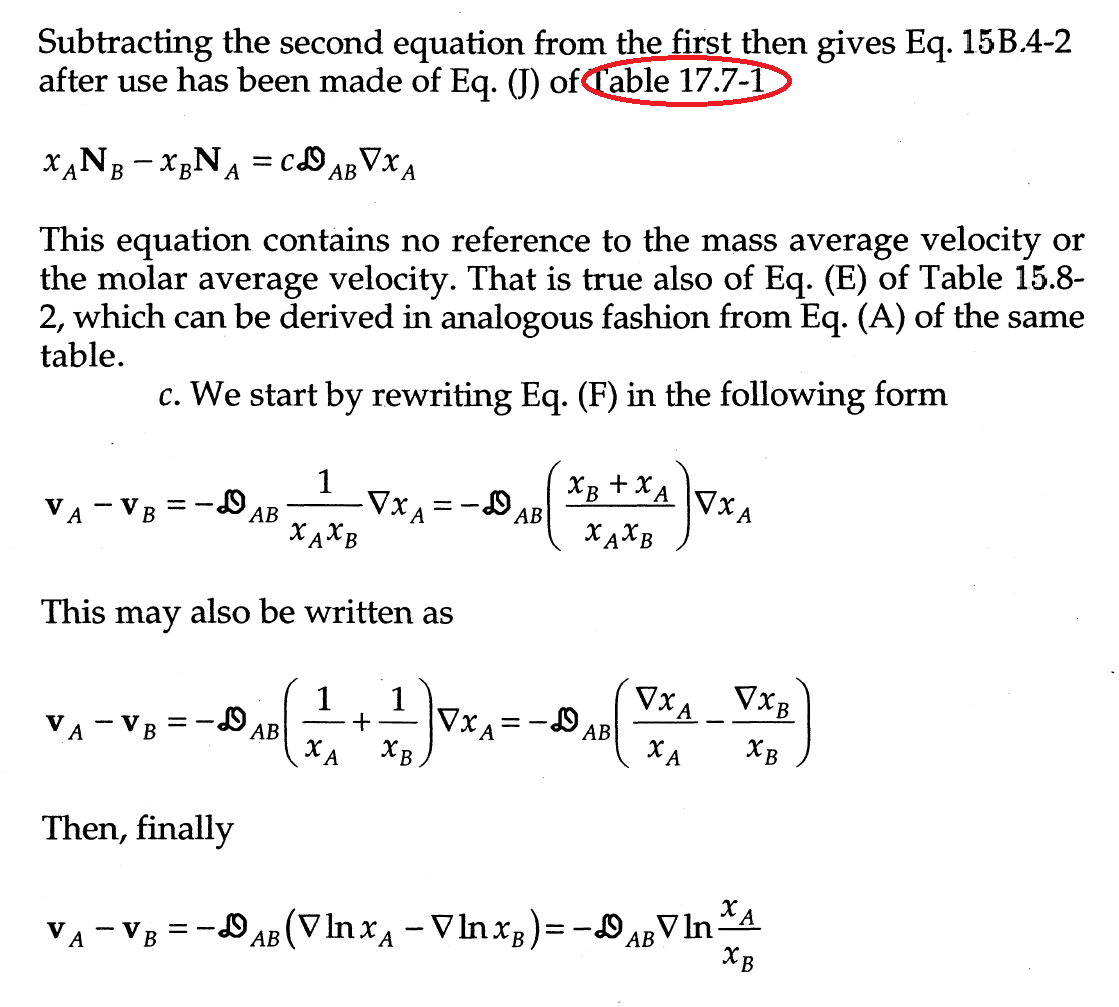
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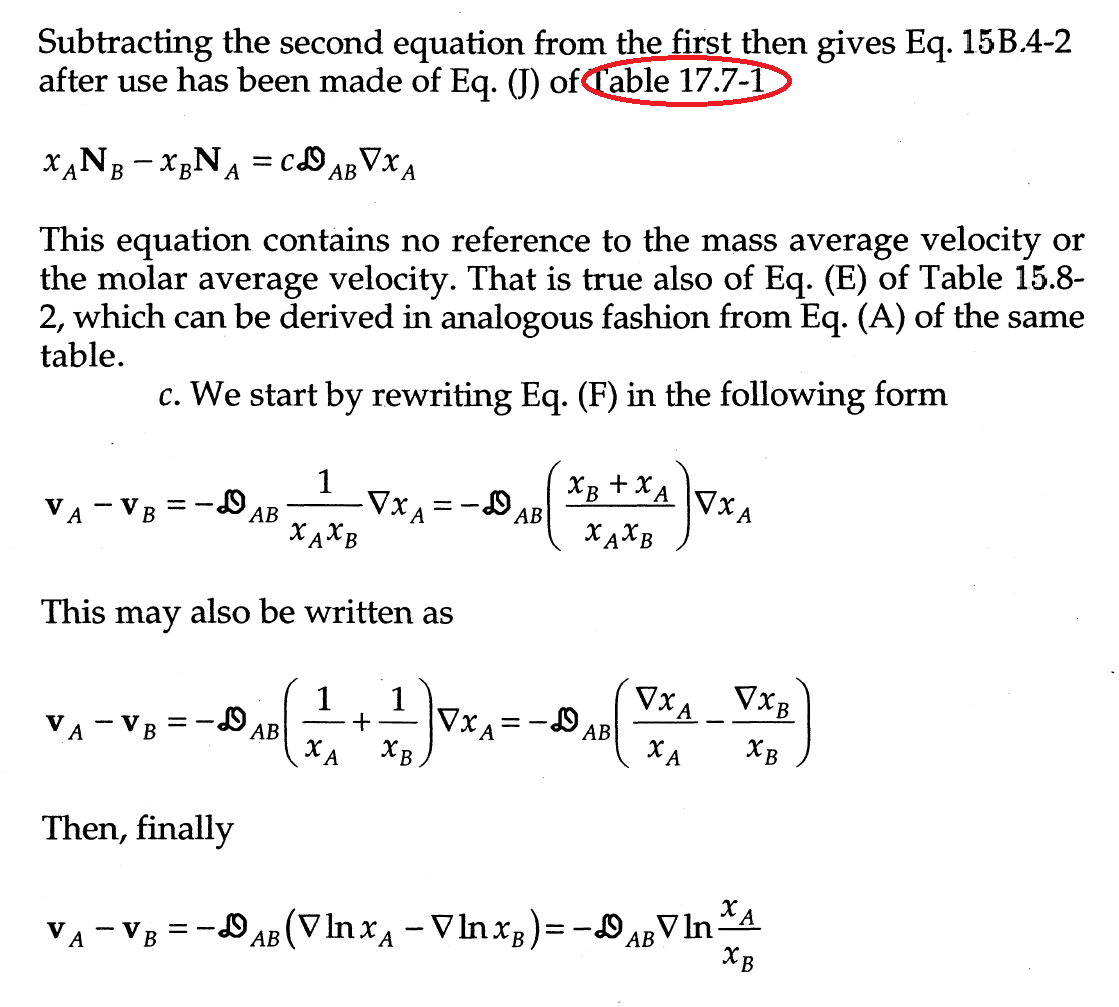
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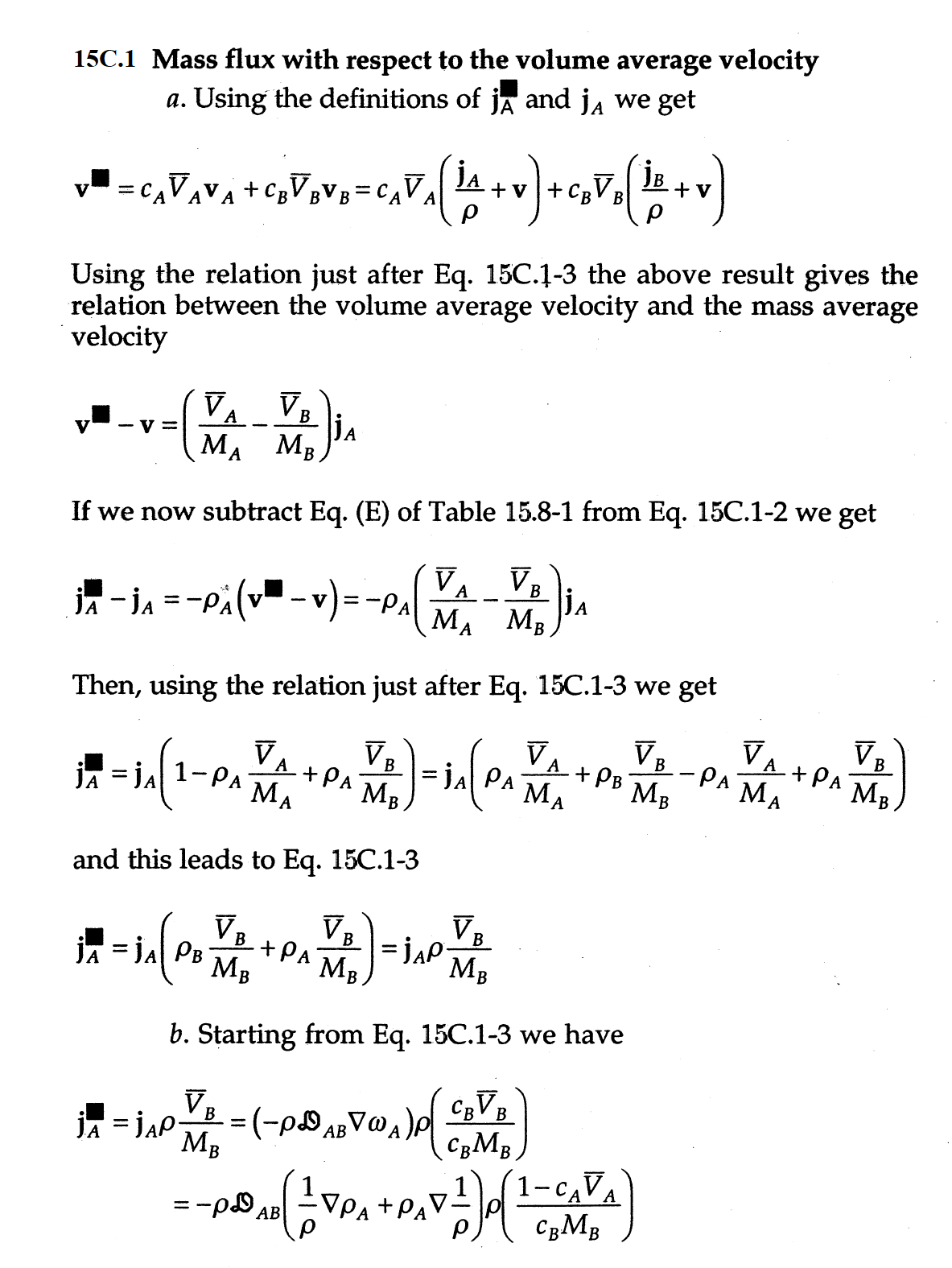
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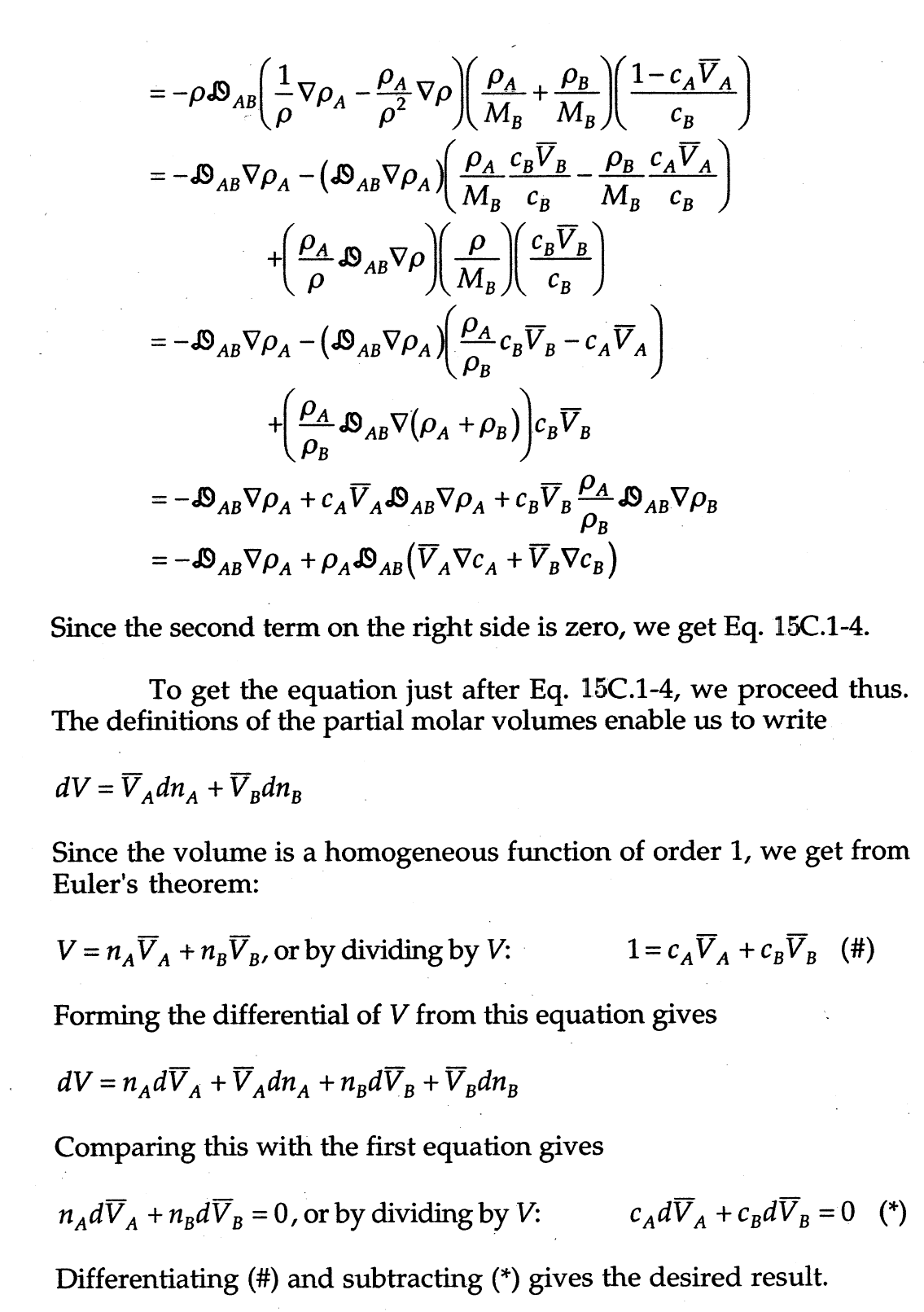
**b.** We get,

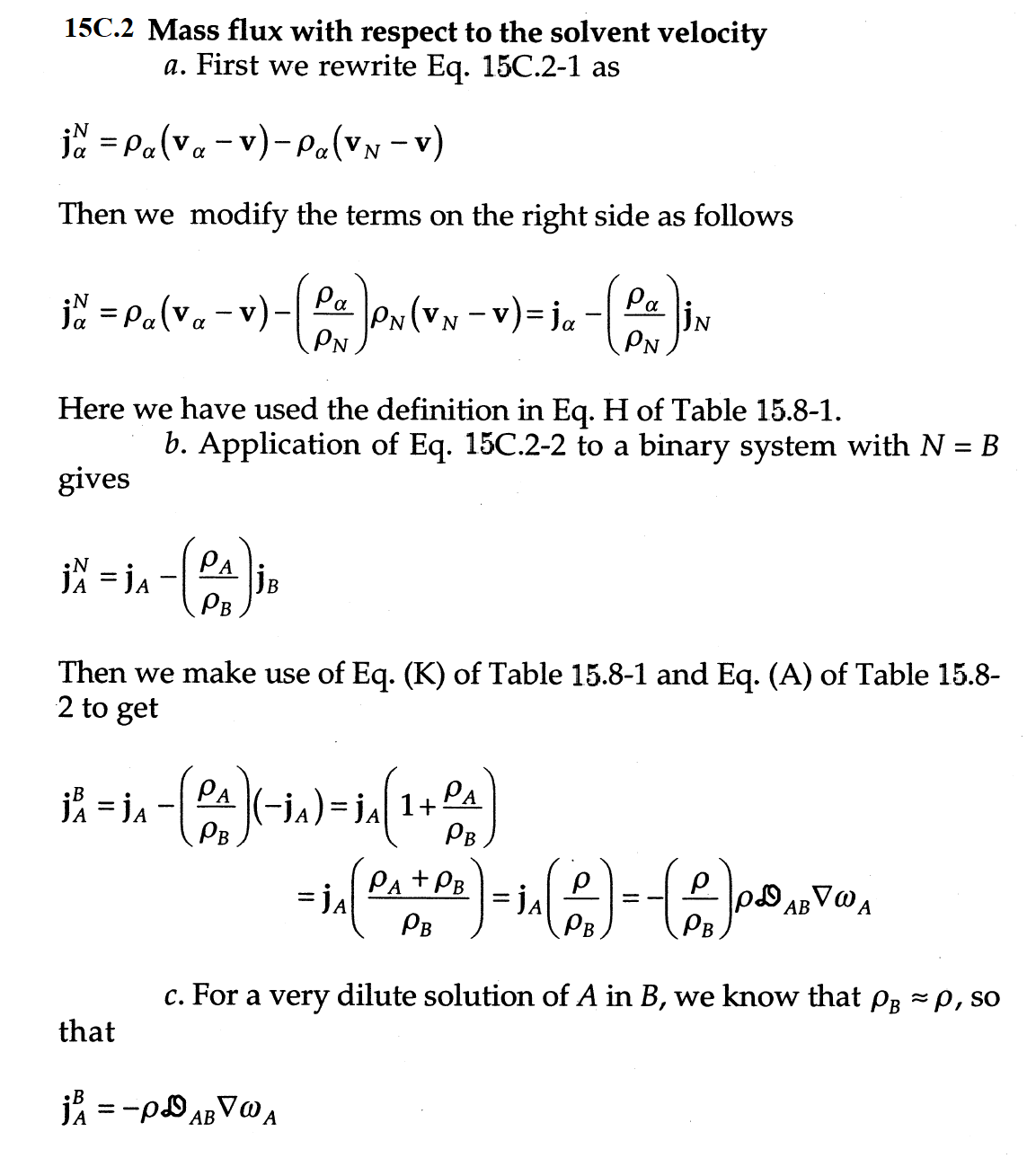
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