Homework for Lecture 6, 5

Consider a binary solution of A and B with the concentration of $X_A=0.4$. The free energy of this binary solution is given by $G = G^0 + RT(X_A X_B)$. Suppose the trace diffusion coefficient of A is three times of that of B, i.e., $D_A=3D_B=3D$,

Then, what is the interdiffusion coefficient, $\widetilde{D}$? (Express your answer in term of D.)