Staring at $\epsilon^2=0$

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$$am_{i\_,j\_\to k\_} := \mathbb{E}\left[(\alpha_i+\alpha_j)\,a_k,\ (e^{-\alpha_j}\xi_i+\xi_j)\,x_k,\ 1+O[\epsilon]^2\right]$$

$$a\Delta_{i\_\to j\_,k\_} := \mathbb{E}\left[\alpha_i\,(a_j+a_k),\ \xi_i\,(x_j+x_k),\right.$$
$$\left.1+\epsilon\,\xi_i\,x_k\,(-a_j+\xi_i\,x_j/2)+O[\epsilon]^2\right]$$

$$aS_{i\_} := \mathbb{E}\left[-\alpha_i\,a_i,\ -e^{\alpha_i}\xi_i\,x_i,\right.$$
$$\left.1-\epsilon\,e^{\alpha_i}\xi_i\,x_i\,(a_i+e^{\alpha_i}\xi_i\,x_i/2)+O[\epsilon]^2\right]$$

$$aSi_{i\_} := \mathbb{E}\left[-\alpha_i\,a_i,\ -e^{\alpha_i}\xi_i\,x_i,\right.$$
$$\left.1-\epsilon\,e^{\alpha_i}\xi_i\,x_i\,(a_i-1+e^{\alpha_i}\xi_i\,x_i/2)+O[\epsilon]^2\right]$$

$$bm_{i\_,j\_\to k\_} := \mathbb{E}\left[(\beta_i+\beta_j)\,b_k,\ (\eta_i+\eta_j)\,y_k,\ 1-\epsilon\,\eta_j\,y_k\,\beta_i+O[\epsilon]^2\right]$$

$$b\Delta_{i\_\to j\_,k\_} := \mathbb{E}\left[\beta_i\,(b_j+b_k),\ \eta_i\,(e^{-b_k}y_j+y_k),\right.$$
$$\left.1+\epsilon\,\eta_i^2\,y_j\,y_k\,e^{-b_k}/2+O[\epsilon]^2\right]$$

$$bS_{i\_} := \mathbb{E}\left[-\beta_i\,b_i,\ -e^{b_i}\eta_i\,y_i,\right.$$
$$\left.1-\epsilon\,e^{b_i}\eta_i\,y_i\,(\beta_i+e^{b_i}\eta_i\,y_i/2)+O[\epsilon]^2\right]$$

$$bSi_{i\_} := \mathbb{E}\left[-\beta_i\,b_i,\ -e^{b_i}\eta_i\,y_i,\right.$$
$$\left.1-\epsilon\,e^{b_i}\eta_i\,y_i\,(\beta_i-1+e^{b_i}\eta_i\,y_i/2)+O[\epsilon]^2\right]$$

$$tP_{i\_,j\_} := \mathbb{E}\left[\beta_i\,\alpha_j,\ \eta_i\,\xi_j,\ 1+\epsilon\,\eta_i^2\,\xi_j^2/4\right]$$

$$R_{i\_,j\_} := \mathbb{E}\left[b_i\,a_j,\ y_i\,x_j,\ 1-\epsilon\,y_i^2\,x_j^2/4+O[\epsilon]^2\right]$$