

$$\text{In[*]} := (\mathbf{R}_{1,2} (\overline{\mathbf{R}}_{3,4} // \mathbf{m}_{4,3 \rightarrow 3})) // \mathbf{m}_{1,3 \rightarrow 1}$$

$$\text{Out[*]} := 2 a_1 a_2 - \frac{a_1 a_2}{T} - \frac{a_2 d_1}{T} - a_1 d_2 + 2 T a_1 d_2 + d_1 d_2 - 3 k b_2 k c_1 + \frac{k b_2 k c_1}{T} + 2 T k b_2 k c_1$$

$$\text{In[*]} := \mathbf{R}_{1,2}$$

$$\text{Out[*]} := a_1 a_2 + a_2 d_1 + T a_1 d_2 - T d_1 d_2 - (1 - T) k b_2 k c_1$$

$$\text{In[*]} := \overline{\mathbf{C}}_2 \mathbf{R}_{1,3} // \mathbf{m}_{1,2 \rightarrow 1} // \mathbf{m}_{1,3 \rightarrow 1}$$

$$\text{Out[*]} := k a_1 - k d_1$$

$$\text{In[*]} := \overline{\mathbf{C}}_2 \overline{\mathbf{R}}_{1,3} // \mathbf{m}_{1,2 \rightarrow 1} // \mathbf{m}_{1,3 \rightarrow 1}$$

$$\text{Out[*]} := k a_1 - k d_1$$

$$\text{In[*]} := \text{Expand}[\mathbf{R}_{i,j} (k a_3 - k d_3)] // \mathbf{m}_{i,3 \rightarrow i}$$

$$\text{Out[*]} := a_j k a_i + T d_j k a_i + c_i k b_j - T c_i k b_j - a_j k d_i + T d_j k d_i$$

$$\text{In[*]} := \overline{\mathbf{R}}_{i,j} (k a_3 - k d_3) // \mathbf{m}_{i,3 \rightarrow i}$$

$$\text{Out[*]} := a_j k a_i + \frac{d_j k a_i}{T} + c_i k b_j - \frac{c_i k b_j}{T} - a_j k d_i + \frac{d_j k d_i}{T}$$

$$\text{In[*]} := \mathbf{R}_{1,2}$$

$$\text{Out[*]} := a_1 a_2 + a_2 d_1 + T a_1 d_2 - T d_1 d_2 - (1 - T) k b_2 k c_1$$