$$\text{lhs} = \int \left(\mathbb{E}\left[\dot{\imath}\,\pi_i\,p_i + \dot{\imath}\,\pi_j\,p_j + \dot{\imath}\,\pi_k\,p_k\right] \times \mathcal{L}\,/@\,\left(X_{i,j}[1]\,X_{i+1,k}[1]\,X_{j+1,k+1}[1]\right)\right)$$

$$\mathrm{d}\{p_i, p_j, p_k, x_i, x_j, x_k, p_{i+1}, p_{j+1}, p_{k+1}, x_{i+1}, x_{j+1}, x_{k+1}\};$$

$$\text{rhs} = \int \left(\mathbb{E}\left[\dot{\imath}\,\pi_i\,p_i + \dot{\imath}\,\pi_j\,p_j + \dot{\imath}\,\pi_k\,p_k\right] \times \mathcal{L}\,/@\,\left(X_{j,k}[1]\,X_{i,k+1}[1]\,X_{i+1,j+1}[1]\right)\right)$$

$$\mathrm{d}\{p_i, p_j, p_k, x_i, x_j, x_k, p_{i+1}, p_{j+1}, p_{k+1}, x_{i+1}, x_{j+1}, x_{k+1}\};$$

$$\text{lhs} == \text{rhs}$$