Mangold (2015) Paper Implementation

1. Figure out what is a bivariate Nelsen copula $C_\theta(u_1, u_2)$, understand its structure and how many parameters it has.
2. Figure out p-dimensional Nelsen copula. For the assessment work you only need 4-D, so write it down.
3. Analytically calculate the density c_θ for the Nelsen copula in 4-D from its definition.
4. Analytically calculate $\dot{c}_\theta(u_1, \ldots, u_4) = \frac{\partial c_\theta(u_1, \ldots, u_4)}{\partial \theta}$.
5. Evaluate the above at $\theta_0 = \mathbf{0}$.
6. Implement **proposition 3.3**. Get as much work done analytically as possible. Especially do not do numerical integrations until the last step. See **Example 3.2** for a nice implemented 2-D example.