$$(F(X) \otimes_{\mathbf{D}} F(Y)) \otimes_{\mathbf{D}} F(Z) \xrightarrow{\mathrm{as}^{\mathbf{D}}_{F(X),F(Y),F(Z)}} F(X) \otimes_{\mathbf{D}} (F(Y) \otimes_{\mathbf{D}} F(Z))$$

Left vertical: $\mu_{X,Y} \otimes_{\mathbf{D}} \mathrm{id}(F(Z))$

Right vertical: $\mathrm{id}(F(X)) \otimes_{\mathbf{D}} \mu_{Y,Z}$

$$F(X \otimes_{\mathbf{C}} Y) \otimes_{\mathbf{D}} F(Z) \qquad F(X) \otimes_{\mathbf{D}} F(Y \otimes_{\mathbf{C}} Z)$$

Left vertical: $\mu_{X \otimes_{\mathbf{D}} Y, Z}$

Right vertical: $\mu_{X, Y \otimes_{\mathbf{D}} Z}$

$$F((X \otimes_{\mathbf{C}} Y) \otimes_{\mathbf{C}} Z) \xrightarrow{F(\mathrm{as}^{\mathbf{C}}_{X,Y,Z})} F(X \otimes_{\mathbf{C}} (Y \otimes_{\mathbf{C}} Z))$$