

$$\begin{array}{ccc}
 F(A) \odot F(B) & \xrightarrow{\varphi_F} & F(A \otimes B) \\
 \eta_A \odot \eta_B \downarrow & & \downarrow \eta_{A \otimes B} \\
 G(A) \odot G(B) & \xrightarrow{\varphi_G} & G(A \otimes B)
 \end{array}$$