

$$\begin{aligned}
 ((\mathbf{Arr} \circ \mathbf{Arr})(f) \circ \mathbf{mu}_Y)([[a, b], [c, d]]) &= \mathbf{mu}_Y([[f(a), f(b)], [f(c), f(d)]]) \\
 &= [f(a), f(d)].
 \end{aligned}$$