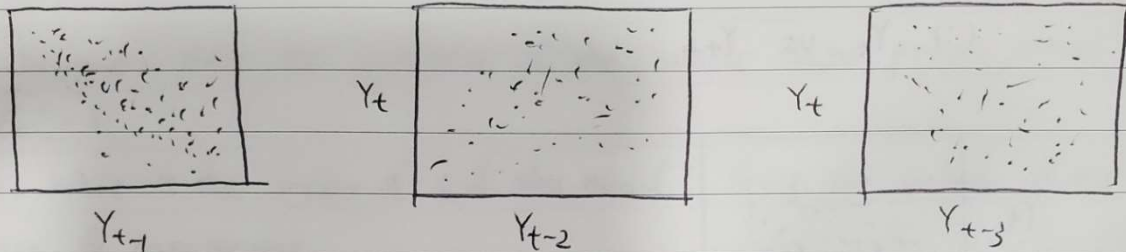


3. Consider an MA model that results in the following plots of Y_t vs Y_{t-1} , Y_t vs Y_{t-2} and Y_t vs Y_{t-3} .



Based on the above plots, what do you believe to be the order q of this model? Explain your reasoning.

→ It looks like autocorrelation is negative when $k=1$ and positive when $k=2$. However, when $k>2$, autocorrelation is zero. To make sense of it, $q=2$ would be reasonable. \therefore Order of 2.

4. Consider an $MA(1)$ model that results in the following plots of Y_t vs. Y_{t-1} and Y_t vs Y_{t-2} :