Gráfico, Gráfico de líneas

Descripción generada automáticamenteGraphical user interface, application

Description automatically generated

The moving average will not be a good method because it does not capture the trend or seasonality of the series.

It would also not be a good method because it would only be useful if the trend of the series was exponential, which is not the case, and it would not caputure the seasonality.

Text, letter

Description automatically generated

b.

i.

It shows that there is an increasing trend until the first quarter of 1988, then the trend starts decreasing.

ii.

Point Forecast Lo 80 Hi 80 Lo 95 Hi 95

1990 Q1 4565.743 4482.992 4648.494 4439.186 4692.300

iii

Point Forecast Lo 80 Hi 80 Lo 95 Hi 95

1991 Q1 4565.743 4380.720 4750.766 4282.775 4848.711

iv

It is most likely to overestimate actual sales, since the problem with the MA as a forecasting tool is that it does not pick up seasonality, so as a general rule if seasonality is maintained in the actual data the MA will still make the seasonality error, which we can see in the graph below (error made by the MA, i.e., sales - MA). In the next period, if there is nothing to stimulate a change, this seasonality will be maintained and the MA will again make an error, which in this period will be negative and therefore the MA will be overestimating sales.

Gráfico, Gráfico de líneas

Descripción generada automáticamente

The error committed by the MA -> (sales – MA)