**Mean absolute percentage error (MAPE)**

Expresses accuracy as a percentage of the error. Because this number is a percentage, it can be easier to understand than the other statistics. For example, if the MAPE is 5, on average, the forecast is off by 5%. The equation is:



where *yt* equals the actual value,  equals the fitted value, and *n* equals the number of observations.

**Mean absolute deviation (MAD)**

Expresses accuracy in the same units as the data, which helps conceptualize the amount of error. Outliers have less of an effect on MAD than on MSD. The equation is:



where *yt* equals the actual value,  equals the fitted value, and *n* equals the number of observations.

**Mean squared deviation (MSD)**

A commonly-used measure of accuracy of fitted time series values. Outliers have a greater effect on MSD than on MAD. The equation is:



where *yt* equals the actual value,  equals the forecast value, and *n* equals the number of forecasts.