Estimating the developments in tourism with scientific basis methods is an important guide for central and local public administration programs and tourism operators. When reviewing the related literature, it is seen that the number of scientific studies that modelled and estimated by alternative methods of tourism income in Turkey is limited. Based on the gap seen in the literature, the purpose of this study is to specify the forecasting method that yields the highest accuracy when compared the forecast performances of Exponential Smoothing, Box-Jenkins method and Artificial Neural Networks (ANN) for forecasting monthly inbound tourism incomes via the method giving best results. Forecasting performances of the models were measured by MAPE statistics. As a result of the analyses performed, it was found that ANN Model with \([5:7:1]\) architecture was the best one among the all models applied in this study. Monthly (ex-ante) tourism income forecasts were generated for the year 2020 by using developed ANN model.