

Achievement Standard

Subject Reference Statistics and Modelling 3.1

Title Determine the trend for time series data

Level 3 **Credits** 3 **Assessment** Internal

Subfield Statistics and Probability

Domain Statistics

Status Expiring **Status date** 4 December 2012

This achievement standard is expiring. Assessment against the standard must take place before the expiry date set out below.

Expiry date 31 December 2013 **Date version published** 4 December 2012

This achievement standard involves determining the trend for time series data.

	Achievement Criteria	Explanatory Notes
Achievement	<ul style="list-style-type: none"> Determine the trend for time series data. 	<ul style="list-style-type: none"> This will include: <ul style="list-style-type: none"> graphing smoothing with moving averages describing the trend from the smoothed data, in context, by making a quantitative statement relating to a factor such as the gradient of the trend line.
Achievement with Merit	<ul style="list-style-type: none"> Analyse time series data to make a forecast. 	<ul style="list-style-type: none"> Forecast will be based on: <ul style="list-style-type: none"> estimates of the trend for the smoothed data estimates of seasonal effects. Analysis of cyclic effects is not expected.

	Achievement Criteria	Explanatory Notes
Achievement with Excellence	<ul style="list-style-type: none"> Report on the validity of the analysis. 	<ul style="list-style-type: none"> The report will include justified comments on some of the following: <ul style="list-style-type: none"> relevance and usefulness of forecast features of the time series data appropriateness of the model improvements to the model limitations of the analysis seasonally adjusted data comparison with related time series data development and interpretation of an index number series.

General Explanatory Notes

- This achievement standard is derived from *Mathematics in the New Zealand Curriculum*, Learning Media, Ministry of Education, 1992, and *Mathematics in the New Zealand Curriculum, Addendum to Level 8*, Learning Media, Ministry of Education, 1995:
 - achievement objective p. 198, addendum p. 9
 - suggested learning experiences pp. 199, addendum pp. 9–10
 - sample assessment activities p. 200, addendum pp. 10–11
 - mathematical processes pp. 23–29.
- Analysis* may involve data that is represented by an index series.
- Data may be supplied.
- The use of appropriate technology is expected.

Replacement Information

This achievement standard and unit standard 5257 have been replaced by AS91580.

Quality Assurance

- Providers and Industry Training Organisations must have been granted consent to assess by NZQA before they can register credits from assessment against achievement standards.
- Organisations with consent to assess and Industry Training Organisations assessing against achievement standards must engage with the moderation system that applies to those achievement standards.

Consent and Moderation Requirements (CMR) reference

0226