

IB Applications Pre-Calculus

Data Collection Reporting Standard

PS 1 Classify data as discrete or continuous.

PS 2 Identify sampling techniques used to collect data.

PS 3 Analyze the reliability of data and identify possible bias.

PS 4 Identify possible outliers in a data set.

Data Representation Reporting Standard

PS 5 Organize, present and analyze data in frequency tables, histograms and cumulative frequency graphs.

PS 6 Create and interpret box-and-whisker plots.

PS 7 Calculate and interpret measures of central tendency and measures of dispersion for a set of data.

PS 8 Explain the effect on measures of central tendency and dispersion when a data set is transformed by addition, subtraction, multiplication, and division.

Applied Statistics Reporting Standard

PS 9 Calculate and interpret Pearson's product-moment correlation coefficient and the equation of the least squares regression line.

PS 10 Describe the properties of normally distributed data. Calculate probabilities and expected values for normally distributed data. Perform inverse normal calculations.

PS 11 Calculate and interpret Spearman's rank correlation coefficient.

PS 12 Perform hypothesis tests including Chi-squared test for independence, goodness of fit test, and t-tests. Use the p-value to interpret results.

Trigonometry Reporting Standard

PS 13 Use right triangle trigonometry to solve problems.

PS 14 Use law of sines and cosines to find missing sides and angles of triangles.

PS 15 Use formulas to find areas of triangles.

PS 16 Use properties of triangles to solve problems.

Modeling and Exploration Reporting Standard

PS 17 Use functions to model situations including linear, quadratic, exponential, cubic, and sinusoidal models.

PS 18 Find the parameters of a model and use the model to make predictions.

PS 19 Chose a topic to perform a mathematical exploration.

PS 20 Create a well-organized mathematical exploration that uses pre-calculus and includes conclusion and reflection.

Calculus Reporting Standard

PS 21 Calculate derivatives of polynomial functions.

PS 22 Use derivatives to solve problems.

PS 23 Calculate integrals of polynomial functions.

PS 24 Use integrals to solve problems.
