

New York State Mathematics Correlation Algebra 2 and Trigonometry (Grade 9-12)

Reference: [NY Mathematics Core Curriculum](#)

Introduction

This document correlates Yenka Mathematics software to the content performance indicators of the New York State mathematics core curriculum. It highlights specific areas of the curriculum that are covered by Yenka Mathematics and points to resources that will be useful when teaching the material.

The terminology we have used in this document is as follows:

- **Product:** this is the relevant Yenka Mathematics product, either [Yenka 3D Shapes](#) or [Yenka Statistics](#). More information about these products can be found on the Yenka web page by following the links.
- **Model:** a pre-made Yenka simulation with step-by-step instructions, which will either teach the pupils part of the curriculum, or give them opportunity to apply the knowledge they already have. These models are found under *Content* when you open Yenka itself, and they are linked to through our website.
- **Tutorial:** a model that explains how to use a particular aspect of the Yenka software. These can be found under *Getting Started* in the *Content* tab of Yenka.

Since the Yenka Mathematics titles are simulators, they will help you to cover other areas of the curriculum too. The final column of the table gives some possible *examples* of how you, or the students, can use Yenka Mathematics to create your own models and cover a wider scope of material. You may wish to look at the *tutorials*, and [training videos](#) provided on the website, to explore more of the potential uses of the software, and show you how to create your own models.



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Statistics and Probability Strand

Band		Product	Content (Models)	Example
<i>Organization and Display of Data</i>	A2.S.3 Calculate measures of central tendency with group frequency distributions	Yenka Statistics	- Calculating mean of grouped data	Use a <i>Line up</i> Data set, and the teacher or student can determine characteristics of height, age etc for each person. Ask students to calculate measures of central tendency with this line up. They can then discuss which measure is most appropriate for the situation.
	A2.S.4 Calculate measures of dispersion (range, quartiles, interquartile range, standard deviation, variance) for both samples and populations	Yenka Statistics	- Quartiles and interquartile range - Calculating standard deviation	Pupils can study one of the <i>Example Datasets</i> and calculate measures of dispersion from the data given. They can check to see if their answer is correct, view the graph of the data, and discuss the implications of their results.
	A2.S.5 Know and apply the characteristics of the normal distribution	Yenka Statistics	- Comparing normal distributions	Use a pre-made <i>Normal distribution</i> from <i>Data Sources</i> . Associate to it a <i>Frequency polygon</i> . Students can alter the mean, standard deviation etc. and generate data samples to see how these characteristics affect the distribution of data on the graph. Alternatively, one of the <i>Example Datasets</i> can be used, and students decide if the distribution is in fact normal, and determine its characteristics from the data or graph.
<i>Predictions from Data</i>	A2.S.6 Determine from a scatter plot whether a linear, logarithmic, exponential, or power regression model is most appropriate	Yenka Statistics		Import your data, e.g. from an Excel spreadsheet, to an <i>Empty data set</i> , and drag a <i>Scatter graph</i> onto the screen. Students can study the plots and corresponding data to determine what model best fits the data.

<i>Probability</i>	A2.S.13 Calculate theoretical probabilities, including geometric applications	Yenka Statistics	Related models: <ul style="list-style-type: none"> - Combining independent events - Complementary events - Independent and dependent events 	Set up a <i>Probability Game</i> e.g. the rolling of a dice, or spinning a spinner. The dice can be weighted, and students calculate the probability of each number being rolled, of three 6's being rolled consecutively etc. Students then roll the dice 500 times and use a probability tree or <i>data viewer</i> to determine the empirical probability.
	A2.S.14 Calculate empirical probabilities	Yenka Statistics	Related model: <ul style="list-style-type: none"> - Probability and relative frequency 	

If you have any questions about Yenka or this document, please contact [Esther Droop](#) or visit www.yenka.com