

Hickman County Curriculum Map
Algebra I
Fourth Nine Weeks

Course Level Expectations	Checks for Understanding	Student Performance Indicator(s)	Resources
<p>3102.1.4 Move flexibly between multiple representations (contextual, physical, written, verbal, iconic/pictorial, graphical, tabular, and symbolic), to solve problems, to model mathematical ideas, and to communicate solution strategies.</p> <p>3102.3.9 Understand and use exponential functions to solve contextual problems.</p> <p>3102.4.1 Use algebraic reasoning in applications involving geometric formulas and contextual problems.</p> <p>3102.4.2 Apply appropriate units of measure and convert measures in problem solving situations.</p> <p>3102.5.1 Describe and interpret quantitative information.</p> <p>3102.5.2 Use statistical thinking to draw conclusions and make predictions.</p> <p>3102.5.3 Understand basic counting procedures and concepts of probability.</p>	<p>3102.1.14 Apply graphical transformations that occur when changes are made to coefficients and constants in functions.</p> <p>3102.3.17 Recognize “families” of functions.</p> <p>3102.3.19 Explore the characteristics of graphs of various nonlinear relations and functions including inverse variation, quadratic, and square root function. Use technology where appropriate.</p> <p>3102.3.33 Recognize data that can be modeled by an exponential function.</p> <p>3102.3.34 Graph exponential functions in the form $y = a^{(bx)}$ where $b \neq 0$.</p> <p>3102.3.35 Apply growth/decay and simple/compound interest formulas to solve contextual problems.</p> <p>3102.4.1 Using algebraic expressions solve for measures in geometric figures as well as for perimeter, area, and volume.</p> <p>3102.4.2 Use the Pythagorean Theorem to find the missing measure in a right triangle including those from contextual situations.</p> <p>3102.4.3 Understand horizontal/vertical distance in a coordinate system as absolute value of the difference between coordinates; develop the distance formula for a coordinate plane using the Pythagorean Theorem.</p> <p>3102.4.4 Develop the midpoint formula for segments on a number line or in the coordinate plane.</p> <p>3102.4.5 Use dimensional analysis to convert rates and measurements both within a system and between systems and check the appropriateness of the solution.</p> <p>3102.5.1 Identify patterns or trends in data.</p> <p>3102.5.2 Develop a meaning for and identify outliers in a data set and verify.</p> <p>3102.5.3 When a set of data is changed, identify effects on measures of central tendency, range, and interquartile range.</p>	<p>3102.1.5 Recognize and express the effect of changing constants and/or coefficients in problem solving.</p> <p>3102.3.11 Analyze nonlinear graphs including quadratic and exponential functions that model a contextual situation.</p> <p>3102.4.1 Develop and apply strategies to estimate the area of any shape on a plane grid.</p> <p>3102.4.2 Solve contextual problems using the Pythagorean Theorem.</p> <p>3102.4.3 Solve problems involving the distance between points or midpoint of a segment.</p> <p>3102.4.4 Convert rates and measurements.</p> <p>3102.5.1 Interpret displays of data to answer questions about the data set(s) (e.g., identify pattern, trends, and/or outliers in a data set).</p> <p>3102.5.2 Identify the effect on mean, median, mode, and range when values in</p>	

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	<p>3102.5.4 Explore quartiles, deciles, and percentiles of a distribution.</p> <p>3102.5.5 Construct and interpret various forms of data representations, (including line graphs, bar graphs, circle graphs, histograms, scatter-plots, box-and-whiskers, stem-and-leaf, and frequency tables).</p> <p>3102.5.6 Draw qualitative graphs of functions and describe a general trend or shape.</p> <p>3102.5.7 Compare two data sets using graphs and descriptive statistics.</p> <p>3102.5.8 Examine real-world graphical relationship (including scatter-plots) to determine type of relationship (linear or nonlinear) and any association (positive, negative or none) between the variables of the data set.</p> <p>3102.5.9 Determine an equation for a line that fits real-world linear data; interpret the meaning of the slope and y-intercept in context of the data.</p> <p>3102.5.10 Using technology with a set of contextual linear data to examine the line of best fit; determine and interpret the correlation coefficient.</p> <p>3102.5.11 Use an equation that fits data to make a prediction.</p> <p>3102.5.12 Use techniques (Venn Diagrams, tree diagrams, or counting procedures) to identify the possible outcomes of an experiment or sample space and compute the probability of an event.</p> <p>3102.5.13 Determine the complement of an event and the probability of that complement.</p> <p>3102.5.14 Determine if two events are independent or dependent.</p> <p>3102.5.15 Explore joint and conditional probability.</p> <p>3102.5.16 Identify situations for which the Law of Large Numbers applies.</p> <p>3102.5.17 Perform simulations to estimate probabilities.</p> <p>3102.5.18 Make informed decisions about practical situations using probability concepts.</p>	<p>the data set are changed.</p> <p>3102.5.3 Using a scatter-plot, determine if a linear relationship exists and describe the association between variables.</p> <p>3102.5.4 Generate the equation of a line that fits linear data and use it to make a prediction.</p> <p>3102.5.5 Determine theoretical and/or experimental probability of an event and/or its complement including using relative frequency.</p>	
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