



KENOSHA UNIFIED SCHOOL DISTRICT NO. 1
CURRICULUM & INSTRUCTIONAL SERVICES
MATHEMATICS

Probability and Statistics (341010)
STANDARD A: MATHEMATICAL PROCESSES
Representation, Reasoning, Problem Solving
Communication, Connections
<i>I can use reasoning and logic to formulate, analyze, and solve problems, and to test the reasonableness of my results.</i>
<i>A-1.12PS</i>
<i>I can clearly communicate mathematical concepts either orally or in written form.</i>
<i>A-2.12PS</i>
<i>I can use a computer or a calculator as a problem solving tool.</i>
<i>A-3.12PS</i>
<i>I can read and interpret mathematical text and other mathematical representations (e.g., numbers, symbols, diagrams, models).</i>
<i>A-4.12PS</i>
STANDARD B: NUMBER OPERATIONS AND RELATIONSHIPS
Number Concepts
Number Computation
<i>I can determine the reasonableness of answers.</i>
<i>B-1.12PS</i>
<i>I can use mental math.</i>
<i>B-2.12PS</i>
STANDARD E: STATISTICS AND PROBABILITY
Data Analysis and Statistics
Probability
<i>I can determine the level of measurement (e.g., nominal, ordinal, interval, and ratio).</i>
<i>E-1.12PS</i>
<i>I can construct a simple random sample using random numbers.</i>
<i>E-2.12PS</i>
<i>I can identify sampling methods (e.g., simple random, stratified, systematic, cluster, and convenience).</i>
<i>E-3.12PS</i>
<i>I can identify types of statistical studies (e.g., census, sample, simulation, and experiment).</i>
<i>E-4.12PS</i>
<i>I can evaluate the validity and conclusions of a statistical experiment.</i>
<i>E-5.12PS</i>
<i>I can organize, display, and interpret the data in a variety of ways (e.g., tables, graphs, histograms, dotplots, stem-and-leaf displays, box-and-whisker plots, normal curves, and scatter plots).</i>
<i>E-6.12PS</i>
<i>I can recognize basic distribution shapes (e.g., uniform, symmetric, bimodal, and skewed).</i>
<i>E-7.12PS</i>
<i>I can calculate, make predictions, and analyze the effects of data on measures of central tendency and dispersion (e.g., mode, median, mean, range, standard deviation, variance, coefficient of variation, Chebyshev's theorem, and outliers).</i>
<i>E-8.12PS</i>
<i>I can estimate mean, variance, and standard deviation of grouped data and probability distributions. (e.g., discrete, binomial, linear combinations, and normal approximations).</i>
<i>E-9.12PS</i>
<i>I can calculate the weighted average for a set of data.</i>
<i>E-10.12PS</i>
<i>I can compute the five-number summary from raw data.</i>
<i>E-11.12PS</i>
<i>I can determine the probability of compound events (e.g., dependent, independent, mutually exclusive, and tree diagrams).</i>
<i>E-12.12PS</i>
<i>I can use combinations and permutations to determine the probability of an event.</i>

Most essential benchmarks appear in bold, italicized print.

<i>E-13.12PS</i>
<i>I can compute binomial, geometric, and normal probabilities in a variety of ways (e.g., formula, table, empirical rule, and calculator).</i>
<i>E-14.12PS</i>
<i>I can convert raw data into z scores and vice versa.</i>
<i>E-15.12PS</i>
<i>I can use sample data to compute the correlation coefficient.</i>
<i>E-16.12PS</i>