

Understanding Basic Statistics

Second Edition

correlated to the



**California Standards Map
for Mathematics—Probability and Statistics**

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| Publisher: | McDougal Littell |
| Program Title: | Understanding Basic Statistics |
| Components: | Pupil's Edition (PE), Teacher's Edition (TE) |
| Grade Level(s): | 11-12 |
| Intended Audience: | Statistics Students |

**Standards Map - Basic Comprehensive Program
Grades Eight Through Twelve - Mathematics**

The standards for grades eight through twelve are organized differently from those for kindergarten through grade seven. In this section strands are not used for organizational purposes as they are in the elementary grades because the mathematics studied in grades eight through twelve falls naturally under discipline headings: algebra, geometry, and so forth. Many schools teach this material in traditional courses; others teach it in an integrated fashion. To allow local educational agencies and teachers flexibility in teaching the material, the standards for grades eight through twelve do not mandate that a particular discipline be initiated and completed in a single grade. The core content of these subjects must be covered; students are expected to achieve the standards however these subjects are sequenced.

| Grade | Standard # | Text of Standard | PUBLISHER CITATIONS* | | | FOR LEA USE ONLY | | |
|-----------------------------------|------------|---|-------------------------|---|---------------------------------------|------------------|--|--|
| | | | Introduced | Practiced | Taught to Mastery | Meets Standard | | Local Education Agency Evaluator Notes |
| DISCIPLINE | | | | | Y | N | | |
| Probability and Statistics | | This discipline is an introduction to the study of probability, interpretation of data, and fundamental statistical problem solving. Mastery of this academic content will provide students with a solid foundation in probability and facility in processing statistical information. | | | | | | |
| 8-12 | 1.0 | Students know the definition of the notion of <i>independent events</i> and can use the rules for addition, multiplication, and complementation to solve for probabilities of particular events in finite sample spaces. | PE/TE: 176 | PE/TE: 190-193, 207 [®] , 210 [®] | PE/TE: 177-179, 185-188 | | | |
| 8-12 | 2.0 | Students know the definition of <i>conditional probability</i> and use it to solve for probabilities in finite sample spaces. | PE/TE: 176 [†] | PE/TE: 190-193, 207 [®] , 210 [®] | PE/TE: 176 [†] -180, 185-187 | | | |
| 8-12 | 3.0 | Students demonstrate an understanding of the notion of <i>discrete random variables</i> by using them to solve for the probabilities of outcomes, such as the probability of the occurrence of five heads in 14 coin tosses. | PE/TE: 214 | PE/TE: 221-224, 248-249 [®] | PE/TE: 215-220 | | | |

* For more information, see Notes.
Math 8-12th Grade Standards Map --Approved by the State Board of Education on February 6, 2002.

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| | | | Introduced | Practiced | Taught to Mastery | Meets Standard | | Local Education Agency Evaluator Notes |
| | | | | | | Y | N | |
| 8-12 | 4.0 | Students are familiar with the standard distributions (normal, binomial, and exponential) and can use them to solve for events in problems in which the distribution belongs to those families. | PE/TE: 224-229 [†] , 257-258 [†] , 534 | PE/TE: 234-238, 242-246 [†] , 249-253 [®] , 254-256 [§] , 269, 545-548, 553-557, 584-586 [®] , 587-588 [°] , 589-590 [§] | PE/TE: 224-229 [†] , 230-233, 238-242 [†] , 257-258 [†] , 259-262, 535-544, 548-553, A3-A6, A10 [°] | | | |
| 8-12 | 5.0 | Students determine the mean and the standard deviation of a normally distributed random variable. | PE/TE: 259-260 [†] | PE/TE: 269-271, 310 [®] | PE/TE: 259-260 [†] , 261-262 | | | |
| 8-12 | 6.0 | Students know the definitions of the <i>mean</i> , <i>median</i> , and <i>mode</i> of a distribution of data and can compute each in particular situations. | PE/TE: 69-70 [†] | PE/TE: 78-80, 111-112 [®] , 115 [°] | PE/TE: 69-70 [†] , 71-77 | | | |
| 8-12 | 7.0 | Students compute the variance and the standard deviation of a distribution of data. | PE/TE: 81-83 [†] , 219 [†] , 241 [†] | PE/TE: 92-97, 111-112 [®] , 114-115 [°] , 117-119 [§] , 222-223, 244-246, 248-250 [®] , 251 [°] | PE/TE: 81-83 [†] , 84-91, 219 [†] -220, 241 [†] -242 | | | |

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| 8-12 | 8.0 | Students organize and describe distributions of data by using a number of different methods, including frequency tables, histograms, standard line and bar graphs, stem-and-leaf displays, scatterplots, and box-and-whisker plots. | PE/TE: 25 [†] , 35 [†] , 50 [†] , 102-103 [†] , 120 123 [†] | PE/TE: 33-34, 44-49, 54-57, 59- 62 [®] , 62-64 [™] , 65-68 [§] , 107- 110, 112- 113 [®] , 115 [™] , 117-119 [§] , 125 127 | PE/TE: 25 [†] -32, 35 [†] - 44, 50 [†] -53, 102-103 [†] , 104- 106, 120- 123 [†] , 124-125 | | | |

Publisher Notes/Additional Comments (note to publishers: please include grade level/standard when listing comments):

† indicated page(s) contain material appropriate for more than one category of instruction

® indicated page(s) contain assessment items

™ Standard 4.0: Binomial Probability Distribution is found in Table 3, pages A3-A6; Chi-square Distribution is found in Table 6, page A10

§ indicated page(s) focus on Using Technology

™ indicated page(s) contain group and writing projects