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Program Title: *Elementary Statistics: A Step by Step Approach*, 5th Ed. © 2004 by Bluman

Components: Text

Grade Level(s) 9-12

Intended Audience:

**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*      |                               |                              | Meets Standard |   | FOR LEA USE ONLY<br>Local Education Agency Evaluator Notes |
|-------------------|------------|---|---------------------------|-------------------------------|------------------------------|----------------|---|--|
|                   |            |   | Introduced                | Practiced                     | Taught to Mastery            | Y              | N |  |
| <b>DISCIPLINE</b> |            | <b>Probability and Statistics</b><br>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 a |                           |                               |                              |                |   |  |
| 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.  | 175<br>183-187<br>193-197 | 180-181<br>187-189<br>201-203 | 182<br>189<br>204<br>221-225 |                |   |  |
| 8-12              | 2.0        | Students know the definition of <i>conditional probability</i> and use it to solve for probabilities in finite sample spaces.   | 198-201                   | 203-204                       | 204<br>221-225               |                |   |  |

| 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.        | 227-230  | 230-231  | 231<br>265-266                  |                         |   |  |
|-------|------------|---|--|--|---------------------------------|-------------------------|---|--|
|       |            |   | <b>PUBLISHER CITATIONS*</b>                              |  |                                 | <b>FOR LEA USE ONLY</b> |   |  |
|       |            |   |  |  |                                 | <b>Meets Standard</b>   |   |  |
| Grade | Standard # | Text of Standard  | Introduced   | Practiced  | Taught to Mastery               | Y                       | N | Local Education Agency Evaluator Notes |
| 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.                                     | 241-247<br>254-259<br>268-282<br>287-295                 | 247-249<br>260<br>282-284<br>296-298                     | 249<br>284<br>320-323           |                         |   |  |
| 8-12  | 5.0        | Students determine the mean and the standard deviation of a normally distributed random variable.   | 231-236  | 238-239  | 239-240<br>320-323              |                         |   |  |
| 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.   | 98-100<br>101-102<br>103-105                             | 109-112<br>238-239                                       | 112<br>161-165<br>239           |                         |   |  |
| 8-12  | 7.0        | Students compute the variance and the standard deviation of a distribution of data.   | 115-121  | 126-128  | 129<br>161-165                  |                         |   |  |
| 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. | 35-42<br>47-57<br>63-77<br>138-141<br>149-152<br>495-499 | 43-44<br>57-59<br>77-79<br>141-142<br>153-154<br>506-509 | 59<br>79<br>154<br>509<br>89-92 |                         |   |  |