

# HONORS LESSON TOPICS

Here are the topics for the special challenge lessons included in the student text. You will find one honors lesson at the end of each regular lesson. The instructions are on the honors pages in the student text.

## LESSON TOPIC

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|----|---|
| 01 | Kinds of mathematics  |
| 02 | Symmetry of graphs and equations                            |
| 03 | Interpolation   |
| 04 | Factoring techniques  |
| 05 | Using factoring techniques to simplify rational expressions |
| 06 | Trig applications   |
| 07 | More trig applications                                      |
| 08 | Bearings and headings                                       |
| 09 | Navigation  |
| 10 | More navigation   |
| 11 | Proving cosine difference identity                          |
| 12 | Unit circle   |
| 13 | Using trigonometry to find the area of a triangle           |
| 14 | Rational roots test and the fundamental theorem of algebra  |
| 15 | Synthetic division  |
| 16 | More on the fundamental theorem of algebra                  |
| 17 | The remainder theorem                                       |
| 18 | Vector applications - navigation and force                  |
| 19 | Graphs of common functions                                  |
| 20 | Transformations of common functions                         |
| 21 | Inverse functions   |
| 22 | More on natural log; the “most beautiful equation”          |
| 23 | Continuous and discontinuous functions                      |
| 24 | Application of sine curve                                   |
| 25 | Graphing calculators  |
| 26 | Three-dimensional coordinate systems                        |
| 27 | Using series to find the natural log                        |
| 28 | Solving expressions with two inequality signs               |
| 29 | Solving algebraic inequalities with quotients               |
| 30 | Definition of the derivative                                |