



**MAINE**  
**Mathematics**  
**Middle Grades 5-8 and Secondary Grades**  
**Geometry © 2004**

OBJECTIVES	PAGE REFERENCES
<b>E. GEOMETRY</b>	
<b>Students will understand and apply concepts from geometry. Students will be able to:</b>	
<b>MIDDLE GRADES 5-8</b>	
1. Compare, classify, and draw two-dimensional shapes and three-dimensional figures.	SE: 178-183, 404-409, 424-430, 431-437, 439-444, 636-642, 643-648 <i>Reading Mathematics</i> 12, 446 TWE: DI 644
2. Apply geometric properties to represent and solve real-life problems involving regular and irregular shapes.	SE: 190 #28-31, 195 #6, 220 #38-39, 251 #16, 303 #32, 314 #43, 347 #39, 355 #41, 415 #34, 429 #35
3. Use a coordinate system to define and locate position.	SE: 47 Ex3, 139-144, 145-150, 222-226, 313 #27-28, 352 Ex3, 359 Ex4, 415 #37-39, 421 #8-10, 434 #20-23
4. Use the appropriate geometric tools and measurements to draw and construct two- and three-dimensional figures.	SE: 643 Ex1 <i>Construction</i> 151, 200, 202, 207 <i>Geometry Activity</i> 126, 438 <i>Geometry Software Investigation</i> 51-52, 101, 132
<b>SECONDARY GRADES</b>	
1. Draw coordinate representations of geometric figures and their transformations.	SE: 223 Ex4, 447-451, 463-469, 470-475, 476-481, 490-496, 506-511 TWE: DI 466, 471 OEA 469
2. Use inductive and deductive reasoning to explore and determine the properties of and relationships among geometric figures.	SE: 101-106, 107-114, 151-157 <i>Geometry Activity</i> 184, 411-412, 417, 438 <i>Geometry Software Investigation</i> 51, 132 <i>Reading Mathematics</i> 12
3. Apply trigonometry to problem situations involving triangles and periodic phenomena.	SE: 364-370, 371-376, 377-382, 385-390, 416 #56-58 <i>Geometry Activity</i> 365, 391 <i>Geometry Software Investigation</i> 384 TWE: DI 372
<b>J. MATHEMATICAL REASONING</b>	
<b>Students will understand and apply concepts of mathematical reasoning. Students will be able to:</b>	
<b>MIDDLE GRADES 5-8</b>	
1. Support reasoning by using models, known facts, properties, and relationships.	SE: 75-80, 82-87, 89-93, 94-100, 101-106, 107-114, 151-157, 207-213 <i>Geometry Activity</i> 88 <i>Reading Mathematics</i> 81

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2. Demonstrate that multiple paths to a conclusion may exist.	SE: 67-74, 75-80, 82-87, 100 #40-42
<b>SECONDARY GRADES</b>	
1. Analyze situations where more than one logical conclusion can be drawn from data presented.	SE: 62-66, 82-87, 209 Ex3, 210 #1
<b>K. MATHEMATICAL COMMUNICATION</b> Students will reflect upon and clarify their understanding of mathematical ideas and relationships. Students will be able to:	
<b>MIDDLE GRADES 5-8</b>	
1. Translate relationships into algebraic notation.	SE: 34 #34-39, 37-43, 112 #16-24, 137 #32-37, 155 #26-31, 163 #25-27, 191 #56-58, 220 #35-37, 225 #25-28, 450 #17-23
2. Use statistics, tables, and graphs to communicate ideas and information in convincing presentations and analyze presentations of others for bias or deceptive presentation.	SE: 62-66, 67-74, 75-80, 82-87 <i>Reading Mathematics</i> 81 TWE: DI 64, 71 OEA 66
<b>SECONDARY GRADES</b>	
1. Restate, create, and use definitions in mathematics to express understanding, classify figures, and determine the truth of a proposition or argument.	SE: 67-74, 101-106, 107-114, 142 #2, 178-183, 200-206, 207-213, 350-356, 434 #20-23 <i>Reading Mathematics</i> 199
2. Read mathematical presentations of topics within the Learning Results with understanding.	SE: <i>Reading Mathematics</i> 12, 81, 199, 246, 446

### Codes Used for TWE Pages

DI            Differentiated Instruction  
OEA         Open-Ended Assessment