

## A Correlation of

en**VISION**MATH™  
Common Core ©2012



to the

# West Virginia Mathematics Criteria

## Grade 4

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<b>SPECIFIC GRADE:</b>	Grade 4		
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**GENERIC EVALUATION CRITERIA**  
**20013-2016 – Off Cycle Year Adoption**  
**Grade 4 Mathematics**

R-E-S-P-O-N-S-E			CRITERIA	NOTES
Yes	No	N/A		
X			<b>I. INTER-ETHNIC</b> The instructional material meets the requirements of inter-ethnic: concepts, content and illustrations, as set by West Virginia Board of Education Policy (Adopted December 1970).	
X			<b>II. EQUAL OPPORTUNITY</b> The instructional material meets the requirements of equal opportunity: concept, content, illustration, heritage, roles contributions, experiences and achievements of males and females in American and other cultures, as set by West Virginia Board of Education Policy (Adopted May 1975).	
X			<b>III. FORMAT</b> The resource is available as an option for adoption in an interactive electronic format.	

**INSTRUCTIONAL MATERIALS ADOPTION: 21<sup>st</sup> CENTURY LEARNING EVALUATION CRITERIA**

**GENERAL EVALUATION CRITERIA**

**20013-2016 – Off Cycle Year Adoption  
Grade 4 Mathematics**

**INSTRUCTIONAL MATERIALS ADOPTION: GENERAL EVALUATION CRITERIA**

The general evaluation criteria apply to each grade level and are to be evaluated for each grade level unless otherwise specified. These criteria consist of information critical to the development of all grade levels. In reading the general evaluation criteria and subsequent specific grade level criteria, **e.g. means “examples of” and i.e. means that “each of” those items must be addressed.** Eighty percent of the general criteria must be met with I (In-depth) or A (Adequate) in order to be recommended.

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	I=In-depth	A=Adequate	M=Minimal	N=Nonexistent	I		A		M		N
<b>For student mastery of content standards and objectives, the instructional materials will provide students with the opportunity to apply:</b>											
<b>A. MATHEMATICAL PRACTICES</b>											
<i>enVisionMATH Common Core</i> is built on a foundation of problem-based instruction that has sense-making at its heart. Each topic includes at least one <i>problem-solving lesson</i> in which students focus on honing their sense-making and problem-solving skills. Each lesson begins with <i>Problem-Based Interactive Learning</i> , an activity in which students interact with their peers and teachers to	<b>1. Make sense of problems and persevere in solving them.</b> <ul style="list-style-type: none"> <li>Explain to themselves the meaning of a problem and looking for entry points to its solution.</li> <li>Analyze givens, constraints, relationships, and goals</li> <li>Make conjectures about the form and meaning of the solution attempt.</li> <li>Plan a solution pathway rather than simply jumping into a solution.</li> <li>Consider analogous problems and try special cases and simpler forms of insight into its solution.</li> <li>Monitor and evaluate their progress and change course if</li> </ul>										

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<p>make sense of and decide on a workable solution for a real-world situation. Another feature of each lesson is the set of problem-solving exercises in which students persevere by applying different skills and strategies to solve problems.</p> <p><b>SE/TE:</b> Topic 1: 13, 16, 18-19, 20-21, 22, 25, 27, 29, 31; Topic 2: 43, 45, 53; Topic 3: 72, 79, 80-81; Topic 4: 95, 98, 101, 103, 104-107; Topic 5: 125, 126, 127; Topic 6: 150, 154-156; Topic 7: 169, 176-177; Topic 8: 193, 195, 196-197; Topic 9: 211, 218-219; Topic 10: 234, 238, 240, 241, 243, 246-247; Topic 11: 266, 275, 276-279; Topic 12: 293, 295, 304, 309, 311, 315, 316-319; Topic 13: 331, 333, 335, 347, 350, 354-355; Topic 14: 367, 371, 374, 376-377, 381, 389, 390-391; Topic 15: 403, 410-413; Topic 16: 423, 427, 442-443</p> <p><b>TE:</b> Topic 2: 54A, 54B, Topic 3: 80A, 80B; Topic 5: 124A, 124B, 125A, 125B, 126A, 126B, 129A, 129B; Topic 6: 154A, 154B, 157A, 157B; Topic 7: 163B, 174A, 174B; Topic 8: 194A, 196A, 196B; Topic 9: 212A, 212B; Topic 10: 232A, 236A, 236B, 240A, 240B, 242A, 242B; Topic 11: 258A, 258B; Topic 12: 287A; Topic 13: 352A, 352B; Topic 14: 366A, 366B; Topic 14: 388A, 388B, 390A, 390B; Topic 15: 410A, 410B</p>	<p>necessary.</p> <ul style="list-style-type: none"> <li>• Transform algebraic expressions or change the viewing window on their graphing calculator to get information.</li> <li>• Explain correspondences between equations, verbal descriptions, tables, and graphs.</li> <li>• Draw diagrams of important features and relationships, graph data, and search for regularity or trends.</li> <li>• Use concrete objects or pictures to help conceptualize and solve a problem.</li> <li>• Check their answers to problems using a different method.</li> <li>• Ask themselves, "Does this make sense?"</li> <li>• Understand the approaches of others to solving complex problems and identify correspondences between approaches.</li> </ul>							

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<p><b>enVisionMATH Common Core</b> provides scaffolded instruction to help students develop both quantitative and abstract reasoning. In the <i>Visual Learning Bridge</i> students can see how to represent a given situation numerically or algebraically. They will have opportunities later in the lesson to reason abstractly as they endeavor to represent situations symbolically. Reasonableness exercises remind students to compare their work to the original situation.</p> <p>In the <i>Do You Understand?</i> part of the Guided Practice, students gain experiences with quantitative reasoning as they consider the meaning of different parts of an expression or equation.</p> <p>Reasoning problems throughout the exercise sets focus students' attention on the structure or meaning of an operation, for example, rather than merely the solution.</p> <p><b>SE/TE:</b> Topic 1: 11, 13, 24, 25, 31; Topic 2: 56; Topic 3: 68, 69, 72, 76, 79, 81; Topic 4: 92, 95, 98, 99, 101; Topic 5: 119, 121, 123, 124, 125, 127; Topic 6: 138, 144, 148, 149; Topic 7: 168, 170, 173; Topic 8: 187, 191, 193; Topic 9: 206, 210, 211, 217, 219; Topic 10: 230, 231, 234, 235, 238, 241, 243,</p>	<p>2. <b>Reason abstractly and quantitatively.</b></p> <ul style="list-style-type: none"> <li>• Make sense of quantities and their relationships in problem situations.</li> <li>• Bring two complementary abilities to bear on problems involving quantitative relationships: <ul style="list-style-type: none"> <li>○ Decontextualize (abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents and</li> <li>○ Contextualize (pause as needed during the manipulation process in order to probe into the referents for the symbols involved).</li> </ul> </li> <li>• Use quantitative reasoning that entails creating a coherent representation of the problem at hand, considering the units involved, and attending to the meaning of quantities, not just how to compute them</li> <li>• Know and flexibly use different properties of operations and objects.</li> </ul>							

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<p>244, 245, 247; Topic 11: 259, 266, 272, 275, 278; Topic 12: 290, 291, 293, 297, 303, 310, 313, 316; Topic 13: 332, 333, 335, 337, 342, 344, 345, 347, 349, 350, 353, 354; Topic 14: 367, 368, 369, 371, 372, 377, 380, 381, 382, 386, 389, 391; Topic 15: 403, 404, 405, 406, 407, 409, 410; Topic 16: 423, 424, 427, 431, 433, 436, 437, 439, 441</p> <p><b>TE:</b> Topic 2: 46A, 46B, 50A, 50B, 54A, 54B; Topic 3: 70A, 70B, 74A, 74B; Topic 4: 90A, 90B, 94A, 94B; Topic 5: 126A, 126B; Topic 6: 144B; Topic 7: 166A, 166B, 170B; topic 8: 183B, 196A, 196B; Topic 9: 208B, 210A, 210B; Topic 10: 225B, 230B; Topic 11: 264A, 264B, 270A, 270B; Topic 12: 214A, 314B; Topic 13: 327B, 348B; Topic 14: 363B, 368A, 368B, 376A, 376B, 382A, 382B; Topic 15: 399A, 402B, 406A, 406B; Topic 16: 426B, 434A, 434B, 436A, 436B, 438A, 438B;</p>	<p>(Continued)</p> <p>2. <b>Reason abstractly and quantitatively.</b></p> <ul style="list-style-type: none"> <li>• Make sense of quantities and their relationships in problem situations.</li> <li>• Bring two complementary abilities to bear on problems involving quantitative relationships: <ul style="list-style-type: none"> <li>○ Decontextualize (abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents and</li> <li>○ Contextualize (pause as needed during the manipulation process in order to probe into the referents for the symbols involved).</li> </ul> </li> <li>• Use quantitative reasoning that entails creating a coherent representation of the problem at hand, considering the units involved, and attending to the meaning of quantities, not just how to compute them</li> <li>• Know and flexibly use different properties of operations and objects.</li> </ul>								

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<p>Consistent with a focus on reasoning and sense-making is a focus on critical reasoning – argumentation and critique of arguments. In Pearson’s <i>enVisionMATH Common Core</i>, the <i>Problem-Based Interactive Learning</i> affords students opportunities to share with classmates their thinking about problems, their solution methods, and their reasoning about the solutions. Many exercises found throughout the program specifically call for students to use reasoning and to justify or explain their solutions.</p> <p><i>Writing to Explain</i> exercises in Grades 3–6 help students develop foundational critical reasoning skills by having them construct explanations for processes. The ability to articulate a clear explanation for a process is a stepping stone to critical analysis and reasoning of both the student’s own processes and those of others.</p> <p><b>SE/TE:</b> Topic 1: 29; Topic 2: 53; Topic 3: 69, 71, 76; Topic 4: 97, 100; Topic 5: 117, 118, Topic 6: 142, 153, Topic 7: 168, 171, 173, Topic 8: 186, 191; Topic 10: 229, 231; Topic 11: 261, 265; Topic 12: 304, 314; Topic 13: 344, 345; Topic 14: 366, 374, 375, 377; Topic 15: 407, 408; Topic 16: 426,</p>	<p>3. <b>Construct viable arguments and critique the reasoning of others.</b></p> <ul style="list-style-type: none"> <li>• Understand and use stated assumptions, definitions, and previously established results in constructing arguments.</li> <li>• Make conjectures and build a logical progression of statements to explore the truth of their conjectures.</li> <li>• Analyze situations by breaking them into cases</li> <li>• Recognize and use counterexamples.</li> <li>• Justify their conclusions, communicate them to others, and respond to the arguments of others.</li> <li>• Reason inductively about data, making plausible arguments that take into account the context from which the data arose.</li> <li>• Compare the effectiveness of plausible arguments.</li> <li>• Distinguish correct logic or reasoning from that which is flawed and, if there is a flaw, explain what it is <ul style="list-style-type: none"> <li>○ Elementary students construct arguments using concrete referents such as objects, drawings, diagrams, and actions.</li> <li>○ Later students learn to determine domains to which an argument applies.</li> </ul> </li> <li>• Listen or read the arguments of others, decide whether they make sense, and ask useful question to clarify or improve arguments.</li> </ul>							



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427, 429, 443 <b>TE:</b> Topic 11: 276A, 276B	(Continued) <b>3. Construct viable arguments and critique the reasoning of others.</b>										
Students in Pearson’s <i>enVisionMATH Common Core</i> are introduced to mathematical modeling in the early grades. They first use manipulatives and drawings and then equations to model addition and subtraction situations. The <i>Visual Learning Bridge</i> often presents real-world situations, and students are shown how these can be modeled mathematically. In later grades, students expand their modeling skills to include representations such as tables and graphs, as well as equations.  <b>SE/TE:</b> Topic 1: 7, 12, 17, 19, 25, 27, 29; Topic 2: 49, 56; Topic 3: 76, 79, 81; Topic 4: 98, 101, 105, 106; Topic 5: 116, 119, 123, 128; Topic 6: 139, 146, 150; Topic 7: 167, 171, 177; Topic 9: 207, 216, 218, 219; Topic 10: 247; Topic 11: 263; Topic 12: 291, 293, 295, 297, 299, 315, 317; Topic 13: 331, 333, 334, 335, 336, 339, 347, 349, 355; Topic 14: 386; Topic 15: 402, 403, 405, 407, 410; Topic 16: 425, 432, 435  <b>TE:</b> Topic 1: 2G, 12A, 12B, 20B, 24A, 24B, 26A, 26B, 30A, 30B; Topic 4: 104A, 104B; Topic 5: 120A, 120B; Topic 6: 152A, 152B;	<b>4. Model with mathematics.</b> <ul style="list-style-type: none"><li>• Apply the mathematics they know to solve problems arising in everyday life, society, and the workplace.<ul style="list-style-type: none"><li>○ In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community.</li><li>○ By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another.</li></ul></li><li>• Make assumptions and approximations to simplify a complicated situation, realizing that these may need revision later.</li><li>• Identify important quantities in a practical situation</li><li>• Map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas.</li><li>• Analyze those relationships mathematically to draw conclusions.</li><li>• Interpret their mathematical results in the context of the situation.</li><li>• Reflect on whether the results make sense, possibly improving the model if it has not served its purpose.</li></ul>										

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Topic 7: 176A, 176B; Topic 8: 194A, 194B; Topic 9: 214A, 215B, 218A, 218B; Topic 10: 242A, 242B, 246A, 246B; Topic 12: 316A, 316B; Topic 13: 343A, 334B; Topic 14: 384A, 384B; Topic 15: 404A, 404B; Topic 16: 432A, 432B	(Continued) <b>4. Model with mathematics.</b>										
Students become fluent in the use of a wide assortment of tools ranging from physical objects, including manipulatives, rulers, protractors, and even pencil and paper, to digital tools, such as eTools, calculators, and computers. As students become more familiar with the tools available to them, they are able to begin making decisions about which tools are most helpful in a particular situation.  <b>SE/TE:</b> Topic 1: 30; Topic 2: 47; Topic 4: 105, 107; Topic 5: 129; Topic 9: 213; Topic 10: 233, 234; Topic 11: 261, 263, 272; Topic 12: 307, 318; Topic 13: 338-340, 346-347, 352; Topic 14: 383; Topic 15: 409; Topic 16: 428-429, 431, 433  <b>TE:</b> Topic 1: 2H, 6A, 6B, 10A, 10B; Topic 2: 37B, 44A, 44B; Topic 3: 63A, 66a, 66B, 80A, 80B; Topic 4: 113B, 116B; Topic 6: 138A, 138B; Topic 7: 163B; Topic 8: 186A, 186B, 190A, 190B; Topic 9: 203D; Topic 10: 225B, 228A,	<b>5. Use appropriate tools strategically.</b> <ul style="list-style-type: none"><li>• Consider available tools when solving a mathematical problem. (these tools might include pencil and paper, concrete models, a ruler, protractor, calculator, spreadsheet, computer algebra system, a statistical package, or dynamic geometry software.</li><li>• Are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations.<ul style="list-style-type: none"><li>○ High school students analyze graphs of functions and solutions generated using a graphing calculator</li></ul></li><li>• Detect possible errors by using estimations and other mathematical knowledge.</li><li>• Know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data.</li><li>• Identify relevant mathematical resources and use them to pose or solve problems.</li><li>• Use technological tools to explore and deepen their understanding of concepts.</li></ul>										

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228B, 232A, 232B: Topic 11: 255B, 260A, 260B: Topic 12: 290A, 290B, 294A, 294B, 298A, 298B, 306A, 306B, 310A, 310B, 312A, 312B; Topic 13: 327A, 327B, 338A, 338B, 346A, 346B, 354B; Topic 14: 378A, 378B; Topic 15: 399B, 408A, 408B; Topic 16: 419B, 422A, 422B, 424A, 424B, 430A, 430B	(Continued) <b>5. Use appropriate tools strategically.</b>										
<p>Students are expected to use mathematical terms and symbols with precision. Key terms and concepts are highlighted in each lesson. The <i>Problem-Based Interactive Learning</i> activity provides repeated opportunities for children to use precise language to explain their solution paths while solving problems.</p> <p>In the <i>Do You Understand?</i> feature, students revisit these key terms or concepts and provide explicit definitions or explanations.</p> <p>In Grades 3–6, the <i>Writing to Explain</i> and <i>Think About the Structure</i> exercises require students to use precise language to provide clear explanations of terms, concepts, or processes.</p> <p>Students are reminded to use appropriate units of measure in their solutions as well as in labels for diagrams, graphs, and other kinds of displays.</p>	<b>6. Attend to precision.</b> <ul style="list-style-type: none"> <li>• Try to communicate precisely to others.</li> <li>• Try to use clear definitions in discussion with others and in their own reasoning.</li> <li>• State the meaning of the symbols they choose, including using the equal sign consistently and appropriately.</li> <li>• Specify units of measure and label axes to clarify the correspondence with quantities in a problem.</li> <li>• Calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. <ul style="list-style-type: none"> <li>○ In the elementary grades, students give carefully formulated explanations to each other.</li> <li>○ In high school, students have learned to examine claims and make explicit use of definitions.</li> </ul> </li> </ul>										

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<p><b>SE/TE:</b> Topic 1: 31; Topic 3: 67; Topic 4: 93; Topic 5: 122; Topic 6: 155; Topic 7: 175; Topic 9: 219; Topic 11: 263, 268, 269, 272; Topic 12: 300; Topic 13: 341; Topic 14: 369, 374, 376, 378, 379, 391; Topic 16: 429</p> <p><b>TE:</b> Topic 1: 2J; Topic 2: 37D; Topic 3: 63D; Topic 4: 87D; Topic 5: 113D; Topic 6: 135A, 135D; Topic 7: 163D; Topic 8: 183D; Topic 9: 203D; Topic 10: 225D; Topic 11: 255D, 268A, 268B; Topic 12: 287D; Topic 13: 327D; Topic 14: 366A, 366B; Topic 15: 399D; Topic 16: 419D, 428A, 428B</p>	<p>(Continued)</p> <p><b>6. Attend to precision.</b></p> <ul style="list-style-type: none"> <li>• Try to communicate precisely to others.</li> <li>• Try to use clear definitions in discussion with others and in their own reasoning.</li> <li>• State the meaning of the symbols they choose, including using the equal sign consistently and appropriately.</li> <li>• Specify units of measure and label axes to clarify the correspondence with quantities in a problem.</li> <li>• Calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. <ul style="list-style-type: none"> <li>○ In the elementary grades, students give carefully formulated explanations to each other.</li> <li>○ In high school, students have learned to examine claims and make explicit use of definitions.</li> </ul> </li> </ul>											
<p>Students are encouraged to look for structure as they develop solution plans. In the <i>Look for a Pattern</i> problem-solving lessons, children in the early years develop a sense of patterning with visual and physical objects. As students mature in their mathematical thinking, they look for structure in numerical operations by focusing on place value and properties of operations. This focus on looking for and recognizing structure enables students to draw from patterns as they formalize their thinking about the structure of operations.</p> <p><b>SE/TE:</b> Topic 1: 8, 15, 18, 21; Topic 2: 40, 41, 42, 43, 48, 56;</p>	<p><b>7. Look for and make use of structure.</b></p> <ul style="list-style-type: none"> <li>• Look closely to discern a pattern or structure. <ul style="list-style-type: none"> <li>○ Young students might notice that three and seven more is the same amount as seven and three more or they may sort a collection of shapes according to how many sides the shapes have.</li> <li>○ Later, students will see <math>7 \times 8</math> equals the well remembered <math>7 \times 5 + 7 \times 3</math>, in preparation for the distributive property.</li> <li>○ In the expression <math>x^2 + 9x + 14</math>, older students can see the 14 as <math>2 \times 7</math> and the 9 as <math>2 + 7</math>. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems.</li> </ul> </li> <li>• Step back for an overview and can shift perspective.</li> <li>• See complicated things, such as some algebraic expressions, as single objects or composed of several objects.</li> </ul>											

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<p>Topic 3: 66, 68; Topic 4: 92, 93, 95, 106; Topic 5: 120, 121, 123, 128; Topic 6: 142-143, 156; Topic 7: 168, 171, 173; Topic 9: 207, 209, 212, 215; Topic 10: 234; Topic 11: 259, 269, 274, 278; Topic 12: 291, 293, 318; Topic 13: 330, 331, 337, 346, 350; Topic 14: 386; Topic 15: 412; Topic 16: 432, 441</p> <p><b>TE:</b> Topic 1: 2H, 14A, 14B, 28A, 28B; Topic 2: 40A, 40B, 41A, 41B, 42A, 42B, 43A, 43B; Topic 3: 63B; Topic 5: 113D, 118A, 118B, 122A, 122B, 124A, 124B; Topic 6: 135B, 135D, 142A, 142B, 148A, 148B; Topic 7: 163D; Topic 8, 183D; topic 9: 206A, 206B; Topic 10: 225D; Topic 11: 255B, 255D, 262A, 262B; Topic 12: 287B, 287D, 302A, 302B; Topic 13: 327D, 330A, 330B, 332A, 332B, 336A, 336B; Topic 14: 363B, 363D, 372A, 372B; Topic 15: 399A, 399D; Topic 16: 440A, 440B</p>	<p>(Continued)</p> <p><b>7. Look for and make use of structure.</b></p> <ul style="list-style-type: none"> <li>• Look closely to discern a pattern or structure. <ul style="list-style-type: none"> <li>○ Young students might notice that three and seven more is the same amount as seven and three more or they may sort a collection of shapes according to how many sides the shapes have.</li> <li>○ Later, students will see <math>7 \times 8</math> equals the well remembered <math>7 \times 5 - 7 \times 3</math>, in preparation for the distributive property.</li> <li>○ In the expression <math>x^2 + 9x + 14</math>, older students can see the 14 as <math>2 \times 7</math> and the 9 as <math>2 + 7</math>. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems.</li> </ul> </li> <li>• Step back for an overview and can shift perspective.</li> <li>• See complicated things, such as some algebraic expressions, as single objects or composed of several objects.</li> </ul>							

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<p>Students are prompted to look for repetition in computations to help them develop shortcuts and become more efficient problem solvers. Students are reminded to think about problems they have encountered previously that may share features or processes. They are encouraged to draw on the solution plan developed for such problems, and as their mathematical thinking matures, to look for and apply generalizations to similar situations. The <i>Problem-Based Interactive Learning</i> activities offer students opportunities to look for regularity in the way operations behave.</p> <p><b>SE/TE:</b> Topic 1: 3, 10; Topic 2: 40-41, 42-43, 44-45, 46-49, 50-53; Topic 3: 69; Topic 5: 117; Topic 6: 143; Topic 13: 340; Topic 14: 369; Topic 16: 443, 456-457</p> <p><b>TE:</b> Topic 1: 18A, 18B; Topic 3: 68a, 68B; Topic 4: 87A; Topic 11: 255A; Topic 14: 380A, 380B; Topic 16: 442A, 442B</p>	<p><b>8. Look for and express regularity in repeated reasoning.</b></p> <ul style="list-style-type: none"> <li>• Notice if calculations are repeated.</li> <li>• Look both for general methods and for shortcuts. <ul style="list-style-type: none"> <li>○ Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeated decimal.</li> <li>○ Middle school students might abstract the equation <math>(y-2)/((x-1)=3</math> by paying attention to the calculation of slope as they repeatedly check whether the points are on the line through (1,2) with a slope 3.</li> <li>○ Noticing the regularity in the way terms cancel when expanding <math>(x-1)(x+1)(x^2+1)</math> and <math>(x-1)(x^3+x^2+x+1)</math> might lead high school students to the general formula for the sum of a geometric series.</li> </ul> </li> <li>• Maintain oversight of the process of solving a problem, while attending to the details.</li> <li>• Continually evaluate the reasonableness of intermediate results.</li> </ul>											

# **SPECIFIC EVALUATION CRITERIA**

## **2013-2016 – Off Cycle Year Adoption**

### **Grade 4 Mathematics**

In Grade 4, instructional time should focus on three critical areas: (1) developing understanding and fluency with multi-digit multiplication and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures and symmetry.

1. Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models), place value and properties of operations, in particular the distributive property, as they develop, discuss and use efficient, accurate and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate or mentally calculate products. They develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations and the relationship of division to multiplication as they develop, discuss and use efficient, accurate and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate and mentally calculate quotients and interpret remainders based upon the context.
2. Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g.,  $15/9 = 5/3$ ), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.
3. Students describe, analyze, compare and classify two-dimensional shapes. Through building, drawing and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

(Vendor/Publisher) SPECIFIC LOCATION OF CONTENT WITHIN PRODUCT	(IMR Committee) Responses										
	I=In-depth	A=Adequate	M=Minimal	N=Nonexistent	I		A		M		N
<b>For student mastery of content standards and objectives, the instructional materials will provide students with the opportunity to</b>											
<b>A. Operations &amp; Algebraic Thinking</b>											
<b>Use the four operations with whole numbers to solve problems.</b>											
<b>SE/TE:</b> Topic 1: 6-9, 12-13, 24-25 <b>TE:</b> Topic 1: 6A-6B, 9A-9B, 12A-12B, 13A-13B, 24A, 25A-25B	1. interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5 and represent verbal statements of multiplicative comparisons as multiplication equations.										
<b>SE/TE:</b> Topic 1: 6-9, 20-23, 26-27, 28-29, 30-31; Topic 9: 218-219 <b>TE:</b> Topic 1: 6A-6B, 9A-9B, 20A-20B, 23A-23B, 26A-26B, 27A-27B, 28A-28B, 29A-29B, 30A-30B, 31A-31B; Topic 9: 218A-218B, 219A-219B	2. multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem and distinguishing multiplicative comparison from additive comparison.										
<b>SE/TE:</b> Topic 1: 18-19, 26-27, 28-29, 30-31; Topic 2: 54-57; Topic 4: 90-93, 94-95; Topic 5: 122-123, 126-129; Topic 6: 142-143, 144-147, 152-153, 154-157; Topic 7: 170-171, 172-173, 174-175, 176-177; Topic 8: 196-197; Topic 9: 206-207, 208-209, 210-211, 218-219; Topic 10: 246-247 <b>TE:</b> Topic 1: 18A-18B, 19A-19B, 26A-26B, 27A-27B, 28A-28B, 29A-29B, 30A-30B, 31A-31B; Topic 2: 54A-54B, 57A-57B; Topic 4: 90A-90B, 93A-93B, 94A-94B, 94A-95B; Topic 5: 122A-122B, 123A-123B, 126A-126B, 129A-129B; Topic 6: 142A-142B, 143A-143B, 144A-144B, 147A-147B,	3. solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted, represent these problems using equations with a letter standing for the unknown quantity and assess the reasonableness of answers using mental computation and estimation strategies including rounding.										



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152A-152B, 153A-153B, 154A-154B, 157A-157B; Topic 7: 170A-170B, 171A-171B, 172A-172B, 173A-173B, 174A-174B, 175A-175B, 176A-176B, 177A-177; Topic 8: 196A-196B, 197A-197B; Topic 9: 206A-206B, 207A-207B, 208A-208B, 209A-209B, 210A-210B, 211A-211B, 218A-218B, 219A-219B; Topic 10: 246A-246B, 247A-247B	(Continued) 3. solve multi-step word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted, represent these problems using equations with a letter standing for the unknown quantity and assess the reasonableness of answers using mental computation and estimation strategies including rounding.										
	<b>Gain familiarity with factors and multiples.</b>										
<b>SE/TE:</b> Topic 1: 14-17; Topic 11: 258-259, 260-261, 262-263 <b>TE:</b> Topic 1: 14A-14B, 17A-17B; Topic 11: 258A-258B, 259A-259B, 260A-260B, 261A-261B, 262A-262B, 263A-263B	4. find all factor pairs for a whole number in the range 1–100, recognize that a whole number is a multiple of each of its factors, determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number and determine whether a given whole number in the range 1–100 is prime or composite.										
	<b>Generate and analyze patterns.</b>										
<b>SE/TE:</b> Topic 1: 10-11, 18-19; Topic 2: 40-41, 42-43, 44-45, 46-49, 50-53, 54-57; Topic 11: 258-259, 262-263; Topic 16: 442-443 <b>TE:</b> Topic 1: 10A-10B, 11A-11B, 18A-18B, 19A-19B; Topic 2: 40A-40B, 41A-41B, 42A-42B, 43A-43B, 44A-44B, 45A-45B, 46A-46B, 49A-49B, 50A-50B, 53A-53B, 54A-54B, 57A-57B; Topic 11: 258A-258B, 259A-259B, 262A-262B, 263A-263B; Topic 16: 442A-442B, 443A-443B	5. generate a number or shape pattern that follows a given rule and identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.										

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	<b>B. Number &amp; Operations in Base Ten</b>										
	<b>Generalize place value understanding for multi-digit whole numbers.</b>										
<b>SE/TE:</b> Topic 3: 66-67, 68-69, 80-81, 82-83; Topic 10: 232-235  <b>TE:</b> Topic 3: 66A-66B, 67A-67B, 68A-68B, 69A-69B, 80A-80B, 81A-81B; Topic 10: 232A-232B, 235A-235B	1. recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.										
<b>SE/TE:</b> Topic 3: 66-67, 68-69, 70-73, 74-77  <b>TE:</b> Topic 3: 66A-66B, 67A-67B, 68A-68B, 69A-69B, 70A-70B, 73A-73B, 74A-74B, 77A-77B	2. read and write multi-digit whole numbers using base-ten numerals, number names and expanded form and compare two multi-digit numbers based on meanings of the digits in each place, using $>$ , $=$ and $<$ symbols to record the results of comparisons.										
<b>SE/TE:</b> Topic 3: 78-79; Topic 4: 90-93, 94-95; Topic 5: 122-123, 124-125, 126-129; Topic 6: 152-153, 172-173, 174-175  <b>TE:</b> Topic 3: 78A-78B, 79A-79B; Topic 4: 90A-90B, 93A-93B, 94A-94B, 95A-95B; Topic 5: 122A-122B, 123A-123B, 124A-124B, 125A-125B, 126A-126B, 129A-129B; Topic 6: 152A-152B, 153A-153B, 172A-172B, 173A-173B, 174A-174B, 175A-175B	3. use place value understanding to round multi-digit whole numbers to any place.										
	<b>Use place value understanding and properties of operations to perform multi-digit arithmetic.</b>										

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<p><b>SE/TE:</b> Topic 4: 94-95, 96-99, 100-101, 102-103, 104-107, 108-109</p> <p><b>TE:</b> Topic 4: 94A-94B, 95A-95B, 96A-96B, 99A-99B, 100A-100B, 101A-101B, 102A-102B, 103A-103B, 104A-104B, 107A-107B</p>											
<p><b>SE/TE:</b> Topic 5: 116-117, 118-119, 120-121, 122-123, 124-125, 126-129; Topic 6: 138-141, 142-143, 144-147, 148-151, 152-153, 154-157; Topic 7: 166-169, 170-171, 174-175, 176-177; Topic 8: 186-189, 190-191, 192-193, 194-195, 196-197; Topic 9: 214-217; Topic 10: 246-247</p> <p><b>TE:</b> Topic 5: 116A-116B, 117A-117B, 118A-118B, 119A-119B, 120A, 121A-121B, 122A-122B, 123A-123B, 124A-124B, 125A-125B, 126A-126B, 129A-129B; Topic 6: 138A-138B, 141A-141B, 142A-142B, 143A-143B, 144A-144B, 147A-147B, 148A-148B, 151A-151B, 152A-152B, 153A-153B, 154A-154B, 157A-157B; Topic 7: 166A-166B, 169A-169B, 170A-170B, 171A-171B, 174A-174B, 175A-175B, 176A-176B, 177A-177B; Topic 8: 186A-186B, 189A-189B, 190A-190B, 191A-191B, 192A-192B, 193A-193B, 194A-194B, 195A-195B, 196A-196B, 197A-197B; Topic 9: 214A-214B, 217A-217B; Topic 10: 246A-246B, 247A-247B</p>											
	4. fluently add and subtract multi-digit whole numbers using the standard algorithm.										
	5 multiply a whole number of up to four digits by a one-digit whole number, multiply two two-digit numbers, using strategies based on place value and the properties of operations and illustrate and explain the calculation by using equations, rectangular arrays and/or area models.										

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<p><b>SE/TE:</b> Topic 9: 206-207, 208-209, 210-211, 212-213, 214-217, 218-219; Topic 10: 228-229, 230-231, 232-235, 236-239, 240-241, 242-243, 244-245</p> <p><b>TE:</b> Topic 9: 206A-206B, 207A-207B, 208A-208B, 209A-209B, 210A-210B, 211A-211B, 212A-212B, 213A-213B, 214A-214B, 217A-217B, 218A-218B, 219A-219B; Topic 10: 228A-228B, 229A-229B, 230A-230B, 231A-231B, 232A-232B, 235A-235B, 236A-236B, 239A-239B, 240A-240B, 241A-241B, 242A-242B, 243A-243B, 244A-244B, 245A-245B</p>	<p>6. find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations and/or the relationship between multiplication and division and illustrate and explain the calculation by using equations, rectangular arrays and/or area models.</p>										
	<p><b>C. Number &amp; Operations - Fractions</b></p> <p><b>Extend understanding of fraction equivalence and ordering.</b></p>										
<p><b>SE/TE:</b> Topic 11: 264-267, 268-269, 276-279</p> <p><b>TE:</b> Topic 11: 264A-264B, 267A-267B, 268A-268B, 269A-269B, 276A-276B, 279A-279B</p>	<p>1. explain why a fraction <math>a/b</math> is equivalent to a fraction <math>(n \times a)/(n \times b)</math> by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size and use this principle to recognize and generate equivalent fractions.</p>										
<p><b>SE/TE:</b> Topic 11: 264-267, 268-269, 270-273, 274-275, 276-279</p> <p><b>TE:</b> Topic 11: 264A-, 267A-267B, 268A, 269A-269B, 270A, 273A-273B, 274A, 275A-275B, 276A, 279A-279B</p>	<p>2. compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as <math>\frac{1}{2}</math>, recognize that comparisons are valid only when the two fractions refer to the same whole and record the results of comparisons with symbols <math>&gt;</math>, <math>=</math> or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model.</p>										

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	<b>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</b>										
<p><b>SE/TE:</b> Topic 12: 290-291 <b>TE:</b> Topic 12: 290A-290B, 291A-291B</p> <p><b>a. SE/TE:</b> Topic 12: 290-291, 292-293, 294-295, 296-297, 298-301, 316-319 <b>TE:</b> Topic 12: 290A-290B, 291A-291B, 292A-292B, 293A-293B, 294A-294B, 295A-295B, 296A-296B, 297A-297B, 298A-298B, 301A-301B, 316A-316B, 319A-319B</p> <p><b>b. SE/TE:</b> Topic 12: 302-305, 306-309, 314-315 <b>TE:</b> Topic 12: 302A-302B, 305A-305B, 306A-306B, 309A-309B, 314A-314B, 315A-315B</p> <p><b>c. SE/TE:</b> Topic 12: 302-305, 306-309, 310-311, 312-313 <b>TE:</b> Topic 12: 302A-302B, 305A-305B, 306A-306B, 309A-309B, 310A-310B, 311A-311B, 312A-312B, 313A-313B</p> <p><b>d. SE/TE:</b> Topic 12: 292-293, 294-295, 296-297, 298-301, 314-315, 316-319 <b>TE:</b> Topic 12: 292A-292B, 293A-293B, 294A-294B, 295A-295B, 296A-296B, 297A-297B, 298A-298B, 301A-301B, 316A-316B, 319A-319B</p>	<p>3. understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of fractions <math>1/b</math></p> <p>a. understand addition and subtraction of fractions as joining and separating parts referring to the same whole,</p> <p>b. decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation and justify decompositions, e.g., by using a visual fraction model. Examples: <math>3/8 = 1/8 + 1/8 + 1/8</math>; <math>3/8 = 1/8 + 2/8</math>; <math>2\ 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8</math>,</p> <p>c. add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction,</p> <p>d. solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.</p>										

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<p><b>SE/TE:</b> Topic 13: 332-333, 334-335  <b>TE:</b> Topic 13: 332A-332B, 333A-333B, 334A-334B, 335A-335B</p> <p><b>a. SE/TE:</b> Topic 13: 330-331  <b>TE:</b> Topic 13: 330A-330B, 331A-331B</p> <p><b>b. SE/TE:</b> Topic 13: 332-333, 334-335  <b>TE:</b> Topic 13: 332A-332B, 333A-333B, 334A-334B, 335A-335B</p> <p><b>c. SE/TE:</b> Topic 13: 334-335  <b>TE:</b> Topic 13: 334A-334B, 335A-335B</p>	<p>4. apply and extend previous understandings of multiplication to multiply a fraction by a whole number</p> <p>a. understand a fraction <math>a/b</math> as a multiple of <math>1/b</math>, (For example, use a visual fraction model to represent <math>5/4</math> as the product <math>5 \times (1/4)</math>, recording the conclusion by the equation <math>5/4 = 5 \times (1/4)</math>.)</p> <p>b. understand a multiple of <math>a/b</math> as a multiple of <math>1/b</math>, and use this understanding to multiply a fraction by a whole number, (For example, use a visual fraction model to express <math>3 \times (2/5)</math> as <math>6 \times (1/5)</math>, recognizing this product as <math>6/5</math>. In general, <math>n \times (a/b) = (n \times a)/b</math>.)</p> <p>c. solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. (For example, if each person at a party will eat <math>3/8</math> of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?)</p>								
	<b>Understand decimal notation for fractions, and compare decimal fractions.</b>								
<p><b>SE/TE:</b> Topic 13: 336-337, 338-341, 342-345; 357-358; Topic 15: 406-407</p> <p><b>TE:</b> Topic 13: 336A-336B, 337A-337B, 338A-338B, 341A-341B, 342A-342B, 345A-345B; Topic 15: 406A-406B, 407A-407B</p>	<p>5 express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.4 For example, express <math>3/10</math> as <math>30/100</math>, and add <math>3/10 + 4/100 = 34/100</math>. (Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.)</p>								

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<p><b>SE/TE:</b> Topic 13: 336-337, 338-341, 342-345, 354-355</p> <p><b>TE:</b> Topic 13: 336A-336B, 337A-337B, 338A-338B, 341A-341B, 342A-342B, 345A-345B, 354A-345B, 355A-355B</p>	<p>6 use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.</p>										
<p><b>SE/TE:</b> Topic 13: 346-347, 348-351, 352-353</p> <p><b>TE:</b> Topic 13: 346A-346B, 347A-347B, 348A-348B, 351A-351B, 352A-352B, 353A-353B</p>	<p>7 compare two decimals to hundredths by reasoning about their size, recognize that comparisons are valid only when the two decimals refer to the same whole and record the results of comparisons with the symbols <math>&gt;</math>, <math>=</math> or <math>&lt;</math> and justify the conclusions, e.g., by using a visual model.</p>										
<p><b>D. Measurement &amp; Data</b></p> <p><b>Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</b></p>											
<p><b>SE/TE:</b> Topic 13: 354-355; Topic 14: 366-367, 368-369, 370-371, 372-375, 376-377, 378-379, 380-381, 382-383, 384-387, 388-389, 390-391</p> <p><b>TE:</b> Topic 13: 354A-354B, 355A-355B; Topic 14: 366A-366B, 367A-367B, 368A-368B, 369A-369B, 370A-370B, 371A-371B, 372A-372B, 375A-375B, 376A-376B, 377A-377B, 378A-378B, 379A-379B, 380A-380B, 381A-381B, 382A-382B, 383A-383B, 384A-384B, 387A-387B, 388A-388B, 389A-389B, 390A-390B, 391A-391B</p>	<p>1. know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec, within a single system of measurement, express measurements in a larger unit in terms of a smaller unit, record measurement equivalents in a two column table, (For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in.) and generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36).</p>										

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<p><b>SE/TE:</b> Topic 13: 352-353, 354-355, 359; Topic 14: 380-381, 382-383, 388-389, 390-391; Topic 15: 404-405, 406-407, 410-413</p> <p><b>TE:</b> Topic 13: 352A-352B, 353A-353B, 354A-354B, 355A-355B; Topic 14: 380A-380B, 381A-381B, 382A-382B, 383A-383B, 388A-388B, 389A-389B, 390A-390B, 391A-391B; Topic 15: 404A-404B, 405A-405B, 406A-406B, 407A-407B, 410A-410B, 413A-413B</p>	2. use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects and money, including problems involving simple fractions or decimals and problems that require expressing measurements given in a larger unit in terms of a smaller unit and represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.										
<p><b>SE/TE:</b> Topic 15: 402-403</p> <p><b>TE:</b> Topic 15: 402A-402B, 403A-403B</p>	3. apply the area and perimeter formulas for rectangles in real world and mathematical problems. (For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.)										
	<b>Represent and interpret data.</b>										
<p><b>SE/TE:</b> Topic 15: 408-409</p> <p><b>TE:</b> Topic 15: 408A-408B, 409A-409B</p>	4. make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{8}$ ) and solve problems involving addition and subtraction of fractions by using information presented in line plots (For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection).										



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	<b>Geometric measurement: understand concepts of angle and measure angles.</b>										
<p><b>SE/TE:</b> Topic 16: 426-427, 428-429  <b>TE:</b> Topic 16: 426A-426B, 427A-427B, 428A-428B, 439A-429B</p> <p><b>a. SE/TE:</b> Topic 16: 426-427, 428-429, 430-431, 432-433  <b>TE:</b> Topic 16: 426A-426B, 427A-427B, 428A-428B, 429A-429B, 430A-430B, 431A-431B, 432A-432B, 433A-433B</p> <p><b>b. SE/TE:</b> Topic 16: 428-429, 430-431, 432-433  <b>TE:</b> Topic 16: 428A-428B, 439A-429B, 430A-430B, 431A-431B, 432A-432B, 433A-433B</p>	<p>5. recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:</p> <p>a. an angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle and an angle that turns through 1/360 of a circle is called a “one-degree angle,” and can be used to measure angles,</p> <p>b. an angle that turns through n one-degree angles is said to have an angle measure of n degrees.</p>										
<p><b>SE/TE:</b> Topic 16: 430-431, 432-433</p> <p><b>TE:</b> Topic 16: 430A-430B, 431A-431B, 432A-432B, 433A-433B</p>	<p>6. measure angles in whole-number degrees using a protractor and sketch angles of specified measure.</p>										
<p><b>SE/TE:</b> Topic 16: 432-433</p> <p><b>TE:</b> Topic 16: 432A-432B, 433A-433B</p>	<p>7. recognize angle measure as additive, when an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts and solve addition and subtraction problems to find unknown angles on a diagram in real-world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.</p>										

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	<b>E. Geometry</b>										
	<b>Draw and Identify Lines and Angles and Classify Shapes by Properties of Their Lines and Angles</b>										
<b>SE/TE:</b> Topic 16: 422-423, 424-425, 426-427, 428-429, 430-431  <b>TE:</b> Topic 16: 422A-442B, 423A-423B, 424A-424B, 425A-425B, 426A-426B, 427A-427B, 428A-429B, 429A-429B, 430A-430B, 431A-431B	1. draw points, lines, line segments, rays, angles (right , acute , obtuse ) and perpendicular and parallel lines and identify these in two-dimensional figures.										
<b>SE/TE:</b> Topic 16: 434-435, 436-437, 438-439, 442-443  <b>TE:</b> Topic 16: 434A, 435A-435B, 436A, 437A-437B, 438A, 439A-439B, 442A, 443A-443B	2. classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size, recognize right triangles as a category and identify right triangles.										
<b>SE/TE:</b> Topic 16: 440-441  <b>TE:</b> Topic 16: 440A-440B, 441A-441B	3. recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts, identify line-symmetric figures and draw lines of symmetry.										