



COURSE 2

# Core-Plus Mathematics

Contemporary Mathematics in Context

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STANDARDS	PAGE REFERENCES
<p><b>Process Standard A:</b> Students will develop their ability to solve problems by engaging in developmentally appropriate opportunities where there is a need to use various approaches to investigate and understand mathematical concepts in order to:</p>	
<ul style="list-style-type: none"> <li>• <b>Formulate their own problems</b></li> <li>• <b>Find solutions to problems from everyday situations</b></li> <li>• <b>Develop and apply strategies to solve a variety of problems</b></li> <li>• <b>Integrate mathematical reasoning, communication and connections</b></li> </ul>	
<ul style="list-style-type: none"> <li>• Generalize solutions and apply previous knowledge to new problem solving situations</li> </ul>	<p><b>Student Edition:</b> 3, 14, 26, 29, 33, 50, 53, 57, 60, 69-71, 72, 75-78, 81, 85, 104, 107, 111, 116, 133, 144, 157-159, 160</p>
<ul style="list-style-type: none"> <li>• Determine an efficient strategy, verify, interpret, and evaluate the results with respect to the original problem</li> </ul>	<p><b>Student Edition:</b> 9, 14, 29, 33, 53, 57, 60, 81, 85, 107, 111, 116, 138, 141, 144, 160, 169, 204, 209, 216, 236, 303</p>
<ul style="list-style-type: none"> <li>• Apply problem solving strategies until a solution is found or it is clear that no solution exists</li> </ul>	<p><b>Student Edition:</b> 3-8, 10-14, 26-28, 30-32, 50-52, 54-56, 57-59, 75-77, 78-81, 82-84, 104-107, 108-111, 112-116, 133-137, 139-141, 142-143, 164-168, 170-174, 299-303, 360-362, 364-366, 412-415</p>
<ul style="list-style-type: none"> <li>• Interpret and solve a variety of mathematical problems by paraphrasing</li> </ul>	<p><b>Student Edition:</b> 169, 174, 180, 204, 209, 216, 236, 242, 256, 263, 268, 285, 290, 297, 303, 324, 331, 335, 340, 344, 363, 366</p>

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<ul style="list-style-type: none"> <li>Identify necessary and extraneous information</li> </ul>	<p><b>Student Edition:</b> 31-32, 33, 37-38, 45 #27b, 155 #26e, 266-267, 287-288, 290, 296, 300-303, <i>Check Your Understanding</i> 33 <i>Summarize The Mathematics</i> 290, 303</p> <p><b>Teacher Guide:</b> CYU T33; I T31-T32, T266-T267, T287-T288, T300-T303; OYO T37-T38, T45 #27b, T155 #26e; STM T290, T303</p>
<ul style="list-style-type: none"> <li>Check the reasonableness of a solution</li> </ul>	<p><b>Student Edition:</b> 332, 334, 335, 343, 344, 362, 369, 372 <i>Check Your Understanding</i> 335 <i>Summarize The Mathematics</i> 344</p> <p><b>Teacher Guide:</b> CYU T335, T343; I T332, T334, T362-T362B; OYO T369, T372; STM T344</p>
<ul style="list-style-type: none"> <li>Apply technology as a tool in problem solving situations</li> </ul>	<p><b>Student Edition:</b> 12-13, 15, 20-23, 41-43, 104-107, 108-111, 112, 137, 147, 160, 164-168, 180-184, 195, 199, 219, 226, 252-253, 278, 281-282, 293, 296, 318, 344, 470-472, 581</p>
<ul style="list-style-type: none"> <li>Apply combinations of proven strategies and previous knowledge to solve non-routine problems</li> </ul>	<p><b>Student Edition:</b> 19-21, 38-41, 63-64, 92-95, 123-124, 147-150, 185-188, 223-226, 245-246, 275, 313-315, 349-352, 370-371, 387, 423-426, 447-448, 477-481, 506-509, 538-540, 554-555, 577-578</p>
<p><b>Process Standard B:</b> Students will develop their ability to communicate mathematically by solving problems where there is a need to obtain information from the real world through reading, listening, and observing in order to:</p>	
<ul style="list-style-type: none"> <li><b>Translate information into mathematical language and symbols</b></li> <li><b>Process information mathematically</b></li> <li><b>Present results in written, oral, and visual formats</b></li> <li><b>Discuss and exchange ideas about mathematics as a part of learning</b></li> <li><b>Read a variety of fiction and nonfiction texts to learn about mathematics</b></li> <li><b>Use mathematical notation to communicate and explain problems</b></li> </ul>	
<ul style="list-style-type: none"> <li>Use a variety of techniques to solve mathematical problems</li> </ul>	<p><b>Student Edition:</b> 3-8, 10-14, 26-28, 30-32, 50-52, 54-56, 57-59, 75-77, 78-81, 82-84, 104-107, 108-111, 139-141, 142-143, 210-215, 232-236, 237-241, 259-263, 264-268, 281-284, 291-297</p>

STANDARDS	PAGE REFERENCES
<ul style="list-style-type: none"> <li>Evaluate written and oral presentations in mathematics</li> </ul>	<p><b>Student Edition:</b> 16-19, 34-38, 61-63, 87-92, 118-122, 145-147, 181-185, 217-222, 243-245, 269-274, 305-313, 345-349, 368-370, 384-386, 417-422, 443-447, 474-477, 503-506, 536-538, 552-554, 573-576</p>
<ul style="list-style-type: none"> <li>Model and explain mathematical relationships using oral, written, graphic, and algebraic methods</li> </ul>	<p><b>Student Edition:</b> 3-8, 9, 33, 60, 72, 77, 85, 107, 111, 138, 141, 142-143, 144, 160, 180, 204, 209, 216, 236, 242, 256, 263, 268, 285, 290, 303, 435-347</p>
<ul style="list-style-type: none"> <li>Communicate and evaluate mathematical thinking based on the use of definitions, properties, rules, and symbols in problem solving</li> </ul>	<p><b>Student Edition:</b> 7, 85, 134, 135, 136-137, 138, 145, 148, 159, 226, 279, 337, 523-527, 528-529, 532-535, 536, 586-589</p> <p><b>Teacher Guide:</b> I T134, T135, T523-T527, T528-T529; LB T586-T589; OYO T145, T148</p>
<ul style="list-style-type: none"> <li>Use everyday language, both orally and in writing, communicate strategies and solutions to problems using appropriate mathematical language</li> </ul>	<p><b>Student Edition:</b> 9, 15, 29, 33, 53, 57, 60, 72, 77, 81-82, 85-86, 107-108, 111-112, 117, 138, 141-142, 144, 160, 169, 175, 180, 205, 210</p>
<p><b>Process Standard C:</b> Students will develop their ability to reason mathematically by solving problems where there is a need to investigate mathematical ideas and construct their own learning in all content areas in order to:</p>	
<ul style="list-style-type: none"> <li><b>Reinforce and extend their logical reasoning abilities</b></li> <li><b>Reflect on, clarify, and justify their thinking</b></li> <li><b>Ask questions to extend their thinking</b></li> <li><b>Use patterns and relationships to analyze mathematical situations</b></li> <li><b>Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems</b></li> </ul>	
<ul style="list-style-type: none"> <li>Recognize and apply deductive and inductive reasoning</li> </ul>	<p><b>Student Edition:</b> 4-5, 161, 164-168, 169, 170-174, 175-179, 180 <i>Check Your Understanding</i> 169, 175, 180 <i>Summarize The Mathematics</i> 169, 174, 180</p> <p><b>Teacher Guide:</b> T161C; CYU T169, 175, T180; I T4-T5, T164-T168, T170-T174, T175-T179; PMD 165B; STM T169, T180</p>
<ul style="list-style-type: none"> <li>Review and refine the assumptions and steps used to derive conclusions in mathematical arguments</li> </ul>	<p><b>Student Edition:</b> 26-28, 46-48, 69-71, 100-102, 130-131, 139-141, 154-156, 157-159, 193-194, 229-230, 250-251, 252-256, 277-279, 320-321, 322-324, 356-358, 393-397, 453-455, 517-519, 586-589</p>

STANDARDS	PAGE REFERENCES
<ul style="list-style-type: none"> <li>Make and test conjectures about algebraic and geometric properties based on mathematical principles</li> </ul>	<p><b>Student Edition:</b> 458-459, 459-466, 467-470, 471-472, 473, 480-481, 482-484, 489, 489-492 <i>Summarize The Mathematics</i> 466, 470, 473, 492 <i>Think About the Situation</i> 459, 489</p> <p><b>Teacher Guide:</b> T457-T457C; I T459-T466, T467-T470, T471-T472, T489-T492; OYO T482-T484; STM T466, T473, T492</p>
<ul style="list-style-type: none"> <li>Justify the validity of an argument</li> </ul>	<p><b>Student Edition:</b> 156, 164-168, 170-174, 175-179, 180, 181-184, 185-188, 189, 191-192, <i>Check Your Understanding</i> 175 <i>Summarize The Mathematics</i> 174, 180</p> <p><b>Teacher Guide:</b> I T164-T168, T170-T174, T175-T179; IN T168, T179; OYO T156, T181-T184, T185-T188, T189, T191-T192B; PMD T165B; STM T180</p>
<ul style="list-style-type: none"> <li>Construct a valid argument</li> </ul>	<p><b>Student Edition:</b> 156, 164-168, 170-174, 175-179, 180, 181-184, 185-188, 189, 191-192, <i>Check Your Understanding</i> 175 <i>Summarize The Mathematics</i> 174, 180</p> <p><b>Teacher Guide:</b> I T164-T168, T170-T174, T175-T179; IN T168, T179; OYO T156, T181-T184, T185-T188, T189, T191-T192B; PMD T165B; STM T180</p>
<p><b>Process Standard D:</b> Students will develop the ability to make mathematical connections by solving problems where there is a need to view mathematics as an integrated whole in order to:</p>	
<ul style="list-style-type: none"> <li><b>Link new concepts to prior knowledge</b></li> <li><b>Identify relationships between content strands</b></li> <li><b>Integrate mathematics with other disciplines</b></li> <li><b>Allow the flexibility to approach problems in a variety of ways within and beyond the field of mathematics</b></li> </ul>	
<ul style="list-style-type: none"> <li>Use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics</li> </ul>	<p><b>Student Edition:</b> 19-21, 38-41, 63-64, 92-95, 123-124, 147-150, 185-188, 223-226, 245-246, 275, 313-315, 349-352, 370-371, 387, 423-426, 447-448, 477-481, 506-509, 538-540, 554-555, 577-578</p>

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<ul style="list-style-type: none"> <li>Explain the relationship between concepts and procedures</li> </ul>	<p><b>Student Edition:</b> 167, 182-183</p> <p><b>Teacher Guide:</b> I T167; OYO T182-T183</p>
<ul style="list-style-type: none"> <li>Use the connections among mathematical topics to develop multiple approaches to problems</li> </ul>	<p><b>Student Edition:</b> 19-21, 38-41, 63-64, 92-95, 123-124, 147-150, 185-188, 223-226, 245-246, 275, 313-315, 349-352, 370-371, 387, 423-426, 447-448, 477-481, 506-509, 538-540, 554-555, 577-578</p>
<ul style="list-style-type: none"> <li>Apply mathematical thinking and modeling to solve problems that arise in other disciplines, such as rhythm in music and motion in science</li> </ul>	<p><b>Student Edition:</b> 16-19, 34-38, 61-63, 87-92, 118-122, 145-147, 181-185, 243-245, 269-274, 305-313, 345-349, 368-370, 384-386, 417-422, 443-447, 474-477, 503-506, 536-538, 552-554, 573-576</p>
<ul style="list-style-type: none"> <li>Identify, explain, and apply mathematics in everyday life</li> </ul>	<p><b>Student Edition:</b> 16-19, 34-38, 61-63, 87-92, 118-122, 145-147, 181-185, 217-222, 243-245, 269-274, 305-313, 345-349, 368-370, 384-386, 417-422, 443-447, 474-477, 503-506, 536-538, 552-554, 573-576</p>
<b>Grade 12</b>	
<b>1.0 Numbers, Number Sense, and Computation</b>	
<p><b>Content Standard 1.0</b> Students will accurately calculate and use estimation techniques, number relationships, operation rules, and algorithms; they will determine the reasonableness of answers and the accuracy of solutions to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.</p>	
<p><b>At a minimum, students will maintain previous skills and attain the following:</b></p>	
<p>1.12.6 Determine an approximate value of radical and exponential expressions using a variety of methods.</p>	<p><b>Student Edition:</b> 24, 48, 193, 245, 246, 321, 356, 390, 451, 485, 585</p> <p><b>Teacher Guide:</b> OYO T24, T48, T193, T245, T246 T356, T390, T451, T485, T585</p>
<p>1.12.7 Solve mathematical problems involving exponents and roots.</p>	<p><b>Student Edition:</b> 21-23, 24, 166-168, 169, 170-173, 175-179, 181, 183-185, 187-188, 327-328, 382-383, 384-386, 387, 388, 390, 565-568, 569, 570-572</p> <p><i>Summarize the Mathematics</i> 169, 383, 568, 572</p>

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Perform addition, subtraction, and scalar multiplication on matrices.	<p><b>Student Edition:</b> 75-77, 78-81, 82-84, 85-86, 88-92, 95, 96, 97-100, 133-134 <i>Check Your Understanding</i> 85-86 <i>Summarize the Mathematics</i> 77, 81, 85</p> <p><b>Teacher Guide:</b> CYU T86; I T82-84; IN T82; OYO T92, T95, T96, T97-T100, T133-T134</p>
1.12.8 Identify and apply real number properties to solve problems.	<p><b>Student Edition:</b> 47, 131 #32, 133, 134-137, 138, 145, 148, 279 #25 <i>Summarize The Mathematics</i> 138</p> <p><b>Teacher Guide:</b> I T133, T134-T137; KI T135; OYO T131 #32, T145, T148; STM T138-T138A; TN T137</p>
<b>2.0 Patterns, Functions, and Algebra</b>	
<p><b>Content Standard 2.0</b> Students will use various algebraic methods to analyze, illustrate, extend, and create numerous representations (words, numbers, tables, and graphs) of patterns, functions, and algebraic relations as modeled in practical situations to solve problems, communicate, reason, and make connections within and beyond the field of mathematics.</p> <p><b>At a minimum, students will maintain previous skills and attain the following:</b></p>	
2.12.1 Use algebraic expressions to identify and describe the $n^{\text{th}}$ term of a sequence.	<p><b>Student Edition:</b> 540, 549, 550, 553, 555, 556, 566, 567, 569 <i>Check Your Understanding</i> 569</p> <p><b>Teacher Guide:</b> CYU 568; I T549, T550, T561A, T566-T566A; OYO T540, T553, T555, T556</p>
2.12.2 Isolate any variable in given equations, inequalities, proportions, and formulas to use in mathematical and practical situations.	<p><b>Student Edition:</b> 7, 16-17, 24, 26-28, 33, 39, 48, 50-52, 53, 559, 375 <i>Check Your Understanding</i> 29, 33e, 53 <i>Summarize the Mathematics</i> 29, 33</p> <p><b>Teacher Guide:</b> T25; CYU T29, T33e; I T7, T26-T28, T50-T52; OYO T39, T229B; STM T29, T33</p>
2.12.3 Add, subtract, multiply, and factor $1^{\text{st}}$ and $2^{\text{nd}}$ degree polynomials connecting the arithmetic and algebraic processes.	<p><b>Student Edition:</b> 54-56, 57, 58-59, 60, 61-63, 64, 65-66, 67, 514 <i>Check Your Understanding</i> 57, 60 <i>Summarize the Mathematics</i> 57, 60</p> <p><b>Teacher Guide:</b> CYU T57, T60; I T54-T56, T58-T59; IN T54; NT T55; OYO T61-T63, T64, T65-T66, T69; STM T57, T60</p>

Simplify algebraic expressions, including exponents and radicals.	<b>Student Edition:</b> 23-24, 46-48, 100, 102, 130, 131, 155, 193, 230, 278, 279, 321, 356, 432, 451, 485, 486, 514, 515, 559
2.12.4 Determine the domain and range of functions, including linear, quadratic, and absolute value, algebraically and graphically.	<b>Student Edition:</b> 330-332, 345, 346, 353, 387, 394, 480 <i>Check Your Understanding</i> 331-332 <i>Looking Back</i> 394 <i>Summarize the Mathematics</i> 331 <b>Teacher Guide:</b> D T32; LB T394; I T330-T332; IN T330; OYO T345, T346, T353, T387, T480
Solve absolute value equations and inequalities both algebraically and graphically.	<b>Student Edition:</b> 305, 418, 555 #9f <b>Teacher Guide:</b> OYO T305, T555 #9f
2.12.5 Solve systems of two linear equations algebraically and graphically and verify solutions (with and without technology).	<b>Student Edition:</b> 50-52, 53, 54-56, 57-59, 60, 61-63, 64, 65-66, 67, 71, 72 <i>Check Your Understanding</i> 53, 57, 60 <i>Summarize the Mathematics</i> 53, 57, 60, 72 <i>Think About the Situation</i> 50 <b>Teacher Guide:</b> CYU T53-T54, T60; OYO T61-T63, T64
2.12.6 Solve mathematical and practical problems involving linear and quadratic equations with a variety of methods, including discrete methods (with and without technology).	<b>Student Edition:</b> 3-9, 23, 30-32, 33, 34-37, 39, 42, 130, 139-141, 142-143, 145-150, 152, 326, 327-330, 331, 332-334, 335, 336-339, 340, 341-343, 344, 348, 357
<b>3.0 Measurement</b>	
<b>Content Standard 3.0</b> Students will use appropriate tools and techniques of measurement to determine, estimate, record, and verify direct and indirect measurements to solve problems, communicate, reason, and make connections within and beyond the field of mathematics. <b>At a minimum, students will maintain previous skills and attain the following:</b>	
3.12.1 Estimate and convert between customary and metric systems.	<b>Student Edition:</b> 131, 316 <b>Teacher Guide:</b> OYO T131, T316

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<p>3.12.2 Justify, communicate, and differentiate between precision, error, and tolerance in practical problems.</p>	<p><b>Student Edition:</b> 281-284, 284, 286-290, 291, 307-308, 310, 316 <i>Check Your Understanding</i> 285-286, 291 <i>Summarize the Mathematics</i> 285, 290</p> <p><b>Teacher Guide:</b> CYU T285-T286, T290; I T281-T284, T286-T289B, T307-T308; STM T285, T290</p>
<p>3.12.3 Select and use appropriate measurement tools, techniques, and formulas to solve problems in mathematical and practical situations.</p>	<p><b>Student Edition:</b> 7-8, 9, 10-14, 15, 16-19, 20-21, 23, 27-28, 29, 316 <i>Check Your Understanding</i> 9, 15, 29 <i>Summarize the Mathematics</i> 9, 14, 29</p> <p><b>Teacher Guide:</b> CYU T9, T15, T29; I T10-T14; OYO T10-T14, T16-T19, T20-T21, T23; STM T8, T14A-T14B, T29</p>
<p>3.12.4 Interpret and apply consumer data presented in charts, tables, and graphs to make informed financial decisions related to practical applications.</p>	<p><b>Student Edition:</b> 5, 18, 24, 30-31, 45, 62, 70, 84, 97, 103, 182-183, 270, 294, 304, 311, 312, 329, 359, 374, 375, 473, 559</p>
<p>3.12.5 Determine the measure of unknown dimensions, angles, areas, and volumes using relationships and formulas to solve problems.</p>	<p><b>Student Edition:</b> 24, 39, 47, 101-102, 130, 172, 173, 230, 250, 193, 428- 429, 433, 457, 459-466, 467-470, 471-473, 474-487, 491-497, 499, 501, 502, 516-520, 544, 585</p>
<p><b>4.0 Spatial Relationships, Geometry, and Logic</b></p>	
<p><b>Content Standard 4.0</b> Students will identify, represent, verify, and apply spatial relationships and geometric properties to solve problems, communicate, and make connections within and beyond the field of mathematics.</p>	
<p><b>At a minimum, students will maintain previous skills and attain the following:</b></p>	
<p>4.12.1 Identify and use the parts of a circle to solve mathematical and practical problems.</p>	<p><b>Student Edition:</b> 175-179, 180, 184, 187, 191, 243, 247, 463, 477, 502 <i>Check Your Understanding</i> 180 <i>Summarize the Mathematics</i> 180</p> <p><b>Teacher Guide:</b> CYU T180, T502; I T175-T179, T463; OYO T187, T191, T242B, T247, T477; STM T180</p>
<p>Identify and apply properties of interior and exterior angles of polygons to solve mathematical and practical problems.</p>	<p><b>Student Edition:</b> 101, 459, 460-465, 466, 467-470, 471-472, 473, 474-477, 478-480, 481-482, 483-484, 489-490, 491, 492-496, 497, 498-500, 501, 503-506, 507-509, 510-513</p>

<p>4.12.2 Apply properties of similarity through right triangle trigonometry to find missing angles and sides.</p>	<p><b>Student Edition:</b> 458, 459-465, 466, 467-469, 470, 471, 472, 473, 474-477, <i>Check Your Understanding</i> 466, 471, 473 <i>Summarize the Mathematics</i> 466, 470, 473 <i>Think About the Situation</i> 459</p> <p><b>Teacher Guide:</b> CYU T466B, T471, T473; I T459-T465; STM T466, T470, T473; TATS 459</p>
<p>4.12.5 Determine the slope of lines using coordinate geometry and algebraic techniques.</p>	<p><b>Student Edition:</b> 37, 38, 40, 42, 163-167, 169, 170-175, 179, 182, 189, 194, 201, 223, 251, 279, 281, 286, 287-290, 300, 305, 306-307</p>
<p>Identify parallel, perpendicular, and intersecting lines by slope.</p>	<p><b>Student Edition:</b> 163, 172, 174, 175, 183-184, 187, 188-189, 192, 193, 224, 227, 251, <i>Check Your Understanding</i> 175 <i>Summarize the Mathematics</i> 174 <i>Think About the Situation</i> 163</p> <p><b>Teacher Guide:</b> CYU T175; I T172; OYO T183-T184, T187, T188; STM T174; TATS T163</p>
<p>Graph linear equations and find possible solutions to those equations using coordinate geometry.</p>	<p><b>Student Edition:</b> 30-32, 33, 37-38, 42, 50-52, 53, 58-59, 67, 130, 159, 366, 367, 368-369, 370-371, 375 <i>Check Your Understanding</i> 33, 53, 367</p> <p><b>Teacher Guide:</b> CYU T33, T53-T54, T367; I T30-T32, T50-T52, T58-T59, T159; IN T52; OYO T37-T38, T42, T67</p>
<p>Find possible solution sets of systems of equations whose slopes indicate parallel, perpendicular, or intersecting lines.</p>	<p><b>Student Edition:</b> 50-52, 53, 54-56, 57-59, 60, 61-63, 65-66, 67, 71-72, 74, 139-141, 142-143, 144, 145-156, 325, 359-367, 368-376, 393, 584</p>
<p>4.12.6 Solve problems using complementary and supplementary angles, congruent angles, vertical angles, angles formed when parallel lines are cut by a transversal and angles in polygons.</p>	<p><b>Student Edition:</b> 154, 452, 470, 476, 479, 481, 485, 489, 503 <i>Think About the Situation</i> 489, 503</p> <p><b>Teacher Guide:</b> T161C, T457A-457B; I T470; OYO T154, T452, T476, T479, T481, T485, T503; TATS T489</p>

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<p>4.12.7 Apply the Pythagorean Theorem and its converse in mathematical and practical situations.</p>	<p><b>Student Edition:</b> 41, 154, 171, 452, 460, 464, 469-470, 472, 476, 480, 484, 485, 490, 493, 496 <i>Summarize the Mathematics</i> 470</p> <p><b>Teacher Guide:</b> T161C, T457A-T457B; I T171; OYO T484, T485; STM T470</p>
<p>4.12.8 Solve problems by drawing and/or constructing geometric figures to demonstrate geometric relationships.</p>	<p><b>Student Edition:</b> 94, 101-102, 163, 164-168, 169, 170-174, 175, 176-179, 180, 181-184, 187, 189, 190-192 <i>Check Your Understanding</i> 169, 175 <i>Think About the Situation</i> 163,</p> <p><b>Teacher Guide:</b> T161-T161C; CYU T169, T175, T180; I T164-T168, T170-T174, T176-T179; OYO T101-T102, T190-T192B; TATS T163</p>
<p>4.12.9 Formulate, evaluate, and justify arguments using inductive and deductive reasoning in mathematical and practical situations.</p>	<p><b>Student Edition:</b> 4-5, 161, 164-168, 169, 170-174, 175-179, 180 <i>Check Your Understanding</i> 169, 175, 180 <i>Summarize The Mathematics</i> 169, 174, 180</p> <p><b>Teacher Guide:</b> T161C; CYU T169, 175, T180; I T4-T5, T164-T168, T170-T174, T175-T179; PMD 165B; STM T169, T180</p>
<p><b>5.0 Data Analysis</b></p>	
<p><b>Content Standard 5.0</b> Students will collect, organize, display, interpret, and analyze data to determine statistical relationships and probability projections to solve problems, communicate, reason, and make connections within and beyond the field of mathematics. <b>At a minimum, students will maintain previous skills and attain the following:</b></p>	
<p>5.12.1 Organize statistical data through the use of tables, graphs, and matrices (with and without technology).</p>	<p><b>Student Edition:</b> 401-406, 407-411, 412-415, 435-437, 438-441, 523-527, 538-540, 549-551, 555, 558, 561-564, 565-568, 570-572, 573-576, 577-578, 579-580</p> <p><b>Teacher Guide:</b> OYO T538-T540, T555, T558</p>
<p>5.12.2 Select and apply appropriate statistical measures in mathematical and practical situations.</p>	<p><b>Student Edition:</b> 48, 121, 131, 250, 279, 291, 316, 320, 523-527, 528-531, 532-534, 536-538, 546-548, 549-551, 552-554, 557, 558, 561-564, 565-568, 570-572, 573-576</p>

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5.12.3 Distinguish between a sample and a census.	<b>Student Edition:</b> 299-303 <i>Summarize the Mathematics</i> 303 <b>Teacher Guide:</b> I T303; IN T303
Identify sources of bias and their effect on data representations and statistical conclusions.	<b>Student Edition:</b> 299-303, 304 <i>Check Your Understanding</i> 304 <i>Summarize the Mathematics</i> 303 <b>Teacher Guide:</b> CYU 304; I T299-T303; STM 303
Use the shape of a normal distribution to compare and analyze data from a sample.	<b>Student Edition:</b> 555, 579 <b>Teacher Guide:</b> OYO T555, T579
5.12.4 Apply permutations and combinations to mathematical and practical situations, including the Fundamental Counting Principle.	<b>Student Edition:</b> 524-527, 539-540, 541, 542, 549, 553, 555, 556, 561, 564 <i>Summarize the Mathematics</i> 528, 564 <i>Think About the Situation</i> 561 <b>Teacher Guide:</b> I T549; IN T527; OYO T539-T540, T541, T542, T553, T555, T556; STM T564; TATS T561
5.12.5 Determine the probability of an event with and without replacement using sample spaces.	<b>Student Edition:</b> 524-527, 528, 529-530, 531, 532-534, 536-538, 539-540 <i>Check Your Understanding</i> 531, 535 <i>Summarize the Mathematics</i> 528, 531, 535 <b>Teacher Guide:</b> CYU T531A, T353; IN T529; IT T529-T530, T532-T534; STM T528, T531, T535
Design, conduct, analyze, and effectively communicate the results of multi-stage probability experiments.	<b>Student Edition:</b> 523-527, 528, 529-530, 531, 532-534, 535, 536-538, 539-540, 549-550, 551, 552-554, 555, 557-558, 562, 565-567, 570-571, 575, 580 <i>Summarize the Mathematics</i> 528, 531, 535, 551 <b>Teacher Guide:</b> CU T526; STM T528, T531, T535

STANDARDS	PAGE REFERENCES
<p>5.12.6 Design, construct, analyze, and select an appropriate type of graphical representations to communicate the results of a statistical experiment.</p>	<p><b>Student Edition:</b> 523-527, 536, 539-540, 549, 550-551, 555, 561-564, 566, 569, 570-571, 573, 577-580 <i>Check Your Understanding</i> 569</p> <p><b>Teacher Guide:</b> CYU T569; I T549, T561-T564, T566, T570-T571; LL T561B; OYO T555, T573, T577</p>
<p>Formulate and justify inferences based on a valid data sample.</p>	<p><b>Student Edition:</b> 5, 19-20, 21, 23, 28, 77-78, 81-82, 83-84, 87-91, 264-267, 269-272, 274, 276-278, 286-290, 291-297 <i>Check Your Understanding</i> 81-82, 291</p> <p><b>Teacher Guide:</b> CYU T81-T82, T290; OYO T19-T20, T21, T23</p>