

Curriculum Correlation

Unit 1 Patterns

Chapter 1 Sequences and Series

Strand/Outcome	Chapter/Section	Pages
Topic: Relations and Functions		
General Outcome <i>Develop algebraic and graphical reasoning through the study of relations.</i>		
Specific Outcomes		
9. Analyze arithmetic sequences and series to solve problems. [CN, PS, R, T]	1.1–1.2 Unit 1 Project	pp. 6–31, 66–67, 69–70, 133–134, 136 pp. 3, 71, 132
10. Analyze geometric sequences and series to solve problems. [PS, R, T]	1.3–1.5 Unit 1 Project	pp. 32–65, 67–70, 133–134, 136–137 pp. 3, 71, 132

Chapter 2 Trigonometry

Strand/Outcome	Chapter/Section	Pages
Topic: Trigonometry		
General Outcome <i>Develop trigonometric reasoning.</i>		
Specific Outcomes		
1. Demonstrate an understanding of angles in standard position [0° to 360°]. [R, V]	2.1 Unit 1 Project	pp. 74–87, 126, 129–130, 134, 136–137 pp. 3, 131–132
2. Solve problems, using the three primary trigonometric ratios for angles from 0° to 360° in standard position. [C, ME, PS, R, T, V]	2.1–2.2 Unit 1 Project	pp. 74–99, 126–127, 129, 134–136 pp. 3, 131–132
3. Solve problems, using the cosine law and sine law, including the ambiguous case. [C, CN, PS, R, T]	2.3–2.4 Unit 1 Project	pp. 100–125, 127–130, 135, 137 pp. 3, 131–132

Unit 2 Quadratics

Chapter 3 Quadratic Functions

Strand/Outcome	Chapter/Section	Pages
Topic: Relations and Functions		
General Outcome <i>Develop algebraic and graphical reasoning through the study of relations.</i>		
Specific Outcomes		
3. Analyze quadratic functions of the form $y = a(x - p)^2 + q$ and determine the: <ul style="list-style-type: none"> • vertex • domain and range • direction of opening • axis of symmetry • x- and y-intercepts. [CN, R, T, V]	3.1 Unit 2 Project	pp. 142–162, 198, 199, 201–203 pp. 139, 263
4. Analyze quadratic functions of the form $y = ax^2 + bx + c$ to identify characteristics of the corresponding graph, including: <ul style="list-style-type: none"> • vertex • domain and range • direction of opening • axis of symmetry • x- and y-intercepts and to solve problems. [CN, PS, R, T, V]	3.2, 3.3 Unit 2 Project	pp. 163–197, 199–203 pp. 139, 263

Chapter 4 Quadratic Equations

Strand/Outcome	Chapter/Section	Pages
Topic: Relations and Functions		
General Outcome <i>Develop algebraic and graphical reasoning through the study of relations.</i>		
Specific Outcomes		
1. Factor polynomial expressions of the form: <ul style="list-style-type: none"> • $ax^2 + bx + c, a \neq 0$ • $a^2x^2 - b^2y^2, a \neq 0, b \neq 0$ • $a(f(x))^2 + b(f(x)) + c, a \neq 0$ • $a^2(f(x))^2 - b^2(g(y))^2, a \neq 0, b \neq 0$ where a, b and c are rational numbers. [CN, ME, R]	4.2, 4.4 Unit 2 Project	pp. 218–233, 244–262, 264–265, 267 pp. 139, 263
4. Analyze quadratic functions of the form $y = ax^2 + bx + c$ to identify characteristics of the corresponding graph, including: <ul style="list-style-type: none"> • vertex • domain and range • direction of opening • axis of symmetry • x- and y-intercepts and to solve problems. [CN, PS, R, T, V]	4.1, 4.3, 4.4 Unit 2 Project	pp. 206–217, 234–262, 265–267 pp. 139, 263
5. Solve problems that involve quadratic equations. [C, CN, PS, R, T, V]	4.1–4.4 Unit 2 Project	pp. 206–262, 264–267 pp. 139, 263

Unit 3 Functions and Equations

Chapter 5 Radical Expressions and Equations

Strand/Outcome	Chapter/Section	Pages
Topic: Algebra and Number		
General Outcome <i>Develop algebraic reasoning and number sense.</i>		
Specific Outcomes		
2. Solve problems that involve operations on radicals and radical expressions with numerical and variable radicands. [CN, ME, PS, R, T]	5.1–5.2 Unit 3 Project	pp. 272–293, 304–307, 416, 418–419 pp. 269, 415
3. Solve problems that involve radical equations (limited to square roots). [C, PS, R]	5.3 Unit 3 Project	pp. 294–303, 305–307, 416, 418–419 pp. 269, 415

Chapter 6 Rational Expressions and Equations

Strand/Outcome	Chapter/Section	Pages
Topic: Algebra and Number		
General Outcome <i>Develop algebraic reasoning and number sense.</i>		
Specific Outcomes		
4. Determine equivalent forms of rational expressions (limited to numerators and denominators that are monomials, binomials or trinomials). [C, ME, R]	6.1 Unit 3 Project	pp. 310–321, 352, 355, 416, 418–419 pp. 269, 415
5. Perform operations on rational expressions (limited to numerators and denominators that are monomials, binomials or trinomials). [CN, ME, R]	6.2–6.3 Unit 3 Project	pp. 322–340, 352–355, 416, 418–419 pp. 269, 415
6. Solve problems that involve rational equations (limited to numerators and denominators that are monomials, binomials or trinomials). [C, PS, R]	6.4 Unit 3 Project	pp. 341–351, 354–355, 416–417, 419 pp. 269, 415

Chapter 7 Absolute Value and Reciprocal Functions

Strand/Outcome	Chapter/Section	Pages
Topic: Algebra and Number		
General Outcome <i>Develop algebraic reasoning and number sense.</i>		
Specific Outcomes		
1. Demonstrate an understanding of the absolute value of real numbers. [R, V]	7.1 Unit 3 Project	pp. 358–367, 410, 413–414, 417–419 pp. 269, 415
Topic: Relations and Functions		
General Outcome <i>Develop algebraic and graphical reasoning through the study of relations.</i>		
Specific Outcomes		
2. Graph and analyze absolute value functions (limited to linear and quadratic functions) to solve problems. [C, PS, R, T, V]	7.2–7.3 Unit 3 Project	pp. 368–391, 410–414, 417, 419 pp. 269, 415
11. Graph and analyze reciprocal functions (limited to the reciprocal of linear and quadratic functions). [CN, R, T, V]	7.4 Unit 3 Project	pp. 392–409, 412–414, 417–419 pp. 269, 415

Unit 4 Systems of Equations and Inequalities

Chapter 8 Systems of Equations

Strand/Outcome	Chapter/Section	Pages
Topic: Relations and Functions		
General Outcome <i>Develop algebraic and graphical reasoning through the study of relations.</i>		
Specific Outcomes		
6. Solve, algebraically and graphically, problems that involve systems of linear-quadratic and quadratic-quadratic equations in two variables. [CN, PS, R, T, V]	8.1–8.2 Unit 4 Project	pp. 424–460, 509–513 pp. 421, 461, 508

Chapter 9 Linear and Quadratic Inequalities

Strand/Outcome	Chapter/Section	Pages
Topic: Relations and Functions		
General Outcome <i>Develop algebraic and graphical reasoning through the study of relations.</i>		
Specific Outcomes		
7. Solve problems that involve linear and quadratic inequalities in two variables. [C, PS, T, V]	9.1, 9.3 Unit 4 Project	pp. 464–475, 488–506, 510–513 pp. 421, 507–508
8. Solve problems that involve quadratic inequalities in one variable. [CN, PS, V]	9.2 Unit 4 Project	pp. 476–487, 503, 505–506 pp. 421, 507–508, 512–513