

# CHAPTER CORRELATION

## Unit 1 Measurement

### Chapter 1: Measurement Systems

| Strand/Outcome  | Chapter/Section                          | Pages  |
|---|--|--|
| <b>Strand: Measurement</b>  |  |  |
| <b>General Outcome</b><br><i>Develop spatial sense and proportional reasoning.</i>  |  |  |
| <b>Specific Outcomes</b>  |  |  |
| <b>1.</b> Solve problems that involve linear measurement, using: <ul style="list-style-type: none"> <li>• SI and imperial units of measure</li> <li>• estimation strategies</li> <li>• measurement strategies.</li> </ul> [ME, PS, V] | Chapter 1: 1.1–1.3<br><br>Unit 1 Project | pp. 8–53, 150–151, 154–155<br>pp. 19, 33, 36–37, 46, 150 |
| <b>2.</b> Apply proportional reasoning to problems that involve conversions between SI and imperial units of measure.<br>[C, ME, PS]  | Chapter 1: 1.3<br><br>Unit 1 Project     | pp. 36–47, 50–53, 150–151, 154–155<br>pp. 36–37, 46, 150 |

### Chapter 2: Surface Area and Volume

| Strand/Outcome   | Chapter/Section                          | Pages  |
|--|--|--|
| <b>Strand: Measurement</b>   |  |  |
| <b>General Outcome</b><br><i>Develop spatial sense and proportional reasoning.</i>   |  |  |
| <b>Specific Outcomes</b>   |  |  |
| <b>1.</b> Solve problems that involve linear measurement, using: <ul style="list-style-type: none"> <li>• SI and imperial units of measure</li> <li>• estimation strategies</li> <li>• measurement strategies.</li> </ul> [ME, PS, V]  | Chapter 2: 2.1<br><br>Unit 1 Project     | pp. 56–65, 92, 95–97, 151–152, 154–155<br>pp. 56–57, 150 |
| <b>3.</b> Solve problems, using SI and imperial units, that involve the surface area and volume of 3-D objects, including: <ul style="list-style-type: none"> <li>• right cones</li> <li>• right prisms</li> <li>• spheres.</li> <li>• right cylinders</li> <li>• right pyramids</li> </ul> [CN, PS, R, V] | Chapter 2: 2.2–2.3<br><br>Unit 1 Project | pp. 66–97, 151–152, 154–155<br>pp. 76, 90–91, 150        |
| <b>Strand: Algebra and Number</b>  |  |  |
| <b>General Outcome</b><br><i>Develop algebraic reasoning and number sense.</i>   |  |  |
| <b>Specific Outcomes</b>   |  |  |
| <b>3.</b> Demonstrate an understanding of powers with integral and rational exponents.<br>[C, CN, PS, R]   | Chapter 2: 2.2–2.3<br><br>Unit 1 Project | pp. 66–97, 151–152, 154–155<br>pp. 76, 90–91, 159        |

### Chapter 3: Right Triangle Trigonometry

| Strand/Outcome  | Chapter/Section                      | Pages  |
|---|--------------------------------------|--|
| <b>Strand: Measurement</b>  |                                      |  |
| <b>General Outcome</b><br><i>Develop spatial sense and proportional reasoning.</i>  |                                      |  |
| <b>Specific Outcomes</b>  |                                      |  |
| 4. Develop and apply the primary trigonometric ratios (sine, cosine, tangent) to solve problems that involve right triangles.<br>[C, CN, PS, R, T, V] | Chapter 3: 3.1–3.4<br>Unit 1 Project | pp. 100–149, 152–155<br>pp. 106–108, 122, 144, 150 |

## Unit 2 Algebra and Number

### Chapter 4: Exponents

| Strand/Outcome  | Chapter/Section                          | Pages  |
|---|--|--|
| <b>Strand: Algebra and Number</b>   |  |  |
| <b>General Outcome</b><br><i>Develop algebraic reasoning and number sense.</i>  |  |  |
| <b>Specific Outcomes</b>  |  |  |
| 1. Demonstrate an understanding of factors of whole numbers by determining the: <ul style="list-style-type: none"> <li>• prime factors</li> <li>• greatest common factor</li> <li>• least common multiple</li> <li>• square root</li> <li>• cube root.</li> </ul> [CN, ME, R] | Chapter 4: 4.1<br><br>Unit 2 Project     | pp. 162–171, 206,<br>209–210, 266–267,<br>270–271<br>pp. 169–170 |
| 2. Demonstrate an understanding of irrational numbers by: <ul style="list-style-type: none"> <li>• representing, identifying and simplifying irrational numbers</li> <li>• ordering irrational numbers.</li> </ul> [CN, ME, R, V]   | Chapter 4 4.4<br><br>Unit 2 Project      | pp. 194–205, 208–211,<br>266–267, 270–271<br>pp. 195, 204–205    |
| 3. Demonstrate an understanding of powers with integral and rational exponents.<br>[C, CN, PS, R]   | Chapter 4: 4.2–4.4<br><br>Unit 2 Project | pp. 172–211, 266–267,<br>270–271<br>pp. 195, 205                 |

## Chapter 5: Polynomials

| Strand/Outcome  | Chapter/Section                      | Pages   |
|---|--------------------------------------|---|
| <b>Strand: Algebra and Number</b>   |                                      |   |
| <b>General Outcome</b><br><i>Develop algebraic reasoning and number sense.</i>  |                                      |   |
| <b>Specific Outcomes</b>  |                                      |   |
| 1. Demonstrate an understanding of factors of whole numbers by determining the: <ul style="list-style-type: none"> <li>• prime factors</li> <li>• greatest common factor</li> <li>• least common multiple</li> <li>• square root</li> <li>• cube root.</li> </ul> [CN, ME, R] | Chapter 5: 5.2                       | pp. 224–233, 262–265, 268                         |
| 4. Demonstrate an understanding of the multiplication of polynomial expressions (limited to monomials, binomials and trinomials), concretely, pictorially and symbolically.<br>[CN, R, V]   | Chapter 5: 5.1<br>Unit 2 Project     | pp. 214–223, 262, 264–265, 267–271<br>pp. 220–221 |
| 5. Demonstrate an understanding of common factors and trinomial factoring, concretely, pictorially and symbolically.<br>[C, CN, R, V]   | Chapter 5: 5.2–5.4<br>Unit 2 Project | pp. 224–265, 268–269, 271<br>pp. 246–247, 257–258 |

## Unit 3 Relations and Functions

### Chapter 6: Linear Relations and Functions

| Strand/Outcome   | Chapter/Section                      | Pages                                |
|--|--------------------------------------|--------------------------------------|
| <b>Strand: Relations and Functions</b>   |                                      |                                      |
| <b>General Outcome</b><br><i>Develop algebraic and graphical reasoning through the study of relations.</i>   |                                      |                                      |
| <b>Specific Outcomes</b>   |                                      |                                      |
| 1. Interpret and explain the relationships among data, graphs and situations.<br>[C, CN, R, T, V]  | Chapter 6: 6.1, 6.3                  | pp. 268–278, 292–304                 |
| 2. Demonstrate an understanding of relations and functions.<br>[C, R, V]   | Chapter 6: 6.2<br>Unit 3 Project     | pp. 279–291<br>pp. 402–405           |
| 3. Demonstrate an understanding of slope with respect to: <ul style="list-style-type: none"> <li>• rise and run</li> <li>• line segments and lines</li> <li>• rate of change</li> <li>• parallel lines</li> <li>• perpendicular lines.</li> </ul> [PS, R, V] | Chapter 6: 6.4–6.5<br>Unit 3 Project | pp. 305–329<br>pp. 264–265, 312, 314 |
| 4. Describe and represent linear relations, using: <ul style="list-style-type: none"> <li>• words</li> <li>• ordered pairs</li> <li>• tables of values</li> <li>• graphs</li> <li>• equations.</li> </ul> [C, CN, R, V]                                      | Chapter 6: 6.1<br>Unit 3 Project     | p. 268–278<br>pp. 402–405            |
| 8. Represent a linear function, using function notation.<br>[CN, ME, V]  | Chapter 6: 6.2<br>Unit 3 Project     | pp. 279–291<br>p. 402–405            |

## Chapter 7: Linear Equations and Graphs

| Strand/Outcome  | Chapter/Section                       | Pages                                    |
|---|---------------------------------------|--|
| <b>Strand: Relations and Functions</b>  |                                       |  |
| <b>General Outcome</b>  |                                       |  |
| <i>Develop algebraic and graphical reasoning through the study of relations.</i>  |                                       |  |
| <b>Specific Outcomes</b>  |                                       |  |
| 1. Interpret and explain the relationships among data, graphs, and situations.  | Chapter 7: 7.1–7.2<br>Unit 3 Project  | pp. 340–369<br>p. 355                    |
| 3. Demonstrate an understanding of slope with respect to: <ul style="list-style-type: none"> <li>rise and run</li> <li>line segments and lines</li> <li>rate of change</li> <li>parallel lines</li> <li>perpendicular lines.</li> </ul> [PS, R, V]  | Chapter 7: 7.1, 7.4<br>Unit 3 Project | pp. 340–356, 383–395<br>pp. 355, 402–405 |
| 5. Determine the characteristics of the graphs of linear relations, including the: <ul style="list-style-type: none"> <li>intercepts</li> <li>slope</li> <li>domain</li> <li>range.</li> </ul> [CN, PS, R, V]   | Chapter 7: 7.1–7.2<br>Unit 3 Project  | pp. 340–369<br>pp. 355, 382, 402–405     |
| 6. Relate linear relations expressed in: <ul style="list-style-type: none"> <li>slope–intercept form (<math>y = mx + b</math>)</li> <li>general form (<math>Ax + By + C = 0</math>)</li> <li>slope–point form (<math>y - y_1 = m(x - x_1)</math>) to their graphs.</li> </ul> [CN, R, T, V] | Chapter 7: 7.1–7.3<br>Unit 3 Project  | pp. 340–382<br>pp. 355, 382, 402–405     |
| 7. Determine the equation of a linear relation, given: <ul style="list-style-type: none"> <li>a graph</li> <li>a point and the slope</li> <li>two points</li> <li>a point and the equation of a parallel or perpendicular line</li> </ul> to solve problems.<br>[CN, PS, R, V]              | Chapter 7: 7.1–7.4<br>Unit 3 Project  | pp. 340–395<br>pp. 355, 382, 402–405     |

## Unit 4 Systems of Equations

### Chapter 8: Solving Systems of Linear Equations Graphically

| Strand/Outcome   | Chapter/Section                      | Pages                            |
|--|--------------------------------------|----------------------------------|
| <b>Strand: Relations and Functions</b>   |                                      |                                  |
| <b>General Outcome</b>   |                                      |                                  |
| <i>Develop algebraic and graphical reasoning through the study of relations.</i>   |                                      |                                  |
| <b>Specific Outcomes</b>   |                                      |                                  |
| 1. Interpret and explain the relationships among data, graphs, and situations.<br>[C, CN, R, T, V]   | Chapter 8: 8.1–8.3<br>Unit 4 Project | pp. 416–459<br>pp. 430, 442, 506 |
| 3. Demonstrate an understanding of slope with respect to: <ul style="list-style-type: none"> <li>• rise and run</li> <li>• line segments and lines</li> <li>• rate of change</li> <li>• parallel lines</li> <li>• perpendicular lines.</li> </ul> [PS, R, V]                           | Chapter 8: 8.3                       | pp. 446–459                      |
| 7. Determine the equation of a linear relation, given: <ul style="list-style-type: none"> <li>• a graph</li> <li>• a point and the slope</li> <li>• two points</li> <li>• a point and the equation of a parallel or perpendicular line</li> </ul> to solve problems.<br>[CN, PS, R, V] | Chapter 8: 8.2–8.3<br>Unit 4 Project | pp. 432–459<br>pp. 442, 506      |
| 9. Solve problems that involve systems of linear equations in two variables, graphically and algebraically.<br>[CN, PS, R, T, V]   | Chapter 8: 8.1–8.3<br>Unit 4 Project | pp. 416–459<br>pp. 430, 442, 506 |

### Chapter 9: Solving Systems of Linear Equations Algebraically

| Strand/Outcome   | Chapter/Section                      | Pages                                 |
|--|--------------------------------------|---------------------------------------|
| <b>Strand: Relations and Functions</b>   |                                      |                                       |
| <b>General Outcome</b>   |                                      |                                       |
| <i>Develop algebraic and graphical reasoning through the study of relations.</i>   |                                      |                                       |
| <b>Specific Outcomes</b>   |                                      |                                       |
| 9. Solve problems that involve systems of linear equations in two variables, graphically and algebraically.<br>[CN, PS, R, T, V] | Chapter 9: 9.1–9.3<br>Unit 4 Project | pp. 468–501<br>pp. 477, 490, 500, 506 |