

Contents

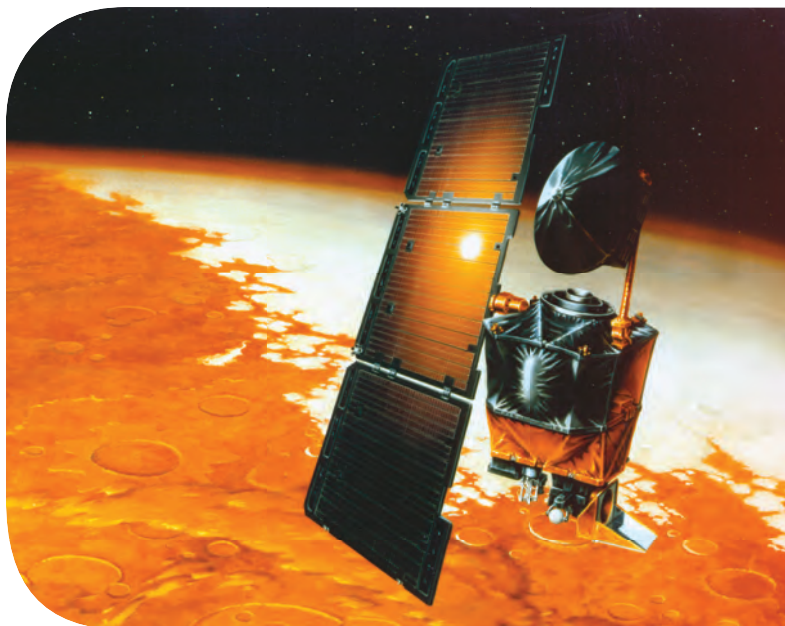
Scavenger Hunt: Explore Your Textbook!	viii
Get Started!	ix
Problem-Solving Strategies	x

Chapter 1

Measurement Systems and Similar Triangles	2
Get Ready!	4
1.1 Imperial Measure	6
1.2 Conversions Between Metric and Imperial Systems	12
1.3 Similar Triangles	19
1.4 Solve Problems Using Similar Triangles	30
Chapter 1 Review	38
Chapter 1 Practice Test	40

Chapter 2

Right Triangle Trigonometry	42
Get Ready!	44
2.1 The Pythagorean Theorem	46
2.2 Explore Ratio and Proportion in Right Triangles	54



2.3 The Sine and Cosine Ratios	63
2.4 The Tangent Ratio	74
2.5 Solve Problems Using Right Triangles	83
Chapter 2 Review	88
Chapter 2 Practice Test	90
Task: Fix Up a Neighbourhood Park	92
Chapters 1 to 2 Review	94





Chapter 3

Linear Relations 96

Get Ready! 98

3.1 Slope as a Rate of Change 100

3.2 Investigate Slope and y -Intercept
Using Technology 111

3.3 Properties of Slopes of Lines 118

3.4 Determine the Equation of a Line 128

3.5 Graph Linear Relations by Hand 138

Chapter 3 Review 146

Chapter 3 Practice Test 148

Chapter 4

Linear Equations 150

Get Ready! 152

4.1 Solve One- and Two-Step
Linear Equations 154

4.2 Solve Multi-Step Linear Equations 163

4.3 Model With Formulas 174

4.4 Convert Linear Equations
From Standard Form 184

Chapter 4 Review 190

Chapter 4 Practice Test 192

Chapter 5

Linear Systems 194

Get Ready! 196

5.1 Solve Linear Systems by Graphing 198

5.2 Solve Linear Systems by Substitution 205

5.3 Solve Linear Systems by Elimination 212

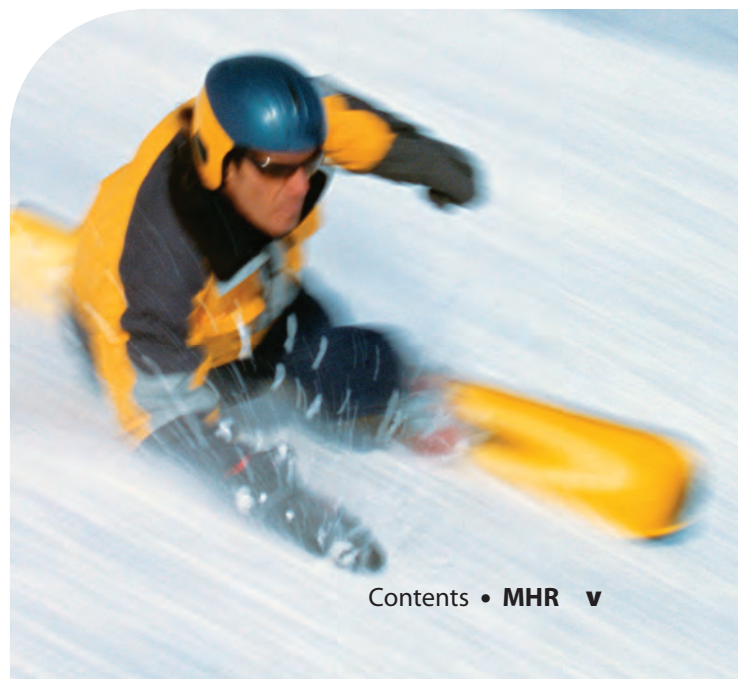
5.4 Solve Problems Involving
Linear Systems 219

Chapter 5 Review 226

Chapter 5 Practice Test 228

Task: Charity Fundraising 230

Chapters 3 to 5 Review 232



Chapter 6

Quadratic Relations 234

Get Ready! 236

6.1 Explore Non-Linear Relations 238

6.2 Model Quadratic Relations 245

6.3 Key Features of Quadratic Relations 254

6.4 Rates of Change in Quadratic Relations 264

Chapter 6 Review 272

Chapter 6 Practice Test 274

Chapter 7

Quadratic Expressions 276

Get Ready! 278

7.1 Multiply Two Binomials 280

7.2 Common Factoring 290

7.3 Factor a Difference of Squares 298

7.4 Factor Trinomials of the Form $x^2 + bx + c$ 306

Chapter 7 Review 312

Chapter 7 Practice Test 314





Chapter 8	
Represent Quadratic Relations	316
Get Ready!	318
8.1 Interpret Quadratic Relations	320
8.2 Represent Quadratic Relations in Different Ways	329
8.3 The Quadratic Relation $y = ax^2 + c$	336
8.4 Solve Problems Involving Quadratic Relations	344
Chapter 8 Review	351
Chapter 8 Practice Test	352
Task: Home Run Derby	354
Chapters 6 to 8 Review	356

Chapter 9	
Volume and Surface Area	360
Get Ready!	362
9.1 Volume of Prisms and Pyramids	364
9.2 Surface Area of Prisms and Pyramids	372
9.3 Surface Area and Volume of Cylinders	381
9.4 Volume of Cones and Spheres	391
9.5 Solve Problems Involving Surface Area and Volume	398
Chapter 9 Review	406
Chapter 9 Practice Test	408
Task: Design a Game	410
Chapters 1 to 9 Review	412

Skills Appendix	416
Technology Appendix	444
Answers	467
Glossary	516
Index	523

