

Contents

About This Book: FAQs	vii
About the Author	viii
Acknowledgments	viii
Introduction	xv
National Council of Teachers of Mathematics Standards and Expectations Addressed by <i>Fantasy Baseball and Mathematics</i>	xvi

Part One: Computing Weekly Points 1

Chapter One: How to Play Fantasy Baseball and Mathematics	3
Step 1: Selecting Players	4
Option 1: Permanent Teams with Salary Cap	4
Option 2: Different Teams Each Week	5
Choosing Your Own Team	5
Trades	5
Injuries	6
Step 2: Reading Box Scores	6
Step 3: Collecting Data	8
Step 4: Computing Points	10
Default Total Points Equation for Nonpitchers	12
Default Total Points Equation for Pitchers	12
Example Using Default Total Points Equations: Points Earned for the English Bulldogs	14
Additional Scoring Systems	15
Additional Scoring Systems (Total Points Equations)	17

Chapter Two: Explaining Fantasy Baseball and Mathematics to Students: Handouts	31
Handout 1: Description and Rules	33
Handout 2: Fantasy Team Roster	35
Handout 3: How to Read Box Scores	36
Handout 4: How to Collect Data	39
Handout 5: How to Compute Points	40
Handout 6: Practice in Computing Points, Using the Default Scoring System	42
Handout 7: Default Total Points Equations	43
Handout 8: Practice in Computing Points, Using the Default Total Points Equations	44
Handout 9: Weekly Scoring Worksheet	46
Handout 10: Weekly Scoring Worksheet Using Total Points Equations	47
Handout 11: Total Points Week-by-Week	48

Part Two: Using Graphs **51**

Chapter Three: Graphing Activities	53
Circle Graphs	53
Stacked-Bar and Multiple-Line Graphs	55
Handout 12: Stacked-Bar Graph	56
Multiple-Line Graph	57
Additional Options for Graphing Activities	58

Part Three: Using Practice Worksheets and Quizzes **59**

Chapter Four: Practice Worksheets	61
Number Sense	
Practice Worksheet 1: Rounding Whole Numbers and Expanded Notation	62
Practice Worksheet 2: Least Common Multiple and Greatest Common Factor	63

Practice Worksheet 3: Operations with Whole Numbers	64
Practice Worksheet 4: Equivalent Fractions	65
Practice Worksheet 5: Patterns and Multiples	66
Practice Worksheet 6: Ordering Fractions and Decimals	67
Practice Worksheet 7: Rounding Decimals	68
Practice Worksheet 8: Improper Fractions, Mixed Numbers, and Reciprocals	69
Practice Worksheet 9: Adding and Subtracting Fractions	70
Practice Worksheet 10: Stacked-Bar Graph	71
Practice Worksheet 11: Multiplying and Dividing Fractions	72
Practice Worksheet 12: Rounding Fractions	73
Practice Worksheet 13: Multiplying and Dividing Decimals	75
Practice Worksheet 14: Unit Rates	76
Practice Worksheet 15: Converting Fractions, Decimals, and Percentages	77
Practice Worksheet 16: Ratios	78
Practice Worksheet 17: Percentage of Price Increase and Decrease	79
Practice Worksheet 18: Finding a Percentage of a Number	80
Practice Worksheet 19: Proportions	82
Practice Worksheet 20: Ratios and Proportions	84
Practice Worksheet 21: Factoring	85
Practice Worksheet 22: Interest, Depreciation, and Tax	86
Practice Worksheet 23: Prime Factorization	87
Practice Worksheet 24: Scientific Notation	88
Practice Worksheet 25: Ordering Integers, Fractions, and Decimals	89
Practice Worksheet 26: Operations with Integers	90
Practice Worksheet 27: Permutations and Combinations	92
Algebra and Functions	
Practice Worksheet 28: Unit Conversions	93
Practice Worksheet 29: Evaluating Algebraic Expressions	94
Practice Worksheet 30: Properties of Mathematics	95
Practice Worksheet 31: Graphing on a Number Line	96
Practice Worksheet 32: Linear Equations (A)	97
Practice Worksheet 33: Linear Equations (B)	101
Measurement and Geometry	
Practice Worksheet 34: Area and Perimeter of Rectangles	102
Practice Worksheet 35: Golden Rectangles	104

Practice Worksheet 36: Functions	105
Practice Worksheet 37: Area and Circumference of Circles	107
Practice Worksheet 38: Weight	108
Practice Worksheet 39: The Pythagorean Theorem	109
Statistics, Data Analysis, and Probability	
Practice Worksheet 40: Mean, Median, Mode, Range	110
Practice Worksheet 41: Probability	111
Practice Worksheet 42: Circle Graphs	113
Practice Worksheet 43: Stem-and-Leaf Plots and Histograms	114
Practice Worksheet 44: Scatter Plots	115
Practice Worksheet 45: Box-and-Whisker Plots	116
Mathematical Reasoning	
Practice Worksheet 46: Statements Using Math Terminology	117
Extra Credit	
Extra Credit Worksheet: Extra Credit Problems	118
Chapter Five: Quizzes	119
Number Sense	
Quiz 1: Rounding Whole Numbers and Expanded Notation	120
Quiz 2: Least Common Multiple and Greatest Common Factor	121
Quiz 3: Operations with Whole Numbers	122
Quiz 4: Equivalent Fractions	123
Quiz 5: Patterns and Multiples	124
Quiz 6: Ordering Fractions and Decimals	125
Quiz 7: Rounding Decimals	126
Quiz 8: Improper Fractions, Mixed Numbers, and Reciprocals	127
Quiz 9: Adding and Subtracting Fractions	128
Quiz 10: Stacked-Bar Graph	129
Quiz 11: Multiplying and Dividing Fractions	130
Quiz 12: Rounding Fractions	131
Quiz 13: Multiplying and Dividing Decimals	132
Quiz 14: Unit Rates	133
Quiz 15: Converting Fractions, Decimals, and Percentages	134
Quiz 16: Ratios	135
Quiz 17: Percentage of Price Increase and Decrease	136
Quiz 18: Finding a Percentage of a Number	137
Quiz 19: Proportions	138
Quiz 20: Ratios and Proportions	139

Quiz 21: Factoring	140
Quiz 22: Interest, Depreciation, and Tax	141
Quiz 23: Prime Factorization	142
Quiz 24: Scientific Notation	143
Quiz 25: Ordering Integers, Fractions, and Decimals	144
Quiz 26: Operations with Integers	145
Quiz 27: Permutations and Combinations	147
Algebra and Functions	
Quiz 28: Unit Conversions	148
Quiz 29: Evaluating Algebraic Expressions	149
Quiz 30: Properties of Mathematics	150
Quiz 31: Graphing on a Number Line	151
Quiz 32: Linear Equations (A)	152
Quiz 33: Linear Equations (B)	154
Measurement and Geometry	
Quiz 34: Area of Rectangles	155
Quiz 35: Golden Rectangles	156
Quiz 36: Functions	157
Quiz 37: Area and Circumference of Circles	159
Quiz 38: Weight	160
Quiz 39: The Pythagorean Theorem	161
Statistics, Data Analysis, and Probability	
Quiz 40: Mean, Median, Mode, Range	162
Quiz 41: Probability	163
Quiz 42: Circle Graphs	165
Quiz 43: Stem-and-Leaf Plots and Histograms	166
Quiz 44: Scatter Plots	167
Quiz 45: Box-and-Whisker Plots	168
Mathematical Reasoning	
Quiz 46: Statements Using Math Terminology	169
Chapter Six: Assessment	171
Pretest/Posttest	173
Chapter Seven: Answer Keys	177
Practice Worksheets	177
Quizzes	189
Pretest/Posttest	200
Appendix: Lesson Plans	201