

Grade Six

Mathematical skill	Conceptual Framework	Subset	Curric. Lvl	Chapter
ALL CHAPTERS				
Utilize problem solving strategies	Problem Solving	Problem Solving	D	All Ch.
Utilizes mental math	Problem Solving	Problem Solving	D	All Ch.
Use estimation in problem solving	Number Sense	Estimation	D	All Ch
Create generalizations	Patterns & Functions	Logic	D/T	All Ch.
Divide whole numbers 3 digit x 2 digit and beyond	Number Sense	Computation without Calculator	D/T	Skills Handbook
Describe and compare collected data	Statistics	Data Interpretation	D/T	See Index
Analyze data to derive meaning	Statistics	Data Interpretation	D/T	See Index
THIS SKILL IS NOT FOUND IN THE TEXT				
Add and Subtract to simplify polynomial expressions	Patterns & Functions	Relationship	I	Not Found
CHAPTER I				
Recognize and name whole numbers to billions	Number Sense	Number Sets	D/T	1-1 1-2
Write whole numbers through billions	Number Sense	Number Sets	D/T	1-1 1-2
Read and write decimals to thousandths and beyond	Number Sense	Relationship	D/T	1-2
Compare and order decimals to the nearest thousandth and beyond	Number Sense	Relationship	D/T	1-3
Identify equivalent decimals	Number Sense	Relationship	D/T	1-3
Round decimals to the nearest tenth and hundredth	Number Sense	Estimation	D/T	1-4

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Multiply decimals	Number Sense	Computation without Calculator	D/T	1-6 Thru 1-8
Multiply whole numbers 3 digit x 2 digit and beyond	Number Sense	Computation without Calculator	D/T	1-8 & Skills Handbook
Divide decimals	Number Sense	Computation without Calculator	D	1-8 1-9
Apply order of operations to problems	Number Sense	Computation without Calculator	I/D	1-10
<u>CHAPTER 2</u>				
Recognize and use Commutative, Associative, and Distributive properties of addition and multiplication (numbers)	Patterns & Functions	Relationship	I/D	Ch 2
Use variables to represent missing values	Patterns & Functions	Relationship	D/T	2-2
Evaluate variable expressions through numerical substitutions	Patterns & Functions	Relationship	I	2-2 Thru 2-6
Express sequences algebraically	Patterns & Functions	Number	I	2-4
Given an arithmetic or geometric sequence, find the nth term of the sequence	Patterns & Functions	Number	I	2-4
Solve for a variable in a formula with one step	Patterns & Functions	Relationship	I	2-6
Write linear equations	Patterns & Functions	Relationship	I	2-6
Solve one step linear equations and inequalities	Patterns & Functions	Relationship	I	2-6
Write and evaluate powers (exponents – positive)	Number Sense	Computation without Calculator	D	2-8
Recognize exponents	Number Sense	Number Sets	D	2-8

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Write numbers in scientific notation	Number Sense	Number Sets	D	2-8
Properties: distributive $3*(2+4)=(3*2)+(3*4)$	Number Sense	Number Theory	D	Page 104
CHAPTER 3				2-9
Test for Divisibility (2,3,4,5,6,9,10)	Number Sense	Number Theory	D/T	3-1
Express a number in its prime factorization form	Number Sense	Number Theory	D/T	3-2
Identify prime and composite	Number Sense	Number Theory	D/T	3-2
Identify greatest common factor	Number Sense	Number Theory	D	3-3
Identify Least Common Multiple	Number Sense	Number Theory	D	3-6
Identify multiples	Number Sense	Number Theory	D/T	3-6
Identify Least Common Multiple	Number Sense	Number Theory	D	3-6
Relate and convert fractions to decimals	Number Sense	Relationship	D/T	3-8
CHAPTER 4				
Add mixed numbers	Number Sense	Computation without Calculator	D	4-4
Subtract mixed numbers	Number Sense	Computation without Calculator	D	4-5
CHAPTER 5				
Multiply fractions	Number Sense	Computation without Calculator	D	5-1 Thru 5-5
Divide Fractions	Number Sense	Computation without Calculator	I/D	5-2 Thru 5-4
Use and determine reciprocals	Number Sense	Relationship	D	5-3
Use Logical Reasoning (inductive and deductive)	Patterns & Functions	Logic	D	5-6

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CHAPTER 6				
Use ratio and proportion (rates)	Number Sense	Relationship	D	6-1. Thru 6-4
Estimate distances from a map (using a scale)	Measurement	Estimation	D/T	6-5
Use ratio and proportion (scale drawing)	Number Sense	Relationship	D	6-5
Relate and convert decimals to percents	Number Sense	Relationship	I/D	6-6
Use and determine percents (%)	Number Sense	Relationship	I	6-6 6-7 6-8
Calculate percent (%) of change (sales tax, discounts, mark-up)	Measurement	Money	I/D	6-8
Use and determine percents (%) including those greater than 100 and less than 1	Number Sense	Relationship	I	6-9 Ext. Problem
CHAPTER 7				
Based on data analysis, draw conclusions and develop convincing arguments	Statistics	Data Interpretation	I/D	Ch 7 See Index
Scatter-plot a data set in two variables and estimate a line to fit the data	Statistics	Data Organization	I	Supp w/ Chapt 7
Select an appropriate method of displaying data (line)	Statistics	Data Organization	I/D	Chapter 7
Determine measures of variation (range) using technology as appropriate	Statistics	Data Interpretation	I	7-1 7-2
Determine measures of central tendency (mean, median, mode and range) in complex problems	Statistics	Data Interpretation	D	7-1 7-2
Design various methods to gather data	Probability	Data Organization	D	7-4
Use models/simulations to generate data	Probability	Data Organization	I	7-6

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Examine basic credibility of data	Statistics	Data Interpretation	I/D	7-6 7-8
Select an appropriate method of displaying data (stem-and-leaf)	Statistics	Data Organization	I/D	7-7
Determine measures of variation (outliers of a data set) using technology as appropriate	Statistics	Data Interpretation	I	7-7 Ext Prmb
Select an appropriate method of displaying data (box and whiskers)	Statistics	Data Organization	I/D	7-7
Recognize that data can be manipulated	Statistics	Data Interpretation	I/D	7-8
CHAPTER 8				
Analyze transformations and relate properties to similarity and congruence (translation, reflection, dilation)	Geometry	Geometry	I	Ch 8 No Dilation
Identify parallel lines	Geometry	Geometry	I/D	8-1
Measure angles to nearest degree	Measurement	Angles	D/T	8-2
Identify intersecting, and perpendicular lines	Geometry	Geometry	I/D	8-2
Determine angle measures using angle relationships	Measurement	Types	I	8-2
Recognize angle relationships	Number Sense	Relationship	I	8-3
Classify angle pairs	Measurement	Angles	I/D	8-3
Determine angle measures using angle relationships	Measurement	Types	I	8-3
Classify triangles according to sides	Geometry	Geometry	D/T	8-4
Classify triangles according to angles	Geometry	Geometry	D/T	8-4
Recognize and name: special quadrilaterals and other polygons	Geometry	Geometry	D/T	8-5
Classify quadrilaterals according to sides and/or angles	Geometry	Geometry	D/T	8-5
Identify and use properties of subsets of polygons	Geometry	Geometry	I	8-5

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Use Logical Reasoning (inductive and deductive)	Patterns & Functions	Logic	D	8-6
Identify similar shapes	Geometry	Geometry	D/T	8-7
Use ratio and proportion (similarity)	Number Sense	Relationship	D	8-7
Use ratio and proportion to determine the unknown sides of similar triangles	Geometry	Geometry	I	8-7
Analyze transformations and relate properties to similarity and congruence (rotation)	Geometry	Geometry	I	8-9
CHAPTER 9				
Use formula to find perimeter of common and complex figures	Measurement	Types	D	Suppl w/ Chapter 9
Recognize metric units of measurement	Measurement	Systems	D/T	9-1
Recognize equivalence between standard and metric measures (e.g. one liter is about one quart, one km is about .6 miles)	Measurement	Systems	D	9-1
Converts units within a system (quarts to cups, mm to cm)	Measurement	Systems	I/D	9-2
Determine area of an irregular figure	Measurement	Types	I	9-4
Determine area of parallelograms	Measurement	Types	I/D	9-4
Determine area of triangle	Measurement	Types	I/D	9-4
Determine area of trapezoids	Measurement	Types	I/D	9-4
Identify and calculate radius and diameter	Measurement	Types	I/D	9-4 Chall #26
Determine the circumference of a circle	Measurement	Types	D/T	9-5
Determine area of circle	Measurement	Types	I/D	9-6
Identify and use relationships among parts of complex 2D figures (e.g. parallel sides, congruent faces)	Measurement	Types	I/D	9-5 9-6
	Geometry	Geometry	I	9-6

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Develop spatial sense: 2D, 3D (incl. Draw/construct models)	Geometry	Geometry	D/T	9-7
Measure/ determine volume of rectangular prisms	Measurement	Types	D	9-9
CHAPTER 10				
Recognize and name integers	Number Sense	Number Sets	D/T	10-1
Determine Absolute Value of an Integer	Number Sense	Number Theory	D/T	10-1
Add integers	Number Sense	Computation without Calculator	D	10-2
Multiply integers	Number Sense	Computation without Calculator	I/D	10-4
Divide Integers	Number Sense	Computation without Calculator	I/D	10-5
Identify and locate objects using the rectangular coordinate system	Geometry	Geometry	D/T	10-6
Subtract integers	Number Sense	Computation without Calculator	D	10-6
Recognize and use functions	Patterns & Functions	Relationship	D/T	10-7 Thru 10-9
Write linear equations	Patterns & Functions	Relationship	I	10-8
Graph the line representing the solution of a linear equation	Patterns & Functions	Relationship	I	10-8
CHAPTER 11				
Use lengths & areas to determine theoretical geometric probabilities	Probability	Chance	I	Suppl w/ Chapter 11
Based on data analysis, draw conclusions and develop convincing arguments	Statistics	Data Interpretation	I/D	Chapter 11
Use tables and systematic listing to count outcomes, choices and possibilities	Probability	Chance	D	11-1 Thru 11-6
Express probability as decimals and/or percents	Probability	Numerical Representation	D	11-1

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Relate/Compare theoretical probabilities	Probability	Chance	I/D	11-1
Relate/Compare experimental probability	Probability	Chance	D	11-2
Design various methods to gather data	Probability	Data Organization	D	11-2 11-3
Make predictions based on analysis	Statistics	Data Interpretation	D	11-3
Predict theoretical probability	Probability	Chance	I/D	11-3 11-4
Use tree diagrams	Probability	Chance	D	11-5
CHAPTER 12				
Write inequalities	Patterns & Functions	Relationship	I	12-2
Recognize and use \geq , \leq , and not equal to	Number Sense	Relationship	I/D	12-2
Solve one step linear equations and inequalities	Patterns & Functions	Relationship	I	12-3
Solve one step linear equations and inequalities	Patterns & Functions	Relationship	I	12-3
Recognize and name rational numbers	Number Sense	Number Sets	I	12-5