

# EVERY DAY COUNTS

## ALGEBRA READINESS © 2006

correlated to

# Illinois

## Mathematics Assessment

### Framework

### Grades 6-8



EDUCATION GROUP



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**Every Day Counts Algebra Readiness © 2006**  
**correlated to**  
**Illinois Mathematics Assessment Framework**  
**Grade 6**

**State Goal 6: Number Sense**

**Standard 6A – Representations and Ordering**

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<p><b>Read, Write, and Represent Numbers</b></p> <p>6.6.01 Read, write, recognize, and model equivalent representations of whole numbers and their place values.</p>	<p><b>Teacher’s Guide:</b> 24-28, 40-42, 52-54, 71-72, 140-141, 198, TR22</p>
<p>6.6.02 Read, write, recognize, model, and interpret numerical expressions from a given description or situation.</p>	<p><b>Teacher’s Guide:</b> 24-28, 31-33, 35-37, 40-42, 44, 47, 52-54, 61-62, 64-65, 71-72, 80-81, 94-96, 98-101, 110-114, 120-122, 131-141, 154-158, 177-180</p>
<p>6.6.03 Read, write, recognize, and model equivalent representations of fractions, including improper fractions and mixed numbers.</p>	<p><b>Teacher’s Guide:</b> 28-30, 42-43, 55-57, 91-92, 109, 125</p>
<p>6.6.04 Recognize, translate between, and apply multiple representations of decimals, fractions, percents (less than 100%), and mixed numbers (halves, quarters, fifths, and tenths).</p>	<p><b>Teacher’s Guide:</b> 28-30, 35-37, 42-43, 47, 55-57, 64-65, 72-74, 80-83, 91-92, 109, 120-122, 143-145, 166-169, 194, 199, 209, TR21</p>
<p>6.6.05 Read, write, recognize, and model equivalent representations of decimals and their place values through thousandths.</p>	<p><b>Teacher’s Guide:</b> 30, 42-43, 55-57, 72-73, 109</p>
<p>6.6.06 Represent repeated factors using exponents.</p>	<p><b>Teacher’s Guide:</b> 71-72, 96-98, 117-120, 140-141, 192, 198</p>
<p><b>Order and Compare Numbers</b></p> <p>6.6.07 Order and compare whole numbers.</p>	<p><b>Teacher’s Guide:</b> 24-30</p>
<p>6.6.08 Order and compare decimals through thousandths.</p>	<p><b>Teacher’s Guide:</b> 28-30, 42-43, 55-57, 72-73, 91-92, 109</p>

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
6.6.09 Order and compare fractions and mixed numbers having like or unlike denominators.	<b>Teacher's Guide:</b> 28-30, 42-43, 55-57, 72-73, 91-92, 109
<b>Number Line</b> 6.6.10 Identify and locate decimals, fractions, and mixed numbers on a number line.	<b>Teacher's Guide:</b> 28-29, 42-43, 55, 73, 91, 109, 125, 146
<b>Classification of Numbers</b> 6.6.11 Solve problems involving descriptions of numbers, including characteristics and relationships (e.g., odd/even, factors/multiples, greater than, less than, square numbers, primes).	<b>Teacher's Guide:</b> 24-28, 40-44, 52-54, 71-72, 88-91, 96-98, 192, 197, 198, TR21, TR22

## Standards 6B, 6C – Computation, Operations, Estimation, and Properties

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<b>Number Operations</b> 6.6.12 Solve problems and number sentences involving addition, subtraction, multiplication, and division using whole numbers.	<b>Teacher's Guide:</b> 24-28, 40-44, 52-54, 71-72, 88-91
6.6.13 Solve problems and number sentences involving addition, subtraction, and multiplication of decimals.	<b>Teacher's Guide:</b> 28-30, 55-57, 72-73, 91-92, 100, 109, 146-147
6.6.14 Solve problems involving addition and subtraction of fractions and mixed numbers, and express answers in simplest form.	<b>Teacher's Guide:</b> 28-30, 55-57, 72-73, 91-92, 109, 125
6.6.15 Identify and apply order of operations to simplify numeric expressions involving whole numbers.	<b>Teacher's Guide:</b> 33-35, 44-46, 63-64, 76-80, 116, 137-139, 193, 208
<b>Properties</b> 6.6.16 Solve problems involving the commutative, distributive, and associative properties of operations on whole numbers [e.g., $(5 - 7) - 2 = 5 - (7 - 2)$ ].	<b>Teacher's Guide:</b> 33, 43-44, 116, TR21
<b>Estimation</b> 6.6.17 Make estimates appropriate to a given situation, and analyze what effect the estimation method used has on the accuracy of results.	<b>Teacher's Guide:</b> 35-37, 42-43, 55-57, 72-73, 80-81, 93-94, 98-101, 110-114, 166-169, 177-180, 182-186, 192

## Standard 6D – Ratios, Proportions, and Percents

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<p><b>Identify and Express Ratios</b>                      6.6.18 Identify and express ratios using appropriate notation (i.e., <math>a/b</math>, <math>a</math> to <math>b</math>, <math>a:b</math>), identify equivalent ratios, and explain ratios that represent a given situation.</p>	<p><b>Teacher’s Guide:</b> 29, 42-43, 110-114, 144-145, 177-180, 189</p>
<p><b>Proportional Reasoning</b>                      6.6.19 Solve problems involving proportional relationships, including unit pricing (e.g., seven apples cost \$1.40, so nine apples cost \$1.80).</p>	<p><b>Teacher’s Guide:</b> 177-180</p>
<p><b>Percents</b>                      6.6.20 Read, write, recognize, and model percents from 0% to 100%.</p>	<p><b>Teacher’s Guide:</b> 28-30, 35-37, 42-43, 47, 55, 57, 72-73, 80-81, 91-92, 98-101, 109, 120-122, 199, TR21</p>
<p>6.6.21 Solve number sentences and problems involving percents.</p>	<p><b>Teacher’s Guide:</b> 28-30, 35-37, 42-43, 47, 55, 57, 72-73, 80-81, 91-92, 98-101, 109, 120-122, 192, 195, 198, 207, 210</p>

## State Goal 7: Measurement

### Standards 7A, 7B, 7C – Units, Tools, Estimation, and Applications

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<p><b>Measurement Tools</b>                      7.6.01 Select and use appropriate standard units and tools to measure length, mass/weight, capacity, and angles.</p>	<p><b>Teacher’s Guide:</b> 57-59, 74, 93-94, 110-114, 125, 142-145, 166-169</p>
<p><b>Area, Perimeter, and Circumference</b>                      7.6.02 Solve problems involving the perimeter and area of a triangle, parallelogram, or irregular shape using diagrams, models, and grids or by measuring or using given formulas (may include sketching a figure from its description).</p>	<p><b>Teacher’s Guide:</b> 30-33, 43-44, 60-62, 94-96, 114-116, 135-139, 197, 199, 202</p>
<p><b>Estimation</b>                      7.6.03 Compare and estimate length (including perimeter), area, volume, weight/mass, and angles (<math>0^\circ</math> to <math>180^\circ</math>) using referents.</p>	<p><b>Teacher’s Guide:</b> 30-33, 43-44, 57-59, 60-62, 74, 93-96, 110-120, 125, 135-139, 142-145, 166-169, 172-174, 186-189, 193, 197, 199, 202, 203, 204, 208</p>

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<p><b>Volume and Surface Area</b> 7.6.04 Determine the volume of a right rectangular prism using an appropriate formula or strategy.</p>	<p><b>Teacher's Guide:</b> 117-120, 186-189</p>
<p><b>Measurement Conventions</b> 7.6.05 Solve problems involving unit conversions within the same measurement system for time, length, and weight/mass, including compound units (e.g., 5 ft 5 in, 2 lbs 2 oz).</p>	<p><b>Teacher's Guide:</b> 125, 146-147, 166-169, 192, 194, 207, 209</p>

## State Goal 8: Algebra

### Standard 8A – Representations, Patterns, and Expressions

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<p><b>Patterns</b> 8.6.01 Determine a missing term in a sequence, extend a sequence, and construct and identify a rule that can generate the terms of a given sequence (e.g., 3, 6, 9, . . . is explained by the rule <math>3n</math>, for <math>n \geq 1</math>).</p>	<p><b>Teacher's Guide:</b> 30-33, 43-44, 50-52, 60-62, 68-70, 75-78, 94-96, 106-108, 114-116, 128-131, 137-139, 162-163, 177-180, 200</p>
<p><b>Write and Simplify Expressions</b> 8.6.02 Write an expression using variables to represent unknown quantities.</p>	<p><b>Teacher's Guide:</b> 30-35, 43-46, 62-64, 75-80, 87, 96-98, 108, 116-120, 131, 137-139, 140-141, 181-182, 200, TR21</p>
<p><b>Evaluate Algebraic Expressions</b> 8.6.03 Evaluate algebraic expressions with up to two whole number variable values (e.g., evaluate <math>3m + n + 3</math> when <math>m = 4</math> and <math>n = 2</math>).</p>	<p><b>Teacher's Guide:</b> 30-35, 43-46, 62-64, 75-80, 87, 96-98, 108, 116-120, 131, 137-139, 140-141, 181-182, 193, 208, TR21</p>
<p><b>Describing Change</b> 8.6.04 Determine a rule having two operations from an input-output table (e.g., multiply by 3 and add 2).</p>	<p><b>Teacher's Guide:</b> 33-35, 45-46, 63-64, 78-80, 96-98</p>
<p><b>Coordinate System</b> 8.6.05 Select a table of values that satisfies a linear equation, and recognize the ordered pairs on a rectangular coordinate system.</p>	<p><b>Teacher's Guide:</b> 33-35, 45-46, 63-64, 78-80, 96-98</p>
<p><b>Representations</b> 8.6.06 Translate between different representations (table, written, or pictorial) of whole number relationships.</p>	<p><b>Teacher's Guide:</b> 30-35, 43-46, 60-64, 78-80, 96-98, 117-118, 122-124, 164-166</p>

## Standards 8C, 8D – Writing, Interpreting, and Solving Equations

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<p><b>Write Equations and Inequalities</b> 8.6.08 Represent problems with equations and inequalities.</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-46, 60-64, 75-80, 94-97, 114-120, 137-139, 156-157, 164-166, 186-189</p>
<p><b>Solve Equations and Inequalities</b> 8.6.09 Solve for the unknown in an equation with one operation (e.g., <math>8x = 24</math>, <math>m \div 2 = 25</math>).</p>	<p><b>Teacher’s Guide:</b> 33-35, 45-46, 63-64, 77-80, 164-166</p>
<p>8.6.10 Solve word problems involving unknown quantities.</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-47, 60-64, 75-80, 94-97, 114-120, 137-141, 156-157, 164-166, 181-182, 186-189</p>

## State Goal 9: Geometry

### Standard 9A – Properties of Single Figures and Coordinate Geometry

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<p><b>Properties of Single Figures</b> 9.6.01 Classify, describe, and sketch regular and irregular two-dimensional shapes according to the number of sides, length of sides, number of vertices, and interior angles.</p>	<p><b>Teacher’s Guide:</b> 31, 50-52, 59, 68-70, 77, 86-88, 106-108, 114-116, 128-131, 135-139, 150-154, 192, 203, 204, 207</p>
<p>9.6.02 Identify and describe three-dimensional shapes (cubes, spheres, cones, cylinders, prisms, and pyramids) according to their characteristics (faces, edges, vertices).</p>	<p><b>Teacher’s Guide:</b> 117-120, 150-154, 172-174, 186-189, 209</p>
<p>9.6.03 Solve problems using properties of triangles and quadrilaterals (e.g., sum of interior angles of a quadrilateral is <math>360^\circ</math>).</p>	<p><b>Teacher’s Guide:</b> 68-79, 86-88, 106-108, 114-116, 128-131, 137-139</p>
<p><b>Circles</b> 9.6.04 Identify, describe, and sketch circles, including radius, diameter, and chord.</p>	<p><b>Teacher’s Guide:</b> 57-59, 74, 93-94, 110-114, 135-136, 203, TR22</p>
<p><b>Coordinate Geometry</b> 9.6.05 Graph, locate, identify points, describe paths, and plot figures using ordered pairs (first quadrant).</p>	<p><b>Teacher’s Guide:</b> 35, 46, 64, 79-80, 98, 118, 122-124, 164-166</p>

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<b>Transformations</b> 9.6.06 Identify, describe, and predict results of reflections, translations, and rotations of two-dimensional shapes.	<b>Teacher's Guide:</b> 86-88, 106-108, 131, 194, 203, 204, 209
<b>Lines, Segments, Rays, and Angles</b> 9.6.07 Identify and sketch parallel, perpendicular, and intersecting lines	<b>Teacher's Guide:</b> 50-52, 68-70, 87, TR21
9.6.08 Identify and sketch acute, right, and obtuse angles.	<b>Teacher's Guide:</b> 57-59, 128-130

## Standard 9B – Relationships Between and Among Multiple Figures

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<b>Relationships Between Two- and Three-Dimensional Objects</b> 9.6.09 Identify a three-dimensional object from its net.	<b>Teacher's Guide:</b> 172-174, 186-189
<b>Composing and Decomposing Figures</b> 9.6.10 Recognize which attributes (such as shape, perimeter, and area) change or don't change when plane figures are composed, decomposed, or rearranged.	<b>Teacher's Guide:</b> 26-28, 30-33, 41-42, 52-54, 60-62, 71-72, 94-96, 114-116, 137-139, 177-180
<b>Congruence and Similarity</b> 9.6.11 Identify congruent and similar figures by visual inspection.	<b>Teacher's Guide:</b> 27, 106, 152, 172-174, TR22
<b>Distance</b> 9.6.13 Determine the distance between two points on a horizontal or vertical number line.	<b>Teacher's Guide:</b> 28-30, 35, 42-43, 46, 79, 82-83, 91-92, 109, 131-135, 154-158, 164

## State Goal 10: Data Analysis, Statistics, and Probability

### Standards 10A, 10B – Data Analysis and Statistics

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<b>Read and Interpret Displays</b> 10.6.01 Read, interpret, and make predictions from data represented in a bar graph, line (dot) plot, Venn diagram (with two circles), chart/table, line graph, or circle graph.	<b>Teacher's Guide:</b> 31, 34-35, 37, 44-46, 60-64, 78-80, 82-83, 96-98, 101-103, 115, 117-120, 122-124, 142-145, 159-165, 167, 175-177, 182-185, 195, 205, 210

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
10.6.02 Compare different representations of the same data.	<b>Teacher's Guide:</b> 34-35, 45-46, 63-64, 78-80, 82-83, 96-98, 101-103, 117-120, 122-124, 142-145, 159-165, 175-177, 182-185
<b>Complete and Create Displays</b> 10.6.03 Create a bar graph, chart/table, line graph, or circle graph with common referents ( $\frac{1}{4}$ , 50%, .75) for a given set of data.	<b>Teacher's Guide:</b> 34-35, 45-46, 63-64, 78-80, 96-98, 122-124, 142-145, 159, 164-166, 167, 175-177, 195, 205, 210
<b>Statistics</b> 10.6.04 Determine the mode, range, median, and mean, given a set of data or a graph.	<b>Teacher's Guide:</b> 82-83, 101-103, 195, 205, 210

### Standard 10C – Probability

Assessment Objectives, Grade 6	Every Day Counts Algebra Readiness
<b>Probability</b> 10.6.05 Solve problems involving the probability of a simple event, including representing the probability as a fraction, decimal, or percent.	<b>Teacher's Guide:</b> 159-161, 175-177, 205, 207, TR22
<b>Outcomes and Counting Principles</b> 10.6.06 Apply the fundamental counting principle in a simple problem (e.g., How many different 3-digit numbers can be made with the digits 1, 2, and 2?).	<b>Teacher's Guide:</b> 176-177



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**Grade 7**

**State Goal 6: Number Sense**

**Standard 6A – Representations and Ordering**

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<p><b>Read, Write, and Represent Numbers</b></p> <p>6.7.01 Read, write, and recognize equivalent representations of positive powers of 10.</p>	<p><b>Teacher’s Guide:</b> 140-141</p>
<p>6.7.02 Read, write, recognize, model, and interpret integers, including translating numerical expressions.</p>	<p><b>Teacher’s Guide:</b> 63-64, 131-135, 154-158, 164-166</p>
<p>6.7.03 Recognize, translate between, and apply multiple representations of rational numbers (decimals, fractions, mixed numbers, and percents less than 100%).</p>	<p><b>Teacher’s Guide:</b> 28-30, 42-43, 55-57, 91-92, 109, 125</p>
<p>6.7.04 Represent repeated factors using exponents.</p>	<p><b>Teacher’s Guide:</b> 71-72, 96-98, 117-120, 140-141, 192, 198</p>
<p><b>Order and Compare Numbers</b></p> <p>6.7.05 Order and compare integers, terminating decimals, fractions, and mixed numbers.</p>	<p><b>Teacher’s Guide:</b> 28-30, 42-43, 55-57, 72-73, 91-92, 109, 131-135, 154-158</p>
<p><b>Number Line</b></p> <p>6.7.06 Identify and locate integers, decimals, and fractions/mixed numbers on a number line, and estimate the locations of square roots.</p>	<p><b>Teacher’s Guide:</b> 28-29, 42-43, 55, 73, 91, 96-98, 109, 125, 131-135, 146, 154-158</p>
<p><b>Classification of Numbers</b></p> <p>6.7.07 Solve problems involving descriptions of numbers, including characteristics and relationships (e.g., square numbers, prime/composite, prime factorization, greatest common factor, least common multiple).</p>	<p><b>Teacher’s Guide:</b> 24-28, 40-44, 52-54, 71-72, 88-91, 96-98, 192, 197, 198, TR21, TR22</p>

## Standards 6B, 6C – Computation, Operations, Estimation, and Properties

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<p><b>Number Operations</b></p> <p>6.7.08 Solve problems and number sentences involving addition, subtraction, multiplication, and division using integers, fractions, and decimals.</p>	<p><b>Teacher’s Guide:</b> 28-30, 55-57, 72-73, 91-92, 100, 109, 125, 131-135, 146-147, 154-158, 164-166</p>
<p>6.7.09 Identify and apply order of operations to simplify numeric expressions involving whole numbers (including exponents), fractions, and decimals.</p>	<p><b>Teacher’s Guide:</b> 33-35, 44-46, 63-64, 76-80, 116, 137-139, 193, 208</p>
<p><b>Properties</b></p> <p>6.7.10 Identify and apply the following properties of operations with rational numbers:</p> <ul style="list-style-type: none"> <li>• the commutative and associative properties for addition and multiplication;</li> <li>• the distributive property;</li> <li>• the additive and multiplicative identity properties;</li> <li>• the additive and multiplicative inverse properties; and</li> <li>• the multiplicative property of zero.</li> </ul>	<p><b>Teacher’s Guide:</b> 26-28, 33, 43-44, 65, 77, 81, 116, TR21</p>
<p>6.7.11 Demonstrate and apply the relationships between addition/subtraction and multiplication/division with rational numbers.</p>	<p><b>Teacher’s Guide:</b> 33, 77</p>
<p><b>Estimation</b></p> <p>6.7.12 Make estimates appropriate to a given situation, and analyze what effect the estimation method used has on the accuracy of results.</p>	<p><b>Teacher’s Guide:</b> 35-37, 42-43, 55-57, 72-73, 80-81, 93-94, 98-101, 110-114, 166-169, 177-180, 182-186, 192</p>

## Standard 6D – Ratios, Proportions, and Percents

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<p><b>Identify and Express Ratios</b></p> <p>6.7.14 Create and explain ratios that represent a given situation.</p>	<p><b>Teacher’s Guide:</b> 29, 42-43, 110-114, 144-145, 177-180, 189</p>
<p><b>Proportional Reasoning</b></p> <p>6.7.15 Use proportional reasoning to model and solve problems.</p>	<p><b>Teacher’s Guide:</b> 177-180</p>
<p><b>Percents</b></p> <p>6.7.16 Read, write, recognize, model, and interpret percents from 0% to 100%.</p>	<p><b>Teacher’s Guide:</b> 28-30, 35-37, 42-43, 47, 55, 57, 72-73, 80-81, 91-92, 98-101, 109, 120-122, 199, TR21</p>

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
6.7.17 Solve number sentences and problems involving fractions, decimals, and percents (e.g., 50% of 10 is the same as $\frac{1}{2}$ of 10 is the same as $0.5 \times 10$ , sales tax, tips, interest, discounts).	<b>Teacher's Guide:</b> 28-30, 35-37, 42-43, 47, 55, 57, 72-73, 80-81, 91-92, 98-101, 109, 120-122, 192, 195, 198, 207, 210

## State Goal 7: Measurement

### Standards 7A, 7B, 7C – Units, Tools, Estimation, and Applications

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<b>Measurement Tools</b> 7.7.01 Select and use appropriate standard units and tools to measure length, mass/weight, capacity, and angles. Sketch, with given specifications, line segments, angles, triangles, and quadrilaterals.	<b>Teacher's Guide:</b> 31, 57-59, 74, 93-94, 110-116, 125, 137-139, 142-145, 166-169
<b>Area, Perimeter, and Circumference</b> 7.7.02 Solve problems involving the perimeter and area of polygons and composite figures using diagrams, models, and grids or by measuring or using given formulas (may include sketching a figure from its description).	<b>Teacher's Guide:</b> 30-33, 43-44, 60-62, 94-96, 114-116, 135-139, 197, 199, 202
<b>Estimation</b> 7.7.03 Compare and estimate length (including perimeter), area, volume, weight/mass, and angles ( $0^\circ$ to $180^\circ$ ) using referents.	<b>Teacher's Guide:</b> 30-33, 43-44, 57-59, 60-62, 74, 93-96, 110-120, 125, 135-139, 142-145, 166-169, 172-174, 186-189, 193, 197, 199, 202, 203, 204, 208
<b>Volume and Surface Area</b> 7.7.04 Determine the volume and surface area of a right rectangular prism using an appropriate formula or strategy.	<b>Teacher's Guide:</b> 117-120, 186-189
<b>Measurement Conventions</b> 7.7.05 Solve problems involving unit conversions within the same measurement system for length, weight/mass, capacity, and square units (e.g., $1 \text{ ft}^2 = 144 \text{ in}^2$ ).	<b>Teacher's Guide:</b> 125, 146-147, 166-169, 192, 194, 207, 209

## State Goal 8: Algebra

### Standard 8A – Representations, Patterns, and Expressions

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<p><b>Patterns</b> 8.7.01 Determine a missing term in a sequence, extend a sequence, and construct and identify a rule that can generate the terms of an arithmetic or geometric sequence.</p>	<p><b>Teacher’s Guide:</b> 30-33, 43-44, 50-52, 60-62, 68-70, 75-78, 94-96, 106-108, 114-116, 128-131, 137-139, 162-163, 177-180, 200</p>
<p><b>Write and Simplify Expressions</b> 8.7.02 Write an expression using variables to represent unknown quantities.</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-46, 62-64, 75-80, 87, 96-98, 108, 116-120, 131, 137-139, 140-141, 181-182, 200, TR21</p>
<p>8.7.04 Recognize equivalent forms of algebraic expressions.</p>	<p><b>Teacher’s Guide:</b> 34-35, 44-46, 62-64, 77, 97, 117</p>
<p><b>Evaluate Algebraic Expressions</b> 8.7.05 Evaluate or simplify algebraic expressions with one or more integer variable values (e.g., <math>a^2 + b</math> for <math>a = 3</math> and <math>b = -4</math>).</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-46, 62-64, 75-80, 87, 96-98, 108, 116-120, 131, 137-139, 140-141, 181-182, 193, 208, TR21</p>
<p><b>Describing Change</b> 8.7.06 Determine how a change in one variable relates to a change in a second variable.</p>	<p><b>Teacher’s Guide:</b> 33-35, 45-46, 63-64, 78-80, 96-98</p>
<p><b>Coordinate System</b> 8.7.07 Represent linear equations and quantitative relationships on a rectangular coordinate system, and interpret the meaning of a specific part of a graph.</p>	<p><b>Teacher’s Guide:</b> 35, 46, 64, 79-80, 98, 118, 122-124, 164-166</p>
<p><b>Representations</b> 8.7.08 Translate between different representations (table, written, graphical, or pictorial) of whole number relationships and linear expressions.</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-46, 60-64, 78-80, 96-98, 117-118, 122-124, 164-166</p>

### Standards 8C, 8D – Writing, Interpreting, and Solving Equations

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<p><b>Write Equations and Inequalities</b> 8.7.10 Represent and analyze problems with linear equations and inequalities.</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-46, 60-64, 75-80, 94-97, 114-120, 137-139, 156-157, 164-166, 186-189</p>

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<b>Solve Equations and Inequalities</b> 8.7.11 Solve linear equations in one variable (e.g., $2x + 3 = 13$ ) and inequalities involving $<$ or $>$ (e.g., $2x < 6$ , $x + 7 > 10$ ).	<b>Teacher's Guide:</b> 33-35, 46-47, 63-64, 77-80, 164-166
8.7.12 Solve word problems involving unknown quantities.	<b>Teacher's Guide:</b> 30-35, 43-47, 60-64, 75-80, 94-97, 114-120, 137-141, 156-157, 164-166, 181-182, 186-189

## State Goal 9: Geometry

### Standard 9A – Properties of Single Figures and Coordinate Geometry

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<b>Properties of Single Figures</b> 9.7.01 Classify, describe, and sketch regular and irregular two-dimensional shapes according to the number of sides, length of sides, number of vertices, and interior angles.	<b>Teacher's Guide:</b> 31, 50-52, 59, 68-70, 77, 86-88, 106-108, 114-116, 128-131, 135-139, 150-154, 192, 203, 204, 207
9.7.02 Solve problems involving two- and three-dimensional shapes.	<b>Teacher's Guide:</b> 31, 50-52, 59, 68-70, 77, 86-88, 106-108, 114-120, 128-131, 135-139, 150-154, 172-174, 186-189, 192, 203, 204, 207, 209
9.7.03 Solve problems using properties of triangles and quadrilaterals (e.g., opposite sides of a parallelogram are congruent).	<b>Teacher's Guide:</b> 68-79, 86-88, 106-108, 114-116, 128-131, 137-139
<b>Circles</b> 9.7.04 Identify, describe, and determine the radius and diameter of a circle.	<b>Teacher's Guide:</b> 57-59, 74, 93-94, 110-114, 135-136, 203, TR22
<b>Coordinate Geometry</b> 9.7.05 Graph points and identify coordinates of points on the Cartesian coordinate plane (all four quadrants).	<b>Teacher's Guide:</b> 35, 46, 64, 79-80, 98, 118, 122-124, 164-166
<b>Transformations</b> 9.7.07 Analyze the results of a combination of transformations.	<b>Teacher's Guide:</b> 86-88, 106-108, 131, 194, 203, 204, 209
<b>Lines, Segments, Rays, and Angles</b> 9.7.08 Identify or analyze relationships of angles formed by intersecting lines.	<b>Teacher's Guide:</b> 52, 70, TR21

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
9.7.09 Identify and sketch acute, right, and obtuse angles.	<b>Teacher's Guide:</b> 57-59, 128-130

## Standard 9B – Relationships Between and Among Multiple Figures

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<b>Relationships Between Two- and Three-Dimensional Objects</b> 9.7.11 Identify a three-dimensional object from its net.	<b>Teacher's Guide:</b> 172-174, 186-189
<b>Composing and Decomposing Figures</b> 9.7.12 Recognize which attributes (such as shape, perimeter, and area) change or don't change when plane figures are composed, decomposed, or rearranged.	<b>Teacher's Guide:</b> 26-28, 30-33, 41-42, 52-54, 60-62, 71-72, 94-96, 114-116, 137-139, 177-180
<b>Congruence and Similarity</b> 9.7.13 Describe the difference between congruence and similarity.	<b>Teacher's Guide:</b> 27, 106, 152, 172-174, TR22
<b>Distance</b> 9.7.15 Determine the distance between two points on a horizontal or vertical number line.	<b>Teacher's Guide:</b> 28-30, 35, 42-43, 46, 79, 82-83, 91-92, 109, 131-135, 154-158, 164

## State Goal 10: Data Analysis, Statistics, and Probability

### Standards 10A, 10B – Data Analysis and Statistics

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<b>Read and Interpret Displays</b> 10.7.01 Read, interpret, and make predictions from data represented in a bar graph, line (dot) plot, Venn diagram (with two circles), chart/table, line graph, scatterplot, circle graph, or histogram.	<b>Teacher's Guide:</b> 31, 34-35, 37, 44-46, 60-64, 78-80, 82-83, 96-98, 101-103, 115, 117-120, 122-124, 142-145, 159-165, 167, 175-177, 182-185, 195, 205, 210
10.7.02 Compare different representations of the same data.	<b>Teacher's Guide:</b> 34-35, 45-46, 63-64, 78-80, 82-83, 96-98, 101-103, 117-120, 122-124, 142-145, 159-165, 175-177, 182-185
<b>Complete and Create Displays</b> 10.7.03 Create a bar graph, chart/table, line graph, or circle graph for a given set of data.	<b>Teacher's Guide:</b> 34-35, 45-46, 63-64, 78-80, 96-98, 122-124, 142-145, 159, 164-166, 167, 175-177, 195, 205, 210

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<b>Line of Best Fit</b> 10.7.04 Identify a reasonable approximation of the line of best fit from a set of data or a scatter plot.	<b>Teacher's Guide:</b> 182-185
<b>Statistics</b> 10.7.05 Determine and use the mode, range, median, and mean to interpret data.	<b>Teacher's Guide:</b> 82-83, 101-103, 195, 205, 210

## Standard 10C – Probability

Assessment Objectives, Grade 7	Every Day Counts Algebra Readiness
<b>Probability</b> 10.7.06 Solve problems involving the probability of a simple or compound event, including representing the probability as a fraction, decimal, or percent.	<b>Teacher's Guide:</b> 159-161, 175-177, 205, 207, TR22
<b>Outcomes and Counting Principles</b> 10.7.07 Represent all possible outcomes for simple events.	<b>Teacher's Guide:</b> 176-177

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correlated to  
**Illinois Mathematics Assessment Framework**  
**Grade 8**

**State Goal 6: Number Sense**

**Standard 6A – Representations and Ordering**

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<p><b>Read, Write, and Represent Numbers</b> 6.8.01 Read, write, and recognize equivalent representations of integer powers of 10.</p>	<p><b>Teacher's Guide:</b> 140-141</p>
<p>6.8.02 Read, write, recognize, model, and interpret integers, including translating numerical expressions.</p>	<p><b>Teacher's Guide:</b> 63-64, 131-135, 154-158, 164-166</p>
<p>6.8.03 Recognize, translate between, and apply multiple representations of rational numbers (decimals, fractions, mixed numbers, percents, and roots).</p>	<p><b>Teacher's Guide:</b> 28-30, 42-43, 55-57, 91-92, 96-98, 109, 117-120, 125</p>
<p>6.8.05 Represent repeated factors using exponents.</p>	<p><b>Teacher's Guide:</b> 71-72, 96-98, 117-120, 140-141, 192, 198</p>
<p><b>Order and Compare Numbers</b> 6.8.06 Order and compare rational numbers.</p>	<p><b>Teacher's Guide:</b> 28-30, 42-43, 55-57, 72-73, 91-92, 109, 131-135, 154-158</p>
<p><b>Number Line</b> 6.8.07 Identify and locate rational and irrational numbers (e.g., <math>\pi</math>, <math>\sqrt{2}</math>, <math>\sqrt{5}</math>) on a number line.</p>	<p><b>Teacher's Guide:</b> 110-114, 135-136</p>
<p><b>Classification of Numbers</b> 6.8.08 Solve problems involving descriptions of numbers, including characteristics and relationships (e.g., exponents, roots, prime/composite, prime factorization, greatest common factor, least common multiple).</p>	<p><b>Teacher's Guide:</b> 24-28, 40-44, 52-54, 71-72, 88-91, 96-98, 117-120, 192, 197, 198, TR21, TR22</p>

## Standards 6B, 6C – Computation, Operations, Estimation, and Properties

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<p><b>Number Operations</b></p> <p>6.8.09 Solve problems and number sentences involving addition, subtraction, multiplication, and division using rational numbers, exponents, and roots.</p>	<p><b>Teacher’s Guide:</b> 28-30, 55-57, 72-73, 91-92, 96-97, 100, 109, 117-120, 125, 131-135, 146-147, 154-158, 164-166</p>
<p>6.8.10 Identify and apply order of operations to simplify numeric expressions involving integers (including exponents and roots), fractions, and decimals.</p>	<p><b>Teacher’s Guide:</b> 33-35, 44-46, 63-64, 76-80, 116, 137-139, 193, 208</p>
<p><b>Properties</b></p> <p>6.8.11 Identify and apply the following properties of operations with rational numbers:</p> <ul style="list-style-type: none"> <li>• the commutative and associative properties for addition and multiplication;</li> <li>• the distributive property;</li> <li>• the additive and multiplicative identity properties;</li> <li>• the additive and multiplicative inverse properties; and</li> <li>• the multiplicative property of zero.</li> </ul>	<p><b>Teacher’s Guide:</b> 26-28, 33, 43-44, 65, 77, 81, 116, TR21</p>
<p>6.8.12 Describe the effect of multiplying and dividing by numbers, including the effect of multiplying or dividing a rational number by:</p> <ul style="list-style-type: none"> <li>• a number less than zero;</li> <li>• zero;</li> <li>• a number between zero and one; and</li> <li>• a number greater than one.</li> </ul>	<p><b>Teacher’s Guide:</b> 28-30, 42-43, 55-57, 72-73, 91-92, 109, 142-145, 164-169</p>
<p><b>Estimation</b></p> <p>6.8.13 Select, use, and justify appropriate operations, methods, and tools to compute or estimate with rational numbers. Verify solutions and determine the reasonableness of results.</p>	<p><b>Teacher’s Guide:</b> 35-37, 42-43, 55-57, 72-73, 80-81, 93-94, 98-101, 110-114, 166-169, 177-180, 182-186, 192</p>

## Standard 6D – Ratios, Proportions, and Percents

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<p><b>Identify and Express Ratios</b></p> <p>6.8.15 Use ratios to describe problem situations.</p>	<p><b>Teacher’s Guide:</b> 29, 42-43, 110-114, 144-145, 177-180, 189</p>

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<b>Proportional Reasoning</b> 6.8.16 Use proportional reasoning to model and solve problems.	<b>Teacher's Guide:</b> 177-180
<b>Percents</b> 6.8.17 Read, write, recognize, model, and interpret percents, including those less than 1% and greater than 100%.	<b>Teacher's Guide:</b> 28-30, 35-37, 42-43, 47, 55, 57, 72-73, 80-81, 91-92, 98-101, 109, 120-122, 199, TR21
6.8.18 Solve number sentences and problems involving fractions, decimals, and percents (e.g., percent increase and decrease, interest rates, tax, discounts, tips).	<b>Teacher's Guide:</b> 28-30, 35-37, 42-43, 47, 55, 57, 72-73, 80-81, 91-92, 98-101, 109, 120-122, 192, 195, 198, 207, 210

## State Goal 7: Measurement

### Standards 7A, 7B, 7C – Units, Tools, Estimation, and Applications

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<b>Measurement Tools</b> 7.8.01 Select and use appropriate standard units and tools to solve measurement problems, including measurements of polygons and circles.	<b>Teacher's Guide:</b> 31, 57-59, 74, 93-94, 110-116, 125, 137-139, 142-145, 166-169
<b>Area, Perimeter, and Circumference</b> 7.8.02 Solve problems involving perimeter/circumference and area of polygons, circles, and composite figures using diagrams, models, and grids or by measuring or using given formulas (may include sketching a figure from its description).	<b>Teacher's Guide:</b> 30-33, 43-44, 60-62, 94-96, 110-116, 135-139, 197, 199, 202
<b>Estimation</b> 7.8.03 Compare and estimate length (including perimeter/circumference), area, volume, weight/mass, and angles ( $0^\circ$ to $360^\circ$ ) using referents.	<b>Teacher's Guide:</b> 30-33, 43-44, 57-59, 60-62, 74, 93-96, 110-120, 125, 135-139, 142-145, 166-169, 172-174, 186-189, 193, 197, 199, 202, 203, 204, 208
<b>Volume and Surface Area</b> 7.8.04 Solve problems involving the volume or surface area of a right rectangular prism, right circular cylinder, or composite shape using an appropriate formula or strategy.	<b>Teacher's Guide:</b> 117-120, 172-174, 186-189

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<p><b>Measurement Conventions</b>            7.8.05 Solve problems involving unit conversions within the same measurement system for length, weight/mass, capacity, square units, and measures expressed as rates (e.g., converting feet/second to yards/minute).</p>	<p><b>Teacher’s Guide:</b> 125, 146-147, 166-169, 192, 194, 207, 209</p>

## State Goal 8: Algebra

### Standard 8A – Representations, Patterns, and Expressions

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<p><b>Patterns</b>            8.8.01 Analyze, extend, and create sequences or linear functions, and determine algebraic expressions to describe the <math>n^{\text{th}}</math> term of a sequence.</p>	<p><b>Teacher’s Guide:</b> 30-33, 43-44, 50-52, 60-62, 68-70, 75-78, 94-96, 106-108, 114-116, 128-131, 137-139, 162-163, 177-180, 200</p>
<p><b>Write and Simplify Expressions</b>            8.8.02 Write an expression using variables to represent unknown quantities.</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-46, 62-64, 75-80, 87, 96-98, 108, 116-120, 131, 137-139, 140-141, 181-182, 200, TR21</p>
<p>8.8.03 Simplify algebraic expressions.</p>	<p><b>Teacher’s Guide:</b> 44, 97, 117</p>
<p>8.8.04 Recognize and generate equivalent forms of algebraic expressions.</p>	<p><b>Teacher’s Guide:</b> 34-35, 44-46, 62-64, 77, 97, 117</p>
<p><b>Evaluate Algebraic Expressions</b>            8.8.05 Evaluate or simplify algebraic expressions with one or more rational variable values (e.g., <math>3a^2 - b</math> for <math>a = 3</math> and <math>b = 7</math>).</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-46, 62-64, 75-80, 87, 96-98, 108, 116-120, 131, 137-139, 140-141, 181-182, 193, 208, TR21</p>
<p><b>Describing Change</b>            8.8.06 Recognize, describe, and extend patterns using rate of change.</p>	<p><b>Teacher’s Guide:</b> 33-35, 45-46, 63-64, 78-80, 96-98</p>
<p><b>Coordinate System</b>            8.8.07 Represent linear equations and quantitative relationships on a rectangular coordinate system, and interpret the meaning of a specific part of a graph.</p>	<p><b>Teacher’s Guide:</b> 35, 46, 64, 79-80, 98, 118, 122-124, 164-166</p>
<p><b>Representations</b>            8.8.08 Translate between different representations (table, written, graphical, or pictorial) of whole number relationships and linear expressions.</p>	<p><b>Teacher’s Guide:</b> 30-35, 43-46, 60-64, 78-80, 96-98, 117-118, 122-124, 164-166</p>

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
8.8.09 Interpret the meaning of slope and intercepts in linear situations.	<b>Teacher's Guide:</b> 46, 164-166

## Standards 8C, 8D – Writing, Interpreting, and Solving Equations

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<b>Write Equations and Inequalities</b> 8.8.11 Represent and analyze problems with linear equations and inequalities.	<b>Teacher's Guide:</b> 30-35, 43-46, 60-64, 75-80, 94-97, 114-120, 137-139, 156-157, 164-166, 186-189
<b>Solve Equations and Inequalities</b> 8.8.12 Solve linear equations and inequalities in one variable over the rational numbers (e.g., $5x + 7 = -13$ , $4x - 3 = -7x + 8$ , $-2x + 3 > -5$ ).	<b>Teacher's Guide:</b> 33-35, 46-47, 63-64, 77-80, 164-166
8.8.13 Solve word problems involving unknown quantities.	<b>Teacher's Guide:</b> 30-35, 43-47, 60-64, 75-80, 94-97, 114-120, 137-141, 156-157, 164-166, 181-182, 186-189

## State Goal 9: Geometry

### Standard 9A – Properties of Single Figures and Coordinate Geometry

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<b>Properties of Single Figures</b> 9.8.01 Solve problems involving two- and three-dimensional shapes	<b>Teacher's Guide:</b> 31, 50-52, 59, 68-70, 77, 86-88, 106-108, 114-120, 128-131, 135-139, 150-154, 172-174, 186-189, 192, 203, 204, 207, 209
9.8.02 Solve problems that require knowledge of triangle and quadrilateral properties (e.g., triangle inequality).	<b>Teacher's Guide:</b> 68-79, 86-88, 106-108, 114-116, 128-131, 137-139
<b>Circles</b> 9.8.04 Identify, describe, and determine the radius, diameter, and circumference of a circle and their relationship to each other and to pi.	<b>Teacher's Guide:</b> 57-59, 74, 93-94, 110-114, 135-136, 203, TR22
<b>Coordinate Geometry</b> 9.8.05 Graph points, and identify coordinates of points on the Cartesian coordinate plane (all four quadrants).	<b>Teacher's Guide:</b> 35, 46, 64, 79-80, 98, 118, 122-124, 164-166

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<b>Transformations</b> 9.8.07 Analyze the results of a combination of transformations, and determine a different transformation that could produce the same result	<b>Teacher's Guide:</b> 86-88, 106-108, 131, 194, 203, 204, 209
<b>Lines, Segments, Rays, and Angles</b> 9.8.08 Identify or analyze relationships of angles formed by intersecting lines (including parallel lines cut by a transversal) and angles formed by radii of a circle.	<b>Teacher's Guide:</b> 57-59, 74, 106-108

## Standard 9B – Relationships Between and Among Multiple Figures

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<b>Relationships Between Two- and Three-Dimensional Objects</b> 9.8.10 Identify front, side, and top views of a three-dimensional solid built with cubes.	<b>Teacher's Guide:</b> 172-174, 186-189
<b>Congruence and Similarity</b> 9.8.11 Solve problems involving congruent and similar figures.	<b>Teacher's Guide:</b> 27, 106, 152, 172-174, TR22
<b>Distance</b> 9.8.12 Relate absolute value to distance on the number line.	<b>Teacher's Guide:</b> 132-133, 155-157

## State Goal 10: Data Analysis, Statistics, and Probability

### Standards 10A, 10B – Data Analysis and Statistics

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<b>Read and Interpret Displays</b> 10.8.01 Read, interpret (including possible misleading characteristics), and make predictions from data represented in a bar graph, line (dot) plot, Venn diagram (with two or three circles), chart/table, line graph, scatterplot, circle graph, stem-and-leaf plot, or histogram.	<b>Teacher's Guide:</b> 31, 34-35, 37, 44-46, 60-64, 78-80, 82-83, 96-98, 101-103, 115, 117-120, 122-124, 142-145, 159-165, 167, 175-177, 182-185, 195, 205, 210
10.8.02 Compare and contrast the effectiveness of different representations of the same data.	<b>Teacher's Guide:</b> 34-35, 45-46, 63-64, 78-80, 82-83, 96-98, 101-103, 117-120, 122-124, 142-145, 159-165, 175-177, 182-185

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<p><b>Complete and Create Displays</b>            10.8.03 Create a bar graph, chart/table, line graph, or circle graph and solve a problem using the data in the graph for a given set of data.</p>	<p><b>Teacher's Guide:</b> 34-35, 45-46, 63-64, 78-80, 96-98, 122-124, 142-145, 159, 164-166, 167, 175-177, 195, 205, 210</p>
<p><b>Line of Best Fit</b>            10.8.04 Identify or draw a reasonable approximation of the line of best fit from a set of data or a scatter plot, and use the line to make predictions.</p>	<p><b>Teacher's Guide:</b> 182-185</p>
<p><b>Statistics</b>            10.8.05 Analyze and apply measures of central tendency (mode, range, median, and mean) in problem-solving situations.</p>	<p><b>Teacher's Guide:</b> 82-83, 101-103, 195, 205, 210</p>

### Standard 10C – Probability

Assessment Objectives, Grade 8	Every Day Counts Algebra Readiness
<p><b>Probability</b>            10.8.06 Solve problems involving the probability of an event composed of repeated trials, compound events (including independent events), or future events with or without replacement.</p>	<p><b>Teacher's Guide:</b> 159-161, 175-177, 205, 207, TR22</p>
<p><b>Outcomes and Counting Principles</b>            10.8.07 Represent all possible outcomes (sample space) for simple or compound events (e.g., tables, grids, tree diagrams).</p>	<p><b>Teacher's Guide:</b> 176-177</p>



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