

# Bridges Grade 3 Correlations to NCTM Curriculum Focal Points

NUMBER AND OPERATIONS AND ALGEBRA				
Developing understandings of multiplication & division and strategies for basic multiplication facts & related division facts				
Students understand the meanings of multiplication and division of whole numbers through the use of representations (e.g., equal-sized groups, arrays, area models, and equal “jumps” on number lines for multiplication, and successive subtraction, partitioning, and sharing for division). They use properties of addition and multiplication (e.g., commutativity, associativity, and the distributive property) to multiply whole numbers and apply increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving basic facts. By comparing a variety of solution strategies, students relate multiplication and division as inverse operations.				
Focal Points	Bridges	Number Corner	Bridges Supplement	Assessments
Represent and apply the concept of multiplication as repeated addition.	Unit 4, Sessions 2, 3, 4, 9, 12, 14, 16	November Numbers Grid	Set A2 Number & Operations: Basic Multiplication & Division, Independent Worksheets 1 & 8 Bridges Practice Book, pages 14, 16	
Represent and apply the concept of division as repeated subtraction and forming equal groups.	Unit 4, Sessions 2, 4, 9, 12, 23		Set A2 Number & Operations: Basic Multiplication & Division, Independent Worksheets 1 & 8 Bridges Practice Book, page 72	
Apply models of multiplication (e.g., equal-sized groups, arrays, area models, equal “jumps” on number lines and hundreds charts) and division (e.g., repeated subtraction, partitioning, and sharing) to solve problems.	Unit 4, Sessions 2–9, 12, 14–16, 18–19, 22 Unit 4, page 465 (HC 13)	October Calendar Grid October Magnetic Board December Computational Fluency February Computational Fluency Number Corner Student Book, pages 14, 58	Set A2 Number & Operations: Basic Multiplication & Division, Activities 1 & 2, and Independent Worksheets 1, 3, 5, 6 & 8 Bridges Practice Book, pages 14, 16, 24, 25, 61, 63, 65, 67, 68, 69, 71, 72, 73, 75, 91, 93	Informal Unit 4, Session 9 (Work Sample) Bridges Practice Book, pages 14, 16, 24, 25, 61, 63, 65, 67, 68, 69, 71, 72, 73, 75, 91, 93
				Formal Unit 4, Sessions 1 & 24 (Unit Pre- and Post-Assessments)
Apply increasingly sophisticated strategies based on the number properties (e.g., place value, commutative, associative, distributive, identity, and zero) to solve multiplication and division problems involving basic facts.	Unit 4, Sessions 5–10, 15, 17-18, 20, 22, 23 Unit 4, pages 495, 548, 564 (HC 14, 16 & 17) Unit 5, page 603 (HC 18) Unit 7, pages 833, 855–856 (HC 27 & 28)	September Numbers Grid October Calendar Grid October Magnetic Board November Numbers Grid December Computational Fluency February–May Computational Fluency	Set A1 Number & Operations: Equal Expressions, Activity 1 and Independent Worksheets 1 & 2 Set A2 Number & Operations: Basic Multiplication & Division, Activities 1 & 2 and Independent Worksheets 1, 3, 4, 5, 6, 7, 8 Bridges Practice Book, pages 71, 73, 74, 78, 79, 82, 118, 120, 121, 122, 124, 127, 129, 136, 138	Bridges Practice Book, pages 71, 73, 74, 78, 79, 82, 118, 120, 121, 122, 124, 127, 129, 136, 138
				Formal Unit 4, Sessions 1 & 24 (Unit Pre- and Post-Assessments)

## Bridges Grade 3 Correlations to NCTM Curriculum Focal Points (cont.)

### NUMBER AND OPERATIONS AND ALGEBRA

#### Developing understandings of multiplication & division and strategies for basic multiplication facts & related division facts

Students understand the meanings of multiplication and division of whole numbers through the use of representations (e.g., equal-sized groups, arrays, area models, and equal “jumps” on number lines for multiplication, and successive subtraction, partitioning, and sharing for division). They use properties of addition and multiplication (e.g., commutativity, associativity, and the distributive property) to multiply whole numbers and apply increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving basic facts. By comparing a variety of solution strategies, students relate multiplication and division as inverse operations.

Focal Points	Bridges	Number Corner	Bridges Supplement	Assessments
Apply the inverse relationship between multiplication and division (e.g., $5 \times 6 = 30$ , $30 \div 6 = 5$ ) and the relationship between multiples and factors.	Unit 4, Sessions 4, 9, 13, 18, 19, 23	November Numbers Grid March Computational Fluency Number Corner Student Book, page 54	Set A1 Number & Operations: Equal Expressions, Independent Worksheets 1 & 2 Set A2 Number & Operations: Basic Multiplication & Division, Independent Worksheets 1, 3, 4, 5, 7 & 8 Bridges Practice Book, pages 67, 69, 72, 75, 77, 83	Informal Bridges Practice Book, pages 67, 69, 72, 75, 77, 83

### NUMBER AND OPERATIONS

#### Developing an understanding of fractions and fraction equivalence

Students develop an understanding of the meanings and uses of fractions to represent parts of a whole, parts of a set, or points or distances on a number line. They understand that the size of a fractional part is relative to the size of the whole, and they use fractions to represent numbers that are equal to, less than, or greater than 1. They solve problems that involve comparing and ordering fractions by using models, benchmark fractions, or common numerators or denominators. They understand and use models, including the number line, to identify equivalent fractions.

Focal Points	Bridges	Number Corner	Bridges Supplement	Assessments
Represent common fractions (e.g., halves, thirds, fourths, tenths) as equal parts of a whole, parts of a set, or points or distances on a number line.	Unit 3, Sessions 11–12 Unit 6, Sessions 6–9, 11–18	December - February Magnetic Board April Calendar Grid May Calendar Grid Number Corner Student Book, page 29	Set A5 Number & Operations: Fractions, Activity 1 and Independent Worksheets 1 & 2 Bridges Practice Book, pages 10, 103, 105, 109, 112, 114, 125, 133	Informal Bridges Practice Book, pages 10, 103, 105, 109, 112, 114, 125, 133 Formal Unit 6, Sessions 2 & 18 (Unit Pre- and Post-Assessments)
Recognize and demonstrate that sizes of fractional parts are relative to the size of the whole.		December Magnetic Board January Magnetic Board	Bridges Practice Book, page 115	

## Bridges Grade 3 Correlations to NCTM Curriculum Focal Points (cont.)

NUMBER AND OPERATIONS				
Developing an understanding of fractions and fraction equivalence				
Students develop an understanding of the meanings and uses of fractions to represent parts of a whole, parts of a set, or points or distances on a number line. They understand that the size of a fractional part is relative to the size of the whole, and they use fractions to represent numbers that are equal to, less than, or greater than 1. They solve problems that involve comparing and ordering fractions by using models, benchmark fractions, or common numerators or denominators. They understand and use models, including the number line, to identify equivalent fractions.				
Focal Points	Bridges	Number Corner	Bridges Supplement	Assessments
Use fractions to represent numbers that are equal to, less than, or greater than one.	Unit 6, Sessions 6-9, 11-18 Unit 6, page 759 (HC 24)	December Magnetic Board January Magnetic Board April Calendar Grid May Calendar Grid	Set A5 Number & Operations: Fractions, Activity 1 and Independent Worksheets 1 & 2 Bridges Practice Book, pages 10, 103, 105, 109, 110, 112, 114, 116, 133	Informal Bridges Practice Book, pages 10, 103, 105, 109, 110, 112, 114, 116, 133
				Formal Unit 6, pages 695-699, 774-779 (Pre- and Post-Assessments)
Solve problems that involve comparing and ordering fractions by using models, benchmarks (0, $\frac{1}{2}$ , 1), or common numerators or denominators.	Unit 6, Sessions 5, 6-9, 12-15	December Magnetic Board January Magnetic Board	Set A5 Number & Operations: Fractions, Activity 1 Bridges Practice Book, pages 30, 103, 108, 109, 110, 112, 114, 116, 125, 128, 133	Informal Bridges Practice Book, pages 30, 103, 108, 109, 110, 112, 114, 116, 125, 128, 133
				Formal Unit 6, Sessions 2 & 18 (Unit Pre- and Post-Assessments)
Identify equivalent fractions using models, including the number line.	Unit 6, Session 6, 8, 9, 13-14	December Magnetic Board January Magnetic Board April Calendar Grid May Calendar Grid	Set A5 Number & Operations: Fractions, Activity 1 Bridges Practice Book, pages 105, 112, 113	Informal Bridges Practice Book, pages 105, 112, 113
				Formal Number Corner Teacher's Guide, pages 322-324 (Checkup 4)

## Bridges Grade 3 Correlations to NCTM Curriculum Focal Points (cont.)

GEOMETRY				
Describing and analyzing properties of two-dimensional shapes				
Students describe, analyze, compare, and classify two-dimensional shapes by their sides and angles and connect these attributes to definitions of shapes. Students investigate, describe, and reason about decomposing, combining, and transforming polygons to make other polygons. Through building, drawing, and analyzing two-dimensional shapes, students understand attributes and properties of two-dimensional space and the use of the attributes and properties in solving problems, including applications involving congruence and symmetry.				
Focal Points	Bridges	Number Corner	Bridges Supplement	Assessments
Identify right angles in two-dimensional shapes and determine if angles are greater than or less than a right angle (obtuse and acute).	Unit 3, Sessions 3, 9 Unit 3, pages 401-402 (Work Place 3C) Unit 3, page 423 (Home Connection 12) Student Work Place Book, pages 57-58	November Calendar Grid Number Corner Student Book, page 22	Set C2 Geometry: Triangles & More, Activities 1 & 2 and Independent Worksheets 1, 2 & 3 Bridges Practice Book, pages 41, 43, 55, 56, 58, 140	Informal Unit 3, Session 9 (Instructional Considerations for Geoboard Polygons) Bridges Practice Book, pages 41, 43, 55, 56, 58, 140  Formal Unit 3, pages 421-426 (Constructed Response Assessment)
Identify, describe, analyze, compare, and informally classify triangles by their sides and angles.	Unit 3, Session 13		Set C2 Geometry: Triangles & More, Activity 2 and Independent Worksheets 2, 3 & 4	Formal Unit 3, pages 421-426 (Constructed Response Assessment)
Identify, describe, analyze, compare, and classify quadrilaterals (square, rectangle, parallelogram, rhombus, and trapezoid) by their sides and angles.	Unit 3, Sessions 2–4, 8–9, 12-13 Unit 7, Sessions 3–7 Student Work Place Book, pages 57-58	November Calendar Grid March Calendar Grid April Calendar Grid	Bridges Practice Book, pages 45, 139, 140	Informal Bridges Practice Book, pages 45, 139, 140  Formal Unit 3, Session 15 (Unit Post-Assessment, Ten Objects in a Bag)
Identify, describe, and compare pentagons, hexagons, and octagons by the number of sides or angles.	Unit 3, Sessions 2, 4, 8, 12-13 Unit 3 pages 360-362 (WP 3A)	November Calendar grid		
Investigate, describe, and reason about the results of decomposing, combining, and transforming polygons to make other polygons.	Unit 3, Sessions 4-6, 11-12 Unit 3, pages 376-378 (WP 3B) Unit 6, Sessions 11-12			Formal Unit 3, pages 421-426 (Constructed Response Assessment)
Build, draw, and analyze two-dimensional shapes to understand attributes and properties of two-dimensional space.	Unit 3, Sessions 2-6, 8-9, 11-13 Student Work Place Book, pages 57-58		Bridges Practice Book, pages 139, 140	

## Bridges Grade 3 Correlations to NCTM Curriculum Focal Points (cont.)

GEOMETRY				
Describing and analyzing properties of two-dimensional shapes				
Students describe, analyze, compare, and classify two-dimensional shapes by their sides and angles and connect these attributes to definitions of shapes. Students investigate, describe, and reason about decomposing, combining, and transforming polygons to make other polygons. Through building, drawing, and analyzing two-dimensional shapes, students understand attributes and properties of two-dimensional space and the use of the attributes and properties in solving problems, including applications involving congruence and symmetry.				
Focal Points	Bridges	Number Corner	Bridges Supplement	Assessments
Use the attributes and properties of two-dimensional shapes in solving problems, including applications involving congruence and symmetry.	Unit 3, Sessions 2–4, 6–7, 9, 11–13 Unit 3, pages 416–417 (WP 3D) Student Work Place Book, pages 57–58 Unit 6, Session 12		Set C1 Geometry: Parallel, Perpendicular & Intersecting, Activity 1 and Independent Worksheets 1 & 2 Bridges Practice Book, pages 42, 53, 50, 58, 60, 106, 139, 140	Informal Unit 3, Session 9 (Instructional Considerations for Geoboard Polygons) Bridges Practice Book, pages 42, 53, 50, 58, 60, 106, 139, 140
				Formal Unit 3, Session 15 (Unit Post-Assessment, Ten Objects in a Bag)

# Bridges Grade 3 Correlations to Focal Points Connections

## ALGEBRA

Understanding properties of multiplication and the relationship between multiplication and division is a part of algebra readiness that develops at grade 3. The creation and analysis of patterns and relationships involving multiplication and division should occur at this grade level. Student build a foundation for later understanding of functional relationships by describing relationships in context with such statements as, “The number of legs is 4 times the number of chairs.”

Connections	Bridges	Number Corner	Bridges Supplement	Assessments
Understand properties of multiplication and their relationship to division.	Unit 4, Sessions 4, 9, 13, 23	March Computational Fluency Number Corner Student Book, page 54	Set A2 Number & Operations: Basic Multiplication & Division, Independent Worksheets 1, 3, 4, 5, 7 & 8 Bridges Practice Book, pages 67, 69, 75, 77, 83	
Create and analyze patterns that involve whole number operations, including multiplication and division.	Unit 1, Sessions 4, 7 Unit 1, pages 86–87 (WP 1B) Unit 2, Session 5 Unit 4, Sessions 2, 6, 9–10, 12, 15, 18–20 Unit 5, Sessions 7–8 Unit 7, Session 8	September Numbers Grid September Magnetic Board October–April Calendar Grid December Numbers Grid February Numbers Grid Number Corner Student Book pages 6, 14, 27, 42		Informal Number Corner Student Book pages 6, 14, 27, 42)
				Formal Unit 4, pages 441-444, 562-569 (Pre- and Post Assessment)
Describe relationships such as “The number of legs is four times the number of chairs.”	Unit 1, Sessions 4, 7 Unit 5, Sessions 7–8 Unit 7, Session 8			

## Bridges Grade 3 Correlations to Focal Points Connections (cont.)

<b>MEASUREMENT</b>				
Students in grade 3 strengthen their understanding of fractions as they confront problems in linear measurement that call for more precision than the whole unit allowed them in their work in grade 2. They develop their facility in measuring with fractional parts of linear units. Students develop measurement concepts and skills through experiences in analyzing attributes and properties of two-dimensional objects. They form an understanding of perimeter as a measurable attribute and select appropriate units, strategies, and tools to solve problems involving perimeter.				
<b>Connections</b>	<b>Bridges</b>	<b>Number Corner</b>	<b>Bridges Supplement</b>	<b>Assessments</b>
Measure with fractional parts of linear units.	Unit 1, page 115 (Work Place 1E Challenge) Unit 2, page 250 (Work Place 2C Challenge) Unit 6, Session 14		Set A5 Number & Operations, Independent Worksheets 1 & 2	
Understand perimeter as a measurable attribute and select appropriate units, strategies, and tools to find the perimeter of polygons.	Unit 5, Sessions 7–8	March Data Collector Number Corner Student Book, page 53	Bridges Practice Book, pages 44, 46, 48, 54	Informal Bridges Practice Book, pages 44, 46, 48, 54
				Formal Number Corner Teacher's Guide, pages 266–268 (Checkup 3)
Solve problems involving perimeter.	Unit 3, Sessions 2–4, 9, 11–12 Unit 7, Session 7		Bridges Practice Book, pages 50, 60, 106, 130, 134, 135	Informal Bridges Practice Book, pages 50, 60, 106, 130, 134, 135
				Formal Unit 3, Session 15 (Unit Post-Assessment, Ten Objects in a Bag)

<b>DATA ANALYSIS</b>				
Addition, subtraction, multiplication, and division of whole numbers come into play as students construct and analyze frequency tables, bar graphs, picture graphs, and line plots and use them to solve problems.				
<b>Connections</b>	<b>Bridges</b>	<b>Number Corner</b>	<b>Bridges Supplement</b>	<b>Assessments</b>
Construct and analyze frequency tables, bar graphs, picture graphs, and line plots and use them to solve problems.	Unit 1, Sessions 2, 3, 20 Unit 2, pages 227–229 (Analyzing Outcomes for Blast Off to Space) Unit 3, Session 6 Unit 4, Sessions 3, 17 Unit 6, Sessions 9, 16 Unit 6, page 775 (Home Connection 25) Unit 8, Sessions 11, 13, 15	October Data Collector December Data Collector February Data Collector April Data Collector Number Corner Student Book, pages 15–16, 28, 49	Set E1 Data Analysis: Graphs, Activities 1, 2 & 3 and Independent Worksheets 1 & 2 Bridges Practice Book, pages 2, 4, 6, 15, 102, 132	Informal Bridges Practice Book, pages 2, 4, 6, 15, 102, 132
				Formal Unit 6, Sessions 2 & 18 (Unit Pre- and Post-Assessment) Number Corner Teacher's Guide, pages 200–202 (Checkup 2)

## Bridges Grade 3 Correlations to Focal Points Connections (cont.)

NUMBER AND OPERATIONS				
Building on their work in grade 2, students extend their understanding of place value to numbers up to 10,000 in various contexts. Students also apply this understanding to the task of representing numbers in different equivalent forms (e.g., expanded notation). They develop their understanding of numbers by building their facility with mental computation (addition and subtraction in special cases, such as $2,500 + 6,000$ and $9,000 - 5,000$ ), by using computational estimation, and by performing paper-and-pencil computations.				
Connections	Bridges	Number Corner	Bridges Supplement	Assessments
Read, write, compare, order, and represent whole numbers to 10,000 using numbers, words and symbols	Unit 2, Sessions 10, 13–14, 18, 25–26 Unit 5, Sessions 6, 14–16, 18–19 Unit 6, page 737 (Home Connection 23)	September Clocks, Coins & Bills November Computational Fluency December–April Numbers Grid January Computational Fluency Number Corner Student Book, pages 21, 27, 36–37, 39, 42, 50	Set A4 Number & Operations: Place Value, Activity 1 and Independent Worksheets 1–4 Bridges Practice Book, pages 3, 19, 23, 97, 131	Informal Bridges Practice Book, pages 3, 19, 23, 97, 131
Round whole numbers through 10,000 to the nearest ten, hundred, and thousand.	Unit 2, Session 16 Unit 5, Sessions 4–5, 16, 18 Unit 5, page 628 (Home Connection 19)	January Computational Fluency	Set A3 Number & Operations: Multi-Digit Addition & Subtraction, Activity 5 and Independent Worksheet 4 Bridges Practice Book, pages 85, 86, 87, 89, 91, 93, 95, 99, 131	Informal Bridges Practice Book, pages 85, 86, 87, 89, 91, 93, 95, 99, 131
Add and subtract multi-digit numbers using mental computation and/or estimation.	Unit 2, Sessions 17, 22, 24, 27 Unit 2, page 337 (Home Connection 9) Unit 5, Sessions 2, 5, 6, 10, 12, 13, 17, 19 Unit 6, Session 1	November Magnetic Board January Coins, Clocks & Bills March Magnetic Board May Coins, Clocks & Bills Number Corner Student Book, pages 35, 40, 62	Set A6 Number & Operations: Estimating to Add & Subtract, Independent Worksheets 1, 2 & 3 Bridges Practice Book, pages 39, 87, 89, 90, 92, 93, 96, 97, 99, 100, 111, 113, 126	Informal Bridges Practice Book, pages 39, 87, 89, 90, 92, 93, 96, 97, 99, 100, 111, 113, 126
				Formal Unit 2, Sessions 12 & 30 (Unit Pre- and Post-Assessment) Unit 5, Sessions 1 & 20 (Unit Pre- and Post-Assessment) Number Corner Teacher's Guide, pages 200–202 and 266–268 (Checkups 2 & 3)

## Bridges Grade 3 Correlations to Focal Points Connections (cont.)

NUMBER AND OPERATIONS				
Building on their work in grade 2, students extend their understanding of place value to numbers up to 10,000 in various contexts. Students also apply this understanding to the task of representing numbers in different equivalent forms (e.g., expanded notation). They develop their understanding of numbers by building their facility with mental computation (addition and subtraction in special cases, such as $2,500 + 6,000$ and $9,000 - 5,000$ ), by using computational estimation, and by performing paper-and-pencil computations.				
Connections	Bridges	Number Corner	Bridges Supplement	Assessments
Add and subtract multi-digit numbers using paper-and-pencil computations, including the standard algorithms.	Unit 2, Sessions 18–19, 22–27, 29 Unit 5, Sessions 2–3, 5–6, 10, 13, 16–19 Unit 7, Session 1	March Magnetic Board	Set A3 Number & Operations: Multi-Digit Addition & Subtraction, Activities 1–5; Independent Worksheets 1, 2 & 3 Bridges Practice Book, pages 89, 90, 92, 98, 99, 100, 101, 107, 118, 123,129, 137	<p>Informal</p> <p>Unit 5, page 588 (Common Strategies for Adding with Regrouping) Bridges Practice Book, pages 89, 90, 92, 98, 99, 100, 101, 107, 118, 123,129, 137</p> <p>Formal</p> <p>Unit 2, Sessions 12 &amp; 30 (Unit Pre- and Post-Assessment) Unit 5, Sessions 1 &amp; 20 (Unit Pre- and Post-Assessment) Number Corner Teacher’s Guide, pages 266–268 and 322–324 (Checkups 3 &amp; 4)</p>