

ACCESS MATH © 2005

correlated to

**Arkansas**  
**Mathematics Curriculum**  
**Framework**  
**Grade 6**

**GR**eAT **S**ouR**Ce**®

EDUCATION GROUP

 A Houghton Mifflin Company

**YOUR ARKANSAS GREAT SOURCE REPRESENTATIVES**

**DEBRA & JIM SIMPSON**

800-289-4490, option 4

Jim\_Simpson@hmco.com



# ACCESS Math © 2005

correlated to

## Arkansas Mathematics Curriculum Framework Grade 6

### Number and Operations

#### Standard 1: Number Sense

Students shall understand numbers, ways of representing numbers, relationships among numbers and number systems.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Rational Numbers</b> NO.1.6.1 Demonstrate conceptual understanding to find a specific <i>percent</i> of a number, using models, real life examples, or explanations	<b>Student Book:</b> 146, 147, 148, 150
NO.1.6.2 Find decimal and <i>percent equivalents</i> for proper fractions and explain why they represent the same value	<b>Student Book:</b> 141, 142, 143, 145
NO.1.6.3 Round and compare decimals to a given <i>place value</i> including thousandths	<b>Student Book:</b> 60, 61, 62, 64, 66, 67, 69
NO.1.6.4 Convert, compare and order fractions (mixed numbers and improper fractions) decimals and <i>percents</i> and find their approximate locations on a number line	<b>Student Book:</b> 66, 67, 69, 106, 108, 109, 110, 111, 114, 115, 116, 118, 143, 145, 147, 148, 150

#### Standard 2: Properties of Number Operations

Students shall understand meanings of operations and how they relate to one another.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Number Theory</b> NO.2.6.1 Use <i>divisibility rules</i> to determine if a number is a <i>factor</i> of another number (4, 6, 9)	<b>Student Book:</b> 82, 83, 84, 86
NO.2.6.2 Apply the <i>distributive property</i> of multiplication over addition to simplify computations with <i>whole numbers</i>	<b>Student Book:</b> 32, 33, 35

Student Learning Expectations, Grade 6	ACCESS Math
NO.2.6.3 Apply the addition, subtraction, multiplication and division properties of equality to one-step <i>equations</i> with <i>whole numbers</i>	<b>Student Book:</b> 49, 50, 52, 53, 54, 55
NO.2.6.4 Apply rules (conventions) for <i>order of operations</i> to <i>whole numbers</i> with and without parentheses	<b>Student Book:</b> 38, 39, 42, 44, 47
<b>Understand Operations</b> NO.2.6.5 Model multiplication and division of fractions (including mixed numbers) and decimals using pictures and physical objects	<b>Student Book:</b> 129, 130, 131, 133

**Standard 3: Numerical Operations and Estimation**

**Students shall compute fluently and make reasonable estimates.**

Student Learning Expectations, Grade 6	ACCESS Math
<b>Computational Fluency</b> NO.3.6.1 Apply, with and without appropriate <i>technology</i> , <i>algorithms</i> with <i>computational fluency</i> to perform <i>whole number operations</i> (+, -, x, /)	<b>Student Book:</b> 27, 28, 31, 32, 33, 35, 38, 39
NO.3.6.2 Develop and analyze <i>algorithms</i> for computing with fractions (including mixed numbers) and decimals and demonstrate, with and without <i>technology</i> , <i>computational fluency</i> in their use and justify the solution	<b>Student Book:</b> 119, 120, 121, 124, 125, 126, 128, 129, 130, 131, 133
NO.3.6.3 Solve, with and without appropriate <i>technology</i> , multi-step problems using a variety of methods and tools (i.e., objects, mental computation, paper and pencil)	<b>Student Book:</b> 36, 37, 39, 58, 59, 80, 81, 102, 103, 134, 135, 138, 1471, 148, 150, 152, 153, 155, 156, 157, 178, 179, 201, 202, 210, 211, 232, 233, 254, 255, 276, 277, 280, 282, 288, 289
<b>Estimation</b> NO.3.6.4 <i>Estimate</i> reasonable solutions to problem situations involving fractions and decimals	<b>Student Book:</b> 21, 22, 23
NO.3.6.5 Find and use <i>factorization (tree diagram)</i> including <i>prime factorization</i> of composite numbers (expanded and exponential notation) to determine the greatest common factor ( <i>GCF</i> ) and least common multiple ( <i>LCM</i> )	<b>Student Book:</b> 89, 92, 93, 94, 96, 97, 98, 99, 100

Student Learning Expectations, Grade 6	ACCESS Math
NO.3.6.6 Use proportional reasoning and <i>ratios</i> to represent problem situations and determine the reasonableness of solutions with and without appropriate <i>technology</i>	<b>Student Book:</b> 136, 138, 147, 200, 201, 202, 204
NO.3.6.7 Determine the <i>percent</i> of a number and solve related problems in real world situations	<b>Student Book:</b> 147, 148, 150, 151, 152, 153, 155

## A l g e b r a

### S t a n d a r d 4 : P a t t e r n s , R e l a t i o n s a n d F u n c t i o n s

Students shall recognize, describe, and develop patterns, relations and functions.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Patterns, Relations and Functions</b> A.4.6.1 Solve problems by finding the next term or missing term in a <i>pattern</i> or <i>function</i> table using real world situations	<b>Student Book:</b> 45, 58, 59, 273
A.4.6.2 Interpret and write an <i>algebraic</i> rule for a one <i>operation function table</i>	<b>Student Book:</b> 45, 58, 59

### S t a n d a r d 5 : A l g e b r a i c R e p r e s e n t a t i o n s

Students shall represent and analyze mathematical situations and structures using algebraic symbols.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Expressions, Equations and Inequalities</b> A.5.6.1 Model, write and solve one-step <i>equations</i> by informal methods using manipulatives and appropriate <i>technology</i>	<b>Student Book:</b> 48, 49, 50, 52, 53, 54, 55, 57, 279
A.5.6.2 Write simple <i>algebraic expressions</i> using appropriate operations (+, -, x, /) with one <i>variable</i>	<b>Student Book:</b> 40, 43, 44, 45, 47
A.5.6.3 Evaluate <i>algebraic expressions</i> with one <i>variable</i> using appropriate properties and operations (+, -, x, /)	<b>Student Book:</b> 44, 45, 214, 219, 224, 228, 229

## Standard 6: Algebraic Models

Students shall develop and apply mathematical models to represent and understand quantitative relationships.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Algebraic Models and Relationships</b> A.6.6.1 Complete, with and without appropriate <i>technology</i> , and interpret tables and <i>line graphs</i> that represent the relationship between two <i>variables</i> in <i>quadrant I</i>	<b>Student Book:</b> 273, 275

## Standard 7: Analysis of Change

Students shall analyze change in various contexts.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Analyze Change</b> A.7.6.1 Identify and compare situations with constant or varying <i>rates</i> of change	<b>Student Book:</b> 273, 275

## Geometry

### Standard 8: Geometric Properties

Students shall analyze characteristics and properties of 2 and 3 dimensional geometric shapes and develop mathematical arguments about geometric relationships.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Characteristics of Geometric Shapes</b> G.8.6.1 Identify <i>three-dimensional</i> geometric figures using models ( <i>rectangular prisms, cylinders, cones, pyramids</i> and <i>spheres</i> )	<b>Student Book:</b> 222, 223, 224, 226, 228, 229, 231
G.8.6.2 Investigate with manipulatives or grid paper what happens to the <i>perimeter</i> and <i>area</i> of a <i>two-dimensional</i> shape when the dimensions are changed	<b>Student Book:</b> 214, 216
G.8.6.3 Identify, describe, draw, and classify triangles as <i>equilateral, isosceles, scalene, right, acute, obtuse</i> , and <i>equiangular</i>	<b>Student Book:</b> 187, 189
G.8.6.4 Draw, label and determine relationships among the <i>radius, diameter, center</i> and <i>circumference</i> (e.g. <i>radius</i> is half the <i>diameter</i> ) of a circle	<b>Student Book:</b> 217, 218, 219, 221

Student Learning Expectations, Grade 6	ACCESS Math
G.8.6.5 Identify <i>similar figures</i> and explore their properties	<b>Student Book:</b> 200, 201, 202, 204

**S t a n d a r d 9 : T r a n s f o r m a t i o n o f S h a p e s**  
**Students shall apply transformations and the use of symmetry to analyze mathematical situations.**

Student Learning Expectations, Grade 6	ACCESS Math
<b>Symmetry and Transformations</b> G.9.6.2 Describe positions and orientations of shapes under <i>transformation (translation, reflection and rotation)</i> recognizing the size and shape do not change	<b>Student Book:</b> 206, 209

**S t a n d a r d 10 : C o o r d i n a t e G e o m e t r y**  
**Students shall specify locations and describe spatial relationships using coordinate geometry and other representational systems.**

Student Learning Expectations, Grade 6	ACCESS Math
<b>Coordinate Geometry</b> G.10.6.1 Use <i>ordered pairs</i> to plot points in <i>Quadrant I</i>	<b>Student Book:</b> 272, 273, 275
G.10.6.2 Plot points that form the <i>vertices</i> of a geometric figure and draw, identify and classify the figure	<b>Student Book:</b> 275

## Standard 11: Visualization and Geometric Models

Students shall use visualization, spatial reasoning and geometric modeling.

Student Learning Expectations, Grade 6	ACCESS Math
<p><b>Spatial Visualization and Models</b></p> <p>G.11.6.1 Identify <i>two-dimensional patterns (nets)</i> for <i>three-dimensional solids</i>, such as <i>prisms, pyramids, cylinders, and cones</i></p>	<p><b>Student Book:</b> 223, 224, 226</p>

## Measurement

### Standard 12: Physical Attributes

Students shall use attributes of measurement to describe and compare mathematical and real-world objects.

Student Learning Expectations, Grade 6	ACCESS Math
<p><b>Attributes and Tools</b></p> <p>M.12.6.1 Identify and select appropriate units and tools from both systems to measure</p>	<p><b>Student Book:</b> 182, 184, 197, 212, 213, 214, 219, 222, 223, 224, 225, 227, 228, 229</p>
<p>M.12.6.3 Compare and contrast the differences among linear units, square units, and cubic units</p>	<p><b>Student Book:</b> 197, 212, 213, 214, 219, 222, 223, 224, 225, 227, 228, 229</p>

### Standard 13: Systems of Measurement

Students shall identify and use units, systems and processes of measurement.

Student Learning Expectations, Grade 6	ACCESS Math
<p><b>Attributes and Tools</b></p> <p>M.13.6.2 Determine which unit of measure or measurement tool matches the context for a problem situation</p>	<p><b>Student Book:</b> 214, 215, 216, 218, 219, 220, 223, 224, 225, 228, 229, 230</p>
<p>M.13.6.4 Establish and apply formulas to find <i>area</i> and <i>perimeter</i> of triangles, rectangles, and parallelograms</p>	<p><b>Student Book:</b> 214, 216</p>
<p>M.13.6.6 Use estimation to check the reasonableness of measurements obtained from use of various instruments (including angle measures)</p>	<p><b>Student Book:</b> 182</p>

## Data Analysis and Probability

### Standard 14: Data Representation

Students shall formulate questions that can be addressed with data and collect, organize and display relevant data to answer them.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Collect, Organize and Display</b> DAP.14.6.1 Formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within one population	<b>Student Book:</b> 158, 159, 160, 162
DAP.14.6.2 Collect data and select appropriate graphical representations to display the data including <i>Venn diagrams</i>	<b>Student Book:</b> 92, 158, 159, 160, 162, 163, 164, 168, 169, 170, 172, 173, 174
DAP.14.6.3 Construct and interpret graphs, using correct scale, including <i>line graphs</i> and <i>double-bar graphs</i>	<b>Student Book:</b> 163, 164, 165, 167, 168, 169, 170, 172, 173, 174, 175, 177

### Standard 15: Data Analysis

Students shall select and use appropriate statistical methods to analyze data.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Data Analysis</b> DAP.15.6.1 Interpret graphs such as <i>double line graphs</i> and <i>circle graphs</i>	<b>Student Book:</b> 139, 142, 145, 168, 169, 170, 172, 173, 174, 175, 177
DAP.15.6.2 Compare and interpret information provided by measures of <i>central tendencies</i> ( <i>mean, median</i> and <i>mode</i> ) and <i>measures of spread</i> ( <i>range</i> )	<b>Student Book:</b> 165, 167

### Standard 16: Inferences and Predictions

Students shall develop and evaluate inferences and predictions that are based on data.

Student Learning Expectations, Grade 6	ACCESS Math
<b>Inferences and Predictions</b> DAP.16.6.1 Use observations about differences in data to make justifiable inferences	<b>Student Book:</b> 165, 167, 172, 173, 174, 175, 177

**S t a n d a r d 1 7 : P r o b a b i l i t y**  
**Students shall understand and apply basic concepts of probability.**

Student Learning Expectations, Grade 6	ACCESS Math
<b>Probability</b> DAP.17.6.1 Distinguish between <i>theoretical</i> and <i>experimental</i> probability	<b>Student Book:</b> 240, 241, 243



---

TOLL FREE: **800-289-4490**

VISIT OUR WEB SITE: **[WWW.GREATSOURCE.COM](http://WWW.GREATSOURCE.COM)**

---