## Math Teachers Press, Inc.

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## ARKANSAS MATH FRAMEWORK STANDARDS CORRELATED TO MOVING WITH MATH EXTENSIONS GRADE 4

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|  |  | Student Book | Skill Builders |
|  | NUMBER SENSE |  |  |
|  | Whole Numbers |  |  |
| No.1.4.1 | Recognize equivalent representations for the same whole number and generate them by composing and decomposing numbers. | 2 |  |
| No.1.4.2 | Use the place-value structure of the base-ten number system and be able to represent and compare whole numbers to millions (using models, illustrations, symbols, expanded notation and problem solving). | 1-2, 4-7 | 1-1, 2-1 |
| No.1.4.3 | Connect various physical models and representations to the quantities they represent using number names, numerals and number words up to 10 with and without appropriate technology | 5,10 | 2-1 |
|  | Rational Numbers |  |  |
| No.1.4.4 | Write a fraction to name part of a whole, part of a set, a location on a number line, and the division of whole numbers, using models up to $12 / 12$. | 45-48 | 30-1, 31-1, 32-1 |
| No.1.4.5 | Utilize models, benchmarks, and equivalent forms to recognize that the size of the whole determines the size of the fraction. |  | 30-1, 31-1, 32-1 |
| No.1.4.6 | Use the place-value structure of the base-ten number system and be able to represent and compare decimals to 100ths, (using models, illustrations, symbols, expanded notation and problem solving). |  |  |
| No.1.4.7 | Write an equivalent decimal for a given fraction relating to money. | 24 | 47-2 |
| No.1.4.8 | Write a fraction that is equivalent to a given fraction with the use of models. | 48 | 32-1 |
|  | Number Theory |  |  |
| No.2.4.1 | Develop an understanding of the associative and zero properties of multiplication using objects. |  | 20-2, 20-3, 25-3 |


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| No.2.4.2 | Apply number theory-odd/even, multiple, factor and divisible by in an appropriate context, generate and use divisibility rules for 2,5 and 10 , demonstrate various multiplication and division relationships. | 25-44 | 24-1, 25-1, 29-1 |
|  | Whole Number Operations |  |  |
| No.2.4.3 | Use conventional mathematical symbols to write equations for contextual problems involving multiplication. | 25-35,38 | 25-2 |
| No.2.4.4 | Represent and explain division as measurement and partitive division including equal groups, related rates, price rectangular arrays ( area models) combinations and multiplicative comparison-translate contextual situations involving division into conventional math symbols-explain how a remainder may impact an answer in a real-world situation. | 37-44 | 25-2 |
|  | Computational Fluency-Addition/Subtraction |  |  |
| No.3.4.1 | Demonstrate with and without appropriate technology, computational fluency in multi-digit addition and subtraction in contextual problems. |  | 15-2 |
| No.3.4.2 | Demonstrate fluency with combinations for multiplication and division facts ( $12 \times 12$ ) and use these combinations to mentally compute related problems ( $30 \times 50$ ). | 34 |  |
| No.3.4.3 | Attain, with and without appropriate technology, computational fluency in multiplication and division using contextual problems-2-digits by 2-digit multiplication (larger numbers with tech) - up to 3-digit by 2-digit division (larger, with tech) - strategies for multiplication and dividing numbers - performance of operations in more than one way - estimation of products and quotients in appropriate situations and relationships between operations. | 28-29, 33-36, 44 | 20-1, 25-2 |
| No.3.4.4 | Solve simple problems using operations involving addition, subtraction, and multiplication using a variety of methods and tools. | $\begin{aligned} & 2,13-20,22,24- \\ & 36 \end{aligned}$ | $\begin{aligned} & 9-1,9-2,10-1,11 \\ & 1,12-1,13-1,15- \\ & 1,15-2,16-1,17- \\ & 1,18-1,20-1 \text { to } \\ & 20-3,21-1,21-2, \\ & 22-1,23-1 \end{aligned}$ |
|  | Estimation |  |  |
| No.3.4.5 | Use estimation strategies to solve problems and judge the reasonableness of the answer. | 34 |  |
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|  | ALGEBRA |  |  |
|  | Recognize, Describe and Develop Patterns |  |  |
| A.4.4.1 | Identify a number that is more or less than any whole number using multiples of 0,100 , and/or 1000. | 3 | 2-1, 3-1, 6-1 |
| A.4.4.2 | Use repeating and growing numeric and geometric patterns to make predictions and solve problems. | 3,5,8 | 2-1, 3-1, 6-1 |
|  | Patterns, Relationships and Functions |  |  |
| A.4.4.3 | Determine the relationship between sets of numbers by selecting the rule (2-step rules in words). | 3, 9 | 2-1, 3-1, 6-1 |
|  | Expressions, equations and Inequalities |  |  |
| A.5.4.1 | Select and/or write number sentences (equations) to find the unknown in problem-solving contexts involving 2-digt by 1 -digit division using appropriate labels. | 38-44 | 25-2, 25-3 |
| A.5.4.2 | Express mathematical relationships using simple equations and inequalities greater than, less than and equal and not equal) |  | 9-1, 9-2 |
| A.5.4.3 | Use a variable to represent an unknown quantity in a number sentence involving contextual situations and find the value | 39 | 49-2 |
|  | Algebraic Models and Relationships |  |  |
| A.6.4.1 | Create a chart or table to organize given information and to understand relationships and explain the results | 63 | 50-1 |
|  | Analyze Change |  |  |
| A.7.4.1 | Identify, describe and generalize relationships in which quantities change proportionally | 28-29, 33-34, 36 | 20-1 |
|  | GEOMETRY |  |  |
|  | Characteristics/Properties 3-D/2-D/1-D |  |  |
| G.8.4.1 | Identify, describe and classify 3-D solids by properties including the number of vertices, edges and shapes of faces using models |  | 40-1 |
| G.8.4.2 | Identify regular and irregular polygons including octagon |  | 39-2 |
|  | Geometric Relationships |  |  |
| G.8.4.3 | Identify, draw and describe a line, line segment, a ray, an angle, intersecting, perpendicular, and parallel lines | 51-53 | 35-1, 36-1, 37-1 |


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| G.8.4.4 | Classify angles relative to 90 degrees as more than, less than or equal to | 53 | 37-1 |
|  | Symmetry and Transformations |  |  |
| G.9.4.1 | Determine the result of a transformation of a 2-D figure as a slide (translation) flip (reflection) or turn (rotation) and justify the answer | 54 | 39-1 |
|  | Coordinate Geometry |  |  |
| G.10.4.1 | Locate and identify points on a coordinate grid and name the ordered pair (quadrant one only) using common language and geometric vocabulary (horizontal and vertical) |  | 50-5 |
|  | Spatial, Visualization and Models |  |  |
| G.11.4.1 | Construct a 3-D model composed of cubes when given an illustration |  |  |
| G.11.4.2 | Create new figures by combining and subdividing models of existing figures in multiple ways and record results on a table |  |  |
|  | MEASUREMENT |  |  |
|  | Time/Calendar/Clock/Money/Temperature/ Tools and Attributes |  |  |
| M.12.4.1 | Recognize that 60 seconds equals 1 minute |  | 41-1, 41-2 |
| M.12.4.2 | Distinguish the temperature in contextual problems using the Fahrenheit scale on a thermometer |  |  |
| M.12.4.3 | Use the relationship among units of measurement-length/capacity/weight |  | 44-1, 45-1 |
| M.12.4.4 | Create and complete a conversion table to show relationships between units of measurement in the same system | 58-59 |  |
| M.13.4.1 | Using a calendar to determine elapsed time from month to month |  | 42-1 |
| M.13.4.2 | Solve problems involving conversions between minutes and hours | 56 | 41-2 |
| M.13.4.3 | Restate the time in multiple ways given an analog clock to the nearest 1-minute | 55 | 41-1, 41-2 |
|  | Elapsed Time |  |  |
| M.13.4.4 | Determine elapsed time to contextual situations to 5minute intervals with beginning time unknown | 56 |  |


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| M.13.4.5 | Apply money concepts in contextual situations-determine better buy--determine change back with the least amount of currency--compare money | 24,33 | 47-1, 47-2 |
| M.13.4.6 | Read temperatures on Fahrenheit and Celsius scales |  |  |
|  | Applications |  |  |
| M.13.4.7 | Use appropriate customary metric measurement tools for length, capacity and mass | 57-60 | $\begin{aligned} & 43-1,44-1,45-1, \\ & 46-1 \end{aligned}$ |
| M.13.4.8 | Estimate and measure length, capacity/volume and mass using appropriate customary and metric units |  | 43-1, 45-1, 46-1 |
|  | Perimeter |  |  |
| M.13.4.9 | Use strategies for finding the perimeter of a rectangle | 60-61 | 46-1 |
|  | Area |  |  |
| M.13.4.10 | Use strategies for finding the area of a rectangle | 62 | 46-2 |
| M.13.4.11 | Use strategies to find the volume (cubic units) of rectangular prisms and cubes |  |  |
|  | DATA ANALYSIS AND PROBABILITY |  |  |
|  | Collect, Organize and Display Data |  |  |
| $\begin{gathered} \text { DAP.14.4. } \\ 1 \end{gathered}$ | Create a data collection plan after being given a topic and collect, organize, display, describe and interpret simple data using frequency tables or line plots, pictographs, and bar graphs. |  | 50-1 |
|  | Data Analysis |  |  |
| $\begin{gathered} \text { DAP. } 15.4 . \\ 1 \end{gathered}$ | Represent and interpret data using pictographs, bar graphs and line graphs in which symbols or intervals are greater than one | 63-64 | 50-1 to 50-3 |
| $\begin{gathered} \text { DAP. } 15.4 \\ 2 \end{gathered}$ | Match a set of data with graphical representation of the data | 64 |  |
|  | Inferences and Predictions |  |  |
| $\begin{gathered} \text { DAP.16.4. } \\ 1 \end{gathered}$ | Make a prediction for a given set of data |  | 50-4, 50-7 |
|  | Probability |  |  |
| $\begin{gathered} \text { DAP. } 17.4 . \\ 1 \end{gathered}$ | Use fractions to predict probability of an event |  | 50-4, 50-7 |


| DAP.17.4. Conduct simple probability experiments, record the <br> data and draw conclusions about the likelihood of <br> possible outcome Student Book Skill Builders <br> DAP.17.4. <br> 3 Find all possible combinations of 2 or 3 sets of objects $50-7$  |  |  |
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