

Description		NRP 2644: <i>Pre-HSE Workbook: Math 1</i>
CASAS Competencies		
6.0.1	Identify and classify numeric symbols	Pages 10–48
6.0.2	Count and associate numbers with quantities, including recognizing correct number sequencing	Pages 10–48
6.0.3	Identify information needed to solve a given problem	Pages 10–48
6.0.4	Determine appropriate operation to apply to a given problem	Pages 10–48
6.0.5	Demonstrate use of a calculator	Pages 10–48
6.1.0	Compute using whole numbers	Pages 10–48
6.1.1	Add whole numbers	Pages 10–48
6.1.2	Subtract whole numbers	Pages 10–48
6.1.3	Multiply whole numbers	Pages 10–48
6.1.4	Divide whole numbers	Pages 10–48
6.1.5	Perform multiple operations using whole numbers	Pages 10–48
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6.2.2	Subtract decimal fractions	Pages 10–48
6.2.3	Multiply decimal fractions	Pages 10–48
6.2.4	Divide decimal fractions	Pages 10–48
6.2.5	Perform multiple operations using decimal fractions	Pages 10–48
6.2.6	Convert decimal fractions to common fractions or percents	Pages 10–48
6.3.0	Compute using fractions	Pages 10–48
6.3.1	Add common or mixed fractions	Pages 10–48
6.3.2	Subtract common or mixed fractions	Pages 10–48
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6.3.4	Divide common or mixed fractions	Pages 10–48
6.3.5	Perform multiple operations using common or mixed fractions	Pages 10–48
6.3.6	Convert common or mixed fractions to decimal fractions or percents	Pages 10–48
6.3.7	Identify or calculate equivalent fractions	Pages 10–48

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6.4.0	Compute with percents, rate, ratio, and proportion	Pages 10–48
6.4.1	Apply a percent to determine amount of discount	Pages 10–48
6.4.2	Apply a percent in a context not involving money	Pages 10–48
6.4.3	Calculate percents	Pages 10–48
6.4.4	Convert percents to common, mixed, or decimal fractions	Pages 10–48
6.4.5	Use rate to compute increase or decrease	Pages 10–48
6.4.6	Compute using ratio or proportion	Pages 10–48
6.6.0	Demonstrate measurement skills	Pages 10–48
6.6.1	Convert units of U.S. standard measurement and metric system	Pages 10–48
6.6.2	Recognize, use, and measure linear dimensions, geometric shapes, or angles	Pages 10–48
6.6.3	Measure area and volume of geometric shapes	Pages 10–48
6.6.4	Use or interpret measurement instruments, such as rulers, scales, gauges, and dials	Pages 10–48
6.6.5	Interpret diagrams, illustrations, and scale drawings	Pages 10–48
6.6.6	Calculate with units of time	Pages 10–48
Content Standards		
M1.1.1	Associate numbers with quantities	Pages 10–48
M1.1.2	Count with whole numbers	Pages 10–48
M1.1.3	Count by 2s, 5s, and 10s up to 100	Pages 10–48
M1.1.4	Recognize odd and even numbers	Pages 10–48
M1.1.5	Understand the decimal place value system: read, write, order and compare whole and decimal numbers (e.g., $0.13 > 0.013$ because $13/100 > 13/1000$)	Pages 10–48
M1.1.6	Round off numbers to the nearest 10, 100, 1000 and/or to the nearest whole number, tenth, hundredth or thousandth according to the demands of the context	Pages 10–48
M1.1.7	Using place value, compose and decompose numbers with up to five digits and/or with three decimal places (e.g., $54.8 = 5 \times 10 + 4 \times 1 + 8 \times 0.1$)	Pages 10–48
M1.1.8	Interpret and use a fraction in context (e.g., as a portion of a whole area or set)	Pages 10–48
M1.1.9	Find equivalent fractions and simplify fractions to lowest terms	Pages 10–48
M1.1.10	Use common fractions to estimate the relationship between two quantities (e.g., $31/179$ is close to $1/6$)	Pages 10–48
M1.1.11	Convert between mixed numbers and improper fractions	Pages 10–48
M1.1.12	Use common fractions and their decimal equivalents interchangeably	Pages 10–48
M1.1.13	Read, write, order and compare positive and negative real numbers (integers, decimals, and fractions)	Pages 10–48
M1.1.14	Interpret and use scientific notation	Pages 10–48
M1.2.1	Mentally add and subtract positive whole numbers smaller than 20	Pages 10–48

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M1.2.2 Add and subtract positive multi-digit numbers, including decimal numbers	Pages 10–48
M1.2.3 Recognize when a problem situation requires addition or subtraction with multi-digit positive integers and decimal numbers, carry out the computation and interpret the answer in context	Pages 10–48
M1.2.4 Use the inverse relationship between addition and subtraction to write problem statements and to check computation (e.g., add back to check subtraction)	Pages 10–48
M1.2.5 Use the commutative property of addition to restate problems (e.g., $34.2 + 6 = 6 + 34.2$) and recognize the proper order to write subtraction problems and enter them into a calculator	Pages 10–48
M1.2.6 Add and subtract fractions and mixed numbers including those with unlike denominators	Pages 10–48
M1.2.7 Recognize when a problem situation requires adding and/or subtracting with fractions and mixed numbers, carry out the computation and interpret the answer in context	Pages 10–48
M1.2.8 Use estimation strategies to determine reasonable answers to addition and subtraction problems involving integers, decimal numbers and fractions	Pages 10–48
M1.2.9 Express the result of adding and subtracting to the level of precision indicated by the problem (e.g., as in measurements)	Pages 10–48
M1.3.1 Mentally double all integers to 20 and halve even integers to 20	Pages 10–48
M1.3.2 Know multiplication facts for integers through 12 and recognize their perfect squares	Pages 10–48
M1.3.3 Mentally multiply and divide numbers by 10, 100, 1000	Pages 10–48
M1.3.4 Identify integers that are multiples of 2, 3, 4, 5, or 10	Pages 10–48
M1.3.5 Find factors of whole numbers to 100 (e.g., 36 is divisible by 1, 2, 3, 4, 6, 9, 12, 18; 37 is prime)	Pages 10–48
M1.3.6 Recognize when a problem situation requires multiplying and/or dividing with multi-digit positive integers and decimal numbers, carry out the computation accurately and interpret the answer in context	Pages 10–48
M1.4.1 Recognize comparisons between quantities in situations that can be expressed as a ratio (e.g., he made 3 out of 5 free throws) and those that can't (e.g., their final score of 11 was 4 more than the opponent's score)	Pages 10–48
M1.4.2 Write and solve proportions for situations where two ratios are equal (e.g., currency conversion)	Pages 10–48
M1.4.3 Find the percent equivalents to fractions and decimals	Pages 10–48
M1.4.4 Know the percent equivalent to common benchmark fractions ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{10}$, $\frac{1}{5}$, etc.) and use them interchangeably for solving problems	Pages 10–48
M1.4.5 Mentally find 10% and/or 1% of an integer or decimal number	Pages 10–48
M1.4.6 Estimate percentages of numbers by using benchmark percents (10%, 25%, 50%) or combinations of them (e.g., 31% of 89 \approx 3(10% of 90) = 27)	Pages 10–48
M1.4.7 Calculate a missing value from a percent relationship – the percentage, the percent, or the base – using paper and pencil or a calculator	Pages 10–48
M1.4.8 Understand and solve problems using percents greater than 100% and less than 1%	Pages 10–48

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M1.4.9 Calculate percent of change (increase or decrease) in a variety of situations, including those involving money	Pages 10–48
M4.1.1 Identify and use the appropriate units, instruments and techniques for measurement tasks	Pages 10–48
M4.1.2 Read and use linear scales (a ruler, tape measure, metric rule, thermometer, etc.)	Pages 10–48
M4.1.3 Read the temperature from a thermometer in degrees F or C	Pages 10–48
M4.1.4 Read and use analog scales: clocks, meters, gauges, etc. (e.g., read to nearest lb., kg, $\frac{1}{2}$ lb., $\frac{1}{2}$ kg)	Pages 10–48
M4.1.5 Read and use digital scales: digital clocks, odometers, etc.	Pages 10–48
M4.1.6 Read and use various indicators of time (e.g., place dates on time line, interpret numeric representations, compare 12 and 24-hour clocks)	Pages 10–48
M4.1.7 Use non-standard measurement methods (e.g., use an object as a measure)	Pages 10–48
M4.1.8 Compare the measure of one object to another (e.g., this is about 3 times as long as that; about 6 of these will fit in there)	Pages 10–48
M4.1.9 Use specialized measurement tools in contextual situations	Pages 10–48
M4.1.10 Make rough-estimate approximations of measurements	Pages 10–48