

Math Content Standards Assignment Sheet

Content Area: Math and Number Sense

| Standard Statement | Assignment: | Completed: |
|---|-------------|------------|
| 1. The Learner will demonstrate fluency with basic operations using: a) calculator; b) mental math; c) pencil and paper | | |
| 2. The Learner will select and apply correct operations or procedures to solve a practical problem. This will include simple and multi-step problems. Procedures will include: a) identifying relevant information; b) determining whether or not there is sufficient information to solve a problem | | |
| 3. The learner will use estimation as a strategy to solve a problem and to check the reasonableness of the results. | | |
| 4. The learner will apply the concept of place value in a practical context. | | |
| 5. The learner will determine equivalent relationships between fractions, decimals, and percents and convert between forms. | | |
| 6. The learner will solve practical problems using: a) rational numbers; b) percentages | | |
| 7. The learner will set up and solve a variety of problems involving rates. <i>Refer to the formula sheet.</i> | | |
| 8. The learner will set up a ratio to represent a comparison using the following notations: a) a/b; b) a:b; c) a to b | | |

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| 9. The learner will solve a variety of practical problems by using proportions. Problems may include: a) scale drawings; b) maps; c) percentages | | |
| 10. The learner will compare and order whole numbers, fractions, decimals, and integers (signed numbers) as they relate to the number line. | | |
| 11. The learner will solve practical problems involving basic operations with integers. | | |
| 12. The learner will evaluate expressions using the order of operations. | | |
| 13. The learner will evaluate numerical expressions which may contain: a) exponents; b) roots | | |
| 14. The learner will use a variety of problem solving and test taking strategies, such as: a) working backwards; b) guess and check; c) substituting simpler numbers; d) recognizing patterns; e) estimating; f) evaluating reasonableness of answers | | |
| 15. The learner will provide answers in various formats, including: a) multiple choice; b) standard grid; c) coordinate plane grid | | |

Math Content Standards Assignment Sheet

Content Area: Algebra, Functions, and Patterns

| Standard Statement | Assignment: | Completed: |
|---|-------------|------------|
| 1. The learner will analyze and represent a situation involving variable quantities with an expression or equation. | | |
| 2. The learner will analyze a set of data for the existence of a pattern. Data may appear as: a) Tabular; b) Symbolic; c) Graphical; d) Verbal; e) Physical representations | | |
| 3. The learner will substitute numbers for the variables in an expression and evaluate, including familiar and unfamiliar formulas. <i>Refer to the formula sheet.</i> | | |
| 4. The learner will perform basic operations to simplify expressions containing variables. The expressions may contain: a) exponents; b) roots | | |
| 5. The learner will solve: a) Multi-step linear equations and inequalities in one variable; b) Literal equations (formulas) for a given variable | | |
| 6. The learner will find square roots by: a) recognizing perfect squares; b) approximating the square root of any whole number less than 200; c) using the scientific calculator | | |
| 7. The learner will convert between different representations of a function including: a) a table of values; b) an equation; c) a graph; d) a verbal description | | |
| 8. The learner will calculate the slope of a line when given: a) the coordinates of two points on the line; b) the equation of the line; c) the graph of the line. <i>Refer to the formula sheet</i> | | |
| 9. The learner will recognize the general shape of a function and relate it to a data set. Functions will include: a) linear; b) quadratic; c) exponential | | |

Math Content Standards Assignment Sheet

Content Area: Data Analysis, Probability, and Statistics

| Standard Statement | Assignment: | Completed: |
|---|-------------|------------|
| 1. The learner will solve problems involving the measures of central tendency: a) Mean; b) Median; c) Mode; d) Range <i>Refer to the formula sheet.</i> | | |
| 2. The learner will predict the effect of changing the data set on the measures of central tendency. | | |
| 3. The learner will analyze data to identify trends. This will include making comparisons, predictions, and inferences using information displayed in: a) Tables; b) Frequency distributions, c) Scatter plots; d) Line, bar, circle, and picture graphs | | |
| 4. The learner will construct an appropriate representation of a given data set. Representations include: a) Tables; b) Frequency distributions; c) Scatter plots; d) Line, bar, circle, and picture | | |
| 5. The learner will interpret data presented in various forms and use the data to solve problems. This includes recognizing sampling errors and bias. | | |
| 6. The learner will determine correlation and distinguish it from causation. | | |
| 7. The learner will analyze a problem situation and determine the probability of an event occurring. This includes: a) Independent events; b) Dependent events | | |
| 8. The learner will represent the probability of an event as a ratio or as a percentage between 0% and 100%. | | |
| 9. The learner will identify the number of possible combinations of several objects using: a) Tree diagram; b) The fundamental basic counting principle | | |

Math Content Standards Assignment Sheet

Content Area: Measurement and Geometry

| Standard Statement | Assignment: | Completed: |
|---|-------------|------------|
| 1. The learner will read and interpret measuring devices. | | |
| 2. The learner will convert measurements within a measurement system as part of solving a problem. a) U.S. customary system; b) Metric system <i>The intent of this standard is for students to make ballpark comparisons and not to memorize conversion factors between U.S. customary and metric units.</i> | | |
| 3. The learner will apply the concepts of the line and angle relationships to solve problems. This includes, but is not limited to, the concepts of: a) Parallelism; b) Perpendicularity; c) Complementary angles; d) Supplementary angles; e) Congruence; f) Similarity of figures | | |
| 4. The learner will identify and use the properties of plane figures to solve practical problems. <i>Refer to the formula sheet for specific plane figures.</i> | | |
| 5. The learner will determine if geometric figures are similar and write proportions to express the relationships between corresponding parts of similar figures. | | |
| 6. The learner will determine if a problem situation involving geometric figures represents the application of: a) Perimeter; b) Circumference; c) Area; d) Volume | | |
| 7. The learner will predict the effect of changing a linear dimension on: a) Perimeter; b) Area; c) Volume | | |
| 8. The learner will use estimation to approximate solutions to problems involving: a) Perimeter; b) Circumference; c) Area; d) Volume | | |

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| 9. The learner will solve problems involving: a) Perimeter; b) Circumference; c) Area; d) Volume | | |
| 10. The learner will identify and plot ordered pairs in the four quadrants of a coordinate plane. | | |
| 11. The learner will transform a geometric figure represented on a coordinate plane by: a) Rotating; b) Sliding; c) Flipping; d) Dilating | | |
| 12. The learner will determine the y-intercept of a line when given: a) An equation of the line; b) The graph of the line; c) Two points on the line | | |
| 13. The learner will solve problems using: a) Slope; b) Y-intercept; c) Point of intersection of two lines | | |
| 14. The learner will use the distance formula to determine lengths. <i>Refer to the formula sheet.</i> | | |
| 15. The learner will recognize when the Pythagorean relationship applies and use it to solve problems. <i>Refer to the formula sheet.</i> | | |