

# Matrix: Cord Wood Dilemma

<b>Student's Name:</b>		<b>Grade Level:</b>		<b>School:</b>	
<b>Analytical Score:</b>			<b>Holistic Score: N A P E</b>		
<input type="checkbox"/> Understanding:		N A P E		<b>Comments or Observations:</b>	
<input type="checkbox"/> Reasoning, Strategies, & Mathematical Procedures:		N A P E			
<input type="checkbox"/> Communication:		N A P E			
<b>APS MATHEMATICS STRAND: Geometry, Spatial Sense, and Measurement</b>					
<b>GRADE: SIXTH</b>					
<b>Selects and applies</b> appropriate formulas to solve problems.		<b>Measures</b> objects using U.S. and metric units for length, volume, mass, and area.		<b>Converts</b> accurately from one unit to another accurately within the same system (e.g., 36 inches = 3 feet or 2 kilometers = 2000 meters).	
<b>Draws and explains</b> congruent two-dimensional figures using mathematical terminology.		<b>Explains</b> both metric and U.S. systems of measurement.			
<b>GRADE: SEVENTH</b>					
<b>Develops and tests</b> strategies for finding volume and surface area of polyhedra, cylinders, and cones.		<b>Selects and applies</b> appropriate formulas to solve problems.		<b>Finds</b> length, area, volume, and angle measures to appropriate levels of precision selecting appropriate techniques and tools.	
<b>Translates</b> problem-solving strategies into formulas for surface area and volume using appropriate mathematical symbols (e.g., cubic feet = ft <sup>3</sup> ).		<b>Uses</b> appropriate standard units for estimating measurements.			
<b>APS MATHEMATICS STRAND: Number Sense and Operations</b>					
<b>GRADE: SIXTH</b>					
<b>Selects</b> an appropriate operation (i.e., +, -, x, ÷) to solve situational story problems.		<b>Develops and tests</b> strategies for adding, subtracting, multiplying, and dividing decimals.		<b>Determines</b> when an exact answer is necessary or when an estimate is appropriate (e.g., medicine dosage vs. number of people at a concert).	

<b>Selects and uses</b> the appropriate number form (e.g., fraction, decimal, or percent) in a variety of situations, including measurement in U.S and metric systems.		<b>Estimates and solves</b> problems involving decimals and <b>justifies</b> the reasonableness of the solution.			
<b>Translates</b> hypotheses into formal and fluent fractional and decimal computations using appropriate mathematical terminology and processes.		<b>Uses</b> the appropriate estimation strategy for a variety of situations.			
<b>GRADE: EIGHTH</b>					
<b>Selects</b> appropriate mathematical representations to describe thought-provoking real-life situations.		<b>Develops and evaluates</b> arguments involving real numbers, their patterns and operations.			
<b>Manipulates</b> all real numbers, their properties, and operations.		<b>Develops and uses</b> strategies to estimate the results of rational-number computations and <b>judges</b> the reasonableness of the results.			
<b>APS MATHEMATICS STRAND: Patterns, Functions, and Algebraic Concepts</b>					
<b>GRADE: SIXTH</b>					
<b>Analyzes</b> the use of variables to represent quantities (e.g., area of a rectangle: $A = lw$ ).		<b>Explains</b> that equations are symbolic representations of relationships, patterns, and functions.		<b>Solves</b> one-step equations using the concept of balance when quantities are added, subtracted, or divided to both sides of an equation.	
<b>GRADE: SEVENTH</b>					
<b>Identifies and uses</b> variable expressions and formulas to solve a variety of real-life situations (e.g., Simple Interest: $I = prt$ ).		<b>Develops and tests</b> strategies for solving two-step equations.		<b>Recognizes and applies</b> the properties of equality.	

<b>Represents, describes, and analyzes</b> numerical patterns and linear relationships using tables, graphs, words, and standard algebraic notation.		<b>Translates</b> hypotheses into formal methods of solving algebraic equations.			
<b>GRADE: EIGHTH</b>					
<b>Represents, describes, and analyzes</b> numerical patterns and relationships using tables, graphs, words, and standard algebraic notation.		<b>Simplifies</b> algebraic expressions including rational expressions.		<b>Solves</b> equations for specified variables (e.g., solve for $h$ if $A = bh/2$ ).	
<b>Identifies and models</b> real-life situations using multiple representations.		<b>Develops and tests</b> strategies for solving multi-step equations.			
<b>APS MATHEMATICS STRAND: Global Mathematical Processes</b>					
<b>GRADE: KINDERGARTEN THROUGH TWELTH</b>					
Develops resourcefulness and perseverance in problem solving in mathematics and other disciplines.		Works in teams to share ideas, to develop and coordinate group approaches to problems, and to communicate findings.		Recognizes and applies mathematics in contexts outside the mathematics course.	
Recognizes when to use previously learned strategies to solve new problems.		Communicates mathematical thinking coherently and clearly to others.		Develops a repertoire of mathematical representation (e.g. pictures, written symbols, oral language, real-world situations, and manipulative models) that can be used purposefully and appropriately interchangeably.	
Develops and uses strategies (e.g., breaking complex problems into simpler parts) for solving given problems.		Analyzes and evaluates mathematical thinking and strategies of others.		Selects, applies, and translates among mathematical representations to solve problems.	
Monitors, discusses, and reflects on the process of mathematical problem solving.		Relates applications to mathematical language in various modalities.		Uses representations to model and interpret physical, social, and mathematical phenomena.	

Makes and investigates mathematical conjectures and uses them successfully in developing and evaluating mathematical arguments and proofs.		Identifies and connects functions with real-world applications.		Uses manipulatives, calculators, computers, and other tools as appropriate in order to strengthen mathematical thinking, understanding, and power to build upon foundational concepts.	
--	--	---	--	--	--