

Matrix: True or False?

Student's Name:		Grade Level:		School:	
Analytical Score:			Holistic Score: N A P E		
<input type="checkbox"/> Understanding:		N A P E		Comments or Observations:	
<input type="checkbox"/> Reasoning, Strategies, & Mathematical Procedures:		N A P E			
<input type="checkbox"/> Communication:		N A P E			
APS MATHEMATICS STRAND: DATA ANALYSIS, STATISTICS, AND PROBABILITY					
GRADE: SIXTH					
Develops and evaluates inferences, predictions, and arguments that are based on data.					
GRADE: SEVENTH					
Applies counting principles to determine sample space (e.g., tree diagrams, fundamental counting principle, combinations, and permutations).		Determines probability of dependent and independent events in experimental and theoretical situations.			
Determines simple probability in experimental and theoretical situations.		Explains and uses appropriate terminology to describe complementary and mutually exclusive events.			
GRADE: EIGHTH					
Interprets data and makes conclusions from data.					
APS MATHEMATICS STRAND: NUMBER SENSE AND OPERATIONS					
GRADE: SEVENTH					
Explains and models the value of exponents and square roots.		Simplifies and evaluates (solves) numerical expressions involving exponents (e.g., $2^3 = 2 \times 2 \times 2 = 8$).			

Mathematics Standards Matrix: True or False? – Grade 8

APS/RDA/CHF: Performance-Based Mathematics Assessment 2001-02

*Performance Standards are based on the APS K – 12 Mathematics Content and Performance Standards – Final 2001

GRADE: EIGHTH					
Simplifies and evaluates , if solvable, algebraic expressions for all types of real numbers including exponents and common square roots.		Examines, describes, and models exponential patterns that reflect growth and decay (e.g., Represent doubling 1¢ every day for 10 days in exponential form).		Develops and evaluates arguments involving real numbers, their patterns and operations.	
APS MATHEMATICS STRAND: PATTERNS, FUNCTIONS, AND ALGEBRAIC CONCEPTS					
GRADE: SIXTH					
Predicts sequences and patterns involving varying rates of change (e.g., growth over time).		Solves one-step equations using the concept of balance when quantities are added, subtracted, or divided to both sides of an equation.			
GRADE: SEVENTH					
Identifies and uses variable expressions and formulas to solve a variety of real-life situations (e.g., Simple Interest: $I = prt$).		Develops and tests strategies for solving two-step equations.			
Represents, describes, and analyzes numerical patterns and linear relationships using tables, graphs, words, and standard algebraic notation.		Translates hypotheses into formal methods of solving algebraic equations.			
GRADE: EIGHTH					
Develops exponential functions to represent real-life situations (e.g., compound interest problem).		Identifies and models real-life situations using multiple representations.		Develops and tests strategies for solving multi-step equations.	
Represents, describes, and analyzes numerical patterns and relationships using tables, graphs, words, and standard algebraic notation.		Simplifies algebraic expressions including rational expressions.		Solves equations for specified variables (e.g., solve for h if $A = bh/2$).	

APS MATHEMATICS STRAND: GLOBAL MATHEMATICAL PROCESSES

GRADE: KINDERGARTEN THROUGH TWELTH

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.	