MATHEMATICS PENTATHLON GAMES
AND
NCTM CORRELATIONS
(NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS)

Division I Grades K-1	1 Number and Operations	2 Algebra	3 Geometry	4 Measure-ment	5 Data Analysis and Probability	6 Problem Solving	7 Reasoning and Proof	8 Communic ation	9 Connect ions	10 Representa tion
Calla	X	X	X			X	X	X	X	X
Shape Up	X	X	X			X	X	X	X	X
Kings & Quadraphages		X	X			X	X	X	X	X
Hex-A-Gone!	X	X	X			X	X	X	X	X
Star Track	X	X		X		X	X	X	X	X
Division II Grades 2-3	1 Number and Operations	2 Algebra	3 Geometry	4 Measure-ment	5 Data Analysis and Probability	6 Problem Solving	7 Reasoning and Proof	8 Communic ation	9 Connect ions	10 Representa tion
Sum Dominoes and Dice	X	X	X		X	X	X	X	X	X
Kwatro-Sinko	X	X	X			X	X	X	X	X
Ramrod	X	X	X	X	X	X	X	X	X	X
FIAR			X			X	X	X	X	X
PAR 55	X	X	X			X	X	X	X	X
Division III Grades 4-5	1 Number and Operations	2 Algebra	3 Geometry	4 Measure-ment	5 Data Analysis and Probability	6 Problem Solving	7 Reasoning and Proof	8 Communic ation	9 Connect ions	10 Representa tion
Contig 60	X	X	X		X	X	X	X	X	X
FAB A Diffy	X	X		X		X	X	X	X	X
Juggle	X	X	X	X	X	X	X	X	X	X
Queens & Guards			X			X	X	X	X	X
Stars & Bars	X	X	X			X	X	X	X	X
Division IV Grades 6-7	1 Number and Operations	2 Algebra	3 Geometry	4 Measure-ment	5 Data Analysis and Probability	6 Problem Solving	7 Reasoning and Proof	8 Communic ation	9 Connect ions	10 Representa tion
Frac Fact	X	X		X	X	X	X	X	X	X
Fraction Pinball	X	X	X			X	X	X	X	X
Pent'Em In			X			X	X	X	X	X
Prime Gold	X	X			X	X	X	X	X	X
Remainder Island	X	X	X			X	X	X	X	X

Use Adventures in Problem Solving Book I & II, and Investigations Exercises I & II for a more complete correlation with the NCTM Standards

NCTM Standards 2000

1. Number and Operations
    a. Understand Numbers, ways of representing numbers, relationships among numbers, and number systems
    b. Understand meanings of operations and how they relate to one another
    c. Compute fluency and make reasonable estimates
2. Algebra
    a. Understand patterns, relations and functions
    b. Represent and analyze mathematical situations and structures using algebraic symbols
    c. Use mathematical models to represent and understand quantitative relationships
    d. Analyze change in various contexts
3. Geometry
    a. Analyze characteristics and properties of two- and three- dimensional geometric shapes and develop mathematical arguments about geometric relations
    b. Specify locations and describe spatial relationships using coordinate geometry and other representational systems
    c. Apply transformations and use symmetry to analyze mathematical situations
    d. Use visualization, spatial reasoning and geometric modeling to solve problems
4. Measurement
    a. Understand measurable attributes of objects and the units, systems and processes of measurement
    b. Apply appropriate techniques, tools and formulas to determine measurements
5. Data Analysis and Probability
    a. Formulate questions that can be addressed with data and collect, organize and display relevant data to answer them
    b. Select and use appropriate statistical methods to analyze data
    c. Develop and evaluate inferences and predictions that are based on data
    d. Understand and apply basic concepts of probability
6. Problem Solving
    a. Build new mathematical knowledge through problem solving
    b. Solve problems that arise in mathematics and in other contexts
    c. Apply and adapt a variety of appropriate strategies to solve problems
    d. Monitor and reflect on the process of mathematical problem solving
7. Reasoning
    a. Recognize reasoning and proof as fundamental aspects of mathematics
    b. Make and investigate mathematical conjectures
    c. Develop and evaluate mathematical arguments and proofs
    d. Select and use various types of reasoning and methods of proof
8. Communication
    a. Organize and consolidate their mathematical thinking through communication
    b. Communicate their mathematical thinking coherently and clearly to peers, teachers and others
    c. Analyze and evaluate the mathematical thinking and strategies of others
    d. Use the language of mathematics to express mathematical ideas precisely
9. Connections
    a. Recognize and use connections among mathematical ideas
    b. Understand how mathematical ideas interconnect and build on one another to produce a coherent whole
    c. Recognize and apply mathematics in contexts outside of mathematics
10. Representation
    a. Create and use representations to organize, record and communicate mathematical ideas
    b. Select, apply and translate among mathematical representations to solve problems
    c. Use representations to model and interpret physical, social and mathematical phenomena