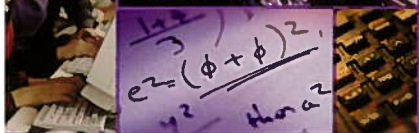


Principles and Standards
for School Mathematics

NAVIGATIONS
SERIES



Navigating *through* Mathematical Connections *in* Grades 9–12



NATIONAL COUNCIL OF
TEACHERS OF MATHEMATICS



TABLE OF CONTENTS

ABOUT THIS BOOK	vii
INTRODUCTION	1
CHAPTER 1	
Connecting with Models	11
Growing Balloons	13
Healthy Dose	20
Nearest Neighbors	27
CHAPTER 2	
Connecting with a Unifying Theme	33
Transformers	35
The Function of Parents	38
Slinky Transformations	42
Line 'Em Up	45
CHAPTER 3	
Connecting with Multiple Representations	49
Tiles in a Row	52
Measurement in the Round	55
Transit Graphs	60
CHAPTER 4	
Connecting with Problem-Solving Processes	65
Quick Response Time	67
Double Dare	72
Support Cables	77
LOOKING BACK AND LOOKING AHEAD	85
APPENDIX	
Blackline Masters and Solutions	87
Breath by Breath	88
Take a Breath and Theorize	90
Experimenting with a Dosage	93
Fine-Tuning a Dosage and a Schedule	95
Scoping Out the Territory	97
Voronoi Vantage Points	100
Transformers	101
The Function of Parents	105
Slinky Transformations	109
Sum Squares	111
Find the Line	114
Tiles in a Row	117
Constructing a Tape	118
Measuring Angles	120

Mathematical Connections

Navigating through Mathematical Connections in Grades 9–12

By Maurice J. Burke, Ted Hodgson, Paul Kehle, Pat Mara, and Diane Resek

Mathematics is a highly interconnected discipline. Teaching isolated concepts can limit students' understanding and diminish their interest. The NCTM Process Standards recommend highlighting mathematical connections by actively involving students in five processes: problem solving, reasoning and proof, communication, connections, and representation.

Making connections becomes increasingly important as students proceed through middle school and high school. This book shows ways of embedding connective processes in instruction in grades 9–12. Problems invite mathematical modeling, unify diverse content, call for different representations, and encourage students to look back at their work to find connections. Activities feature such tasks as determining a dosage schedule for a prescription drug, making “transit graphs” to maximize travel through a canal, and deciding when to accept a “double dare” in a simple game.

The Navigations Series translates *Principles and Standards for School Mathematics* into action. Each book includes practical, teacher-tested activities and a supplemental CD-ROM that features applets for students' use and resources for teachers' professional development.

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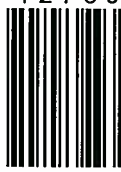
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