

NCTM 9-12 STANDARDS	BOOK IA				BOOK IB			
	1	2	3	4	5	6	7	8
NUMBER AND OPERATIONS								
Understand numbers, ways of representing numbers, relationships among numbers, and number systems	●	●	●		●	●	●	
Understand meanings of operations and how they relate to one another	●	●			●	●	●	
Compute fluently and make reasonable estimates	●	●	●	●	●	●	●	●
ALGEBRA								
Understand patterns, relations, and functions	●	●	●	●	●	●	●	●
Represent and analyze mathematical situations and structures using algebraic symbols—formal direct, indirect, and induction proofs	●	●	●	●	●	●	●	
Use mathematical models to represent and understand quantitative relationships	●	●	●	●	●	●	●	
Analyze change in various contexts		●	●	●	●	●	●	
GEOMETRY								
Analyze characteristics and properties of two- and three-dimensional geometric shapes and develop mathematical arguments about geometric relationships								
Specify locations and describe spatial relationships using coordinate geometry and other representational systems			●					
Apply transformations and use symmetry to analyze mathematical situations			●					
Use visualization, spatial reasoning, and geometric modeling to solve problems			●		●		●	



BOOK 2A			BOOK 2B			BOOK 3A				BOOK 3B			
1	2	3	4	5	6	1	2	3	4	5	6	7	8
		•		•	•	•	•	•	•	•	•	•	•
•	•	•		•	•		•		•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•			
•							•	•		•			
•	•	•	•	•	•	•	•	•	•	•	•		•
•	•	•	•	•	•	•	•	•	•	•			•
•	•	•	•	•	•	•	•	•	•	•	•		
•	•	•	•	•	•	•	•	•	•	•	•	•	•

NCTM 9-12 STANDARDS	BOOK IA				BOOK IB			
	1	2	3	4	5	6	7	8
MEASUREMENT								
Understand measurable attributes of objects and the units, systems, and processes of measurement	●		●	●		●		
Apply appropriate techniques, tools, and formulas to determine measurements	●	●	●	●	●		●	●
DATA ANALYSIS AND PROBABILITY								
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them	●	●	●	●	●			●
Select and use appropriate statistical methods to analyze data	●	●		●	●			●
Develop and evaluate inferences and predictions that are based on data	●			●	●	●		●
Understand and apply basic concepts of probability				●				●
PROBLEM SOLVING								
all aspects	●	●	●	●	●	●	●	●
REASONING AND PROOF								
all aspects except formal proofs	●	●	●	●	●	●	●	●
direct, indirect and induction proofs								
COMMUNICATION								
all aspects	●	●	●	●	●	●	●	●
CONNECTIONS								
all aspects	●	●	●	●	●	●	●	●
REPRESENTATIONS								
all aspects	●	●	●	●	●	●	●	●



BOOK 2A			BOOK 2B			BOOK 3A				BOOK 3B			
1	2	3	4	5	6	1	2	3	4	5	6	7	8
•	•	•	•	•			•	•	•	•		•	•
•	•	•	•	•		•	•	•	•	•		•	•
			•					•	•	•			
•			•				•	•	•				
									•				
									•				
•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•	•	•	•