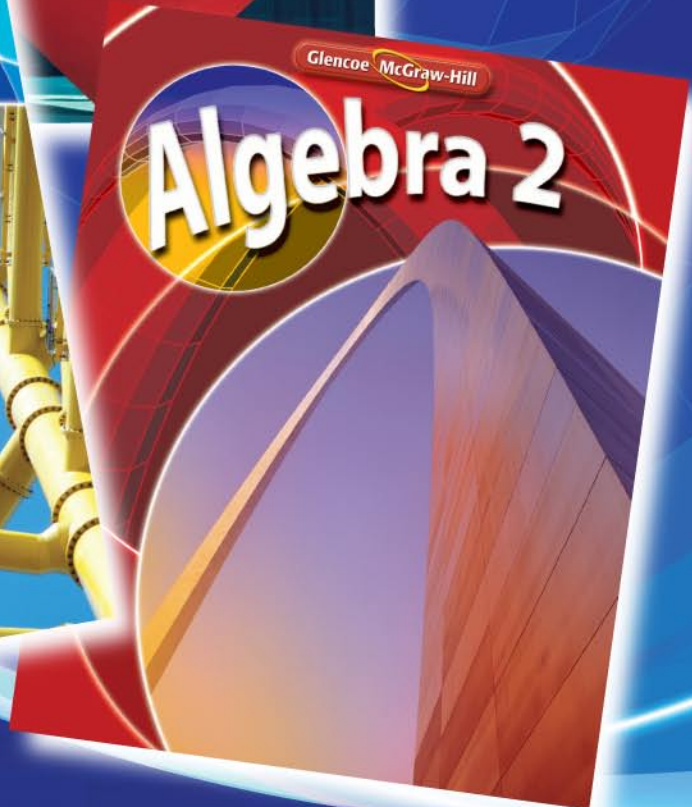
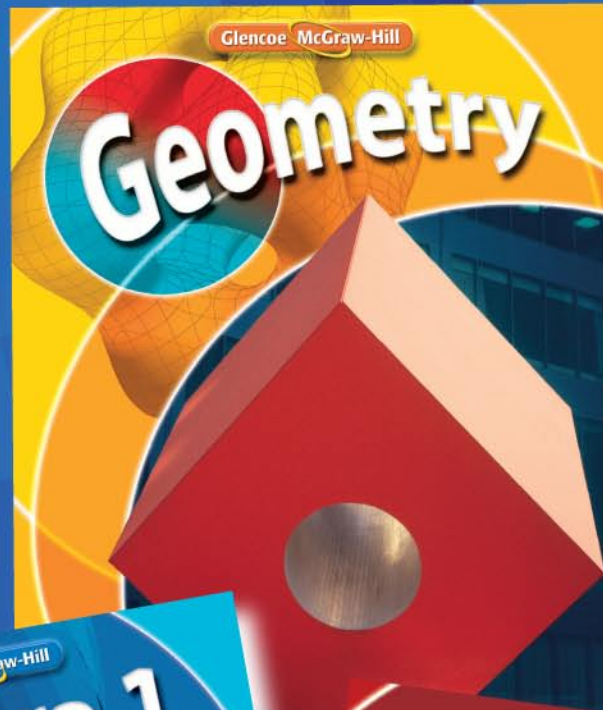


# CORRELATIONS TO THE NCTM STANDARDS

For Glencoe Algebra 1, Geometry, and Algebra 2 ©2008



Glencoe

# NCTM STANDARDS For School Mathematics

The Standards portion of the NCTM Principles and Standards for School Mathematics center upon ten areas of mathematics curriculum development. The number assigned to each standard is for easy reference and is not part of each standard's official title.

*Instructional programs from prekindergarten through grade 12 should enable all students to —*

## ① Number and Operations

- Understand numbers, ways of representing numbers, relationships among numbers, and number systems
- Understand the meaning of operations and how they relate to each other
- Compute fluently and make reasonable estimates

## ② Algebra

- Understand patterns, relations, and functions
- Represent and analyze mathematical situations and structures using algebraic symbols
- Use mathematical models to represent and understand quantitative relationships
- Analyze change in various contexts

## ③ 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

## ④ Measurement

- Understand measurable attributes of objects and the units, systems, and processes of measurement
- Apply appropriate techniques, tools, and formulas to determine measurements

## ⑤ 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

continued on next page →

*Instructional programs from prekindergarten through grade 12 should enable all students to —*

**6 Problem Solving**

- Build new mathematical knowledge through problem solving
- Solve problems that arise in mathematics and in other contexts
- Apply and adapt a variety of appropriate strategies to solve problems
- Monitor and reflect on the process of mathematical problem solving

**7 Reasoning and Proof**

- Recognize reasoning and proof as fundamental aspects of mathematics
- Make and investigate mathematical conjectures
- Develop and evaluate mathematical arguments and proofs
- Select and use various types of reasoning and methods of proof

**8 Communication**

- Organize and consolidate their mathematical thinking through communication
- Communicate their mathematical thinking coherently and clearly to peers, teachers, and others
- Analyze and evaluate the mathematical thinking and strategies of others
- Use the language of mathematics to express mathematical ideas precisely

**9 Connections**

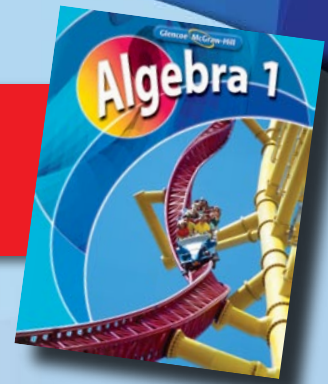
- Recognize and use connections among mathematical ideas
- Understand how mathematical ideas build on one another to produce a coherent whole
- Recognize and apply mathematics in contexts outside of mathematics

**10 Representation**

- Create and use representations to organize, record, and communicate mathematical ideas
- Select, apply, and translate among mathematical representations to solve problems
- Use representations to model and interpret physical, social, and mathematical phenomena

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## Correlation to NCTM Standards



Lesson	NCTM Standards
1-1	1, 2, 3, 6, 8, 9, 10
1-2	1, 2, 6, 8, 9, 10
1-3	1, 2, 6, 8, 9, 10
1-4	1, 2, 6, 8, 9, 10
1-5	1, 2, 6, 8, 9, 10
1-6	1, 2, 6, 8, 9, 10
1-7	6, 7, 8, 9, 10
1-7 Extend	6, 7, 8, 9, 10
1-8	1, 6, 8, 9, 10
1-9	1, 6, 8, 9, 10
1-9 Extend	1, 6, 8, 9, 10
2-1	1, 2, 6, 8, 9, 10
2-2 Explore	1, 2, 10
2-2	1, 2, 6, 8, 9, 10
2-3	1, 2, 6, 8, 9, 10
2-4 Explore	1, 2, 10
2-4	1, 2, 6, 8, 9, 10
2-5	1, 2, 6, 8, 9, 10
2-6	1, 2, 3, 6, 8, 9, 10
2-7	1, 2, 6, 8, 9, 10
2-8	1, 2, 6, 8, 9, 10
2-9	1, 2, 6, 8, 9, 10
2-9 Extend	1, 2, 6, 9
3-1 Explore	2, 3, 4, 6, 7, 8, 9, 10
3-1	2, 3, 6, 8, 9, 10
3-2	2, 3, 6, 8, 9, 10
3-3	2, 3, 6, 8, 9, 10
3-3 Extend	2, 3, 10
3-4	1, 2, 6, 8, 9, 10
3-5	1, 2, 3, 6, 8, 9, 10
4-1 Explore	2, 3, 4, 6, 7, 8, 9, 10
4-1	2, 3, 4, 6, 7, 8, 9, 10
4-2	2, 4, 8, 9, 10
4-3 Explore	2, 3, 4, 8, 9, 10
4-3	2, 3, 4, 6, 8, 9, 10
4-3 Extend	2, 6, 7, 8, 10
4-4	2, 6, 8, 9, 10
4-4 Extend	2, 6, 8, 9, 10

Lesson	NCTM Standards
4-5	2, 6, 8, 9, 10
4-6	2, 5, 6, 7, 8, 9, 10
4-6 Extend	2, 5, 7, 8, 9, 10
4-7	2, 3, 6, 7, 8, 9, 10
5-1 Explore	1, 2, 6, 9, 10
5-1	2, 6, 8, 9, 10
5-1 Extend	2, 6
5-2	2, 6, 8, 9, 10
5-3	2, 6, 8, 9, 10
5-4	2, 6, 8, 9, 10
5-5	2, 6, 8, 9, 10
6-1	2, 6, 8, 9, 10
6-2 Explore	2, 6, 8, 9, 10
6-2	2, 6, 8, 9, 10
6-3	2, 6, 8, 9, 10
6-4	2, 4, 6, 8, 9, 10
6-5	2, 4, 6, 8, 9, 10
6-5 Extend	2, 6, 7, 8, 10
6-6	2, 6, 8, 9, 10
6-7	2, 6, 8, 9, 10
6-7 Extend	2, 6, 8, 9, 10
6-8	2, 6, 8, 9, 10
7-1	2, 6, 8, 9, 10
7-1 Extend	2, 3, 6, 7
7-2	2, 6, 8, 9, 10
7-3 Explore	2, 10
7-3	2, 6, 8, 9, 10
7-4 Explore	2, 10
7-4	2, 6, 8, 9, 10
7-5	2, 6, 8, 9, 10
7-6 Explore	2, 10
7-6	2, 6, 8, 9, 10
7-7	2, 6, 8, 9, 10
8-1	1, 2, 6, 8, 9, 10
8-2 Explore	2, 6, 8, 10
8-2	2, 6, 8, 9, 10
8-3 Explore	2, 6, 8, 10
8-3	2, 6, 8, 9, 10

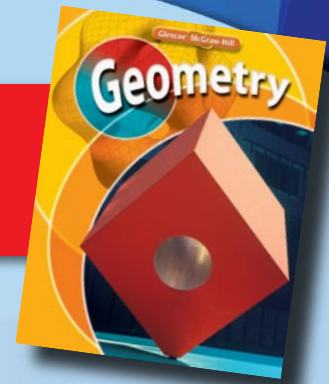
Lesson	NCTM Standards
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8-5	2, 3, 6, 8, 9, 10
8-6	2, 6, 8, 9, 10
9-1 Explore	2, 3, 4, 6, 7, 8, 9, 10
9-1	2, 6, 8, 9, 10
9-1 Extend	2, 6, 7, 8
9-2	2, 6, 8, 9, 10
9-3	2, 6, 8, 9, 10
9-4	2, 6, 8, 9, 10
9-4 Extend	2, 6, 8, 9, 10
9-5	2, 6, 8, 9, 10
9-6 Explore	1, 2, 3, 6, 7, 8, 10
9-6	2, 6, 8, 9, 10
9-6 Extend	5, 6, 8, 9
10-1	1, 2, 6, 8, 9, 10
10-1 Extend	1, 2, 6, 7, 8, 10
10-2	1, 6, 8, 9, 10
10-3	2, 6, 8, 9, 10
10-3 Extend	2, 6, 8
10-4	1, 2, 3, 6, 8, 9, 10
10-5	1, 2, 3, 6, 8, 9, 10
10-6	1, 2, 3, 6, 8, 9, 10
11-1 Explore	5, 6, 8, 9
11-1	1, 2, 6, 8, 9, 10
11-2	1, 2, 6, 8, 9, 10
11-2 Extend	2, 8
11-3	1, 2, 6, 8, 9, 10
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11-6	1, 2, 6, 8, 9, 10
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11-8	1, 2, 6, 8, 9, 10
11-9	1, 2, 6, 8, 9, 10
12-1	1, 5, 6, 8, 9
12-2	1, 5, 6, 8, 9, 10
12-3	1, 5, 6, 8, 9, 10
12-4	1, 5, 6, 8, 9, 10
12-5	1, 5, 6, 8, 9, 10
12-6	1, 5, 6, 8, 9, 10

### KEY

- 1 = Number & Operations
- 2 = Algebra
- 3 = Geometry
- 4 = Measurement
- 5 = Data Analysis & Probability
- 6 = Problem Solving
- 7 = Reasoning & Proof
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- 10 = Representation

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## Correlation to NCTM Standards



Lesson	NCTM Standards
1-1	3, 6, 8, 9, 10
1-2	2, 3, 4, 6, 8, 9, 10
1-3	1, 2, 3, 4, 6, 8, 9, 10
1-3 Extend	1, 2, 3, 4, 6, 8, 10
1-4	1, 2, 3, 6, 8, 9, 10
1-5	2, 3, 6, 8, 9, 10
1-5 Extend	3
1-6	2, 3, 4, 6, 8, 9, 10
1-6 Extend	3, 4, 6, 7, 8
1-7	2, 3, 5, 6, 8, 9, 10
1-7 Extend	3, 4
2-1	1, 6, 7, 8, 9, 10
2-2	6, 7, 8, 9, 10
2-3	3, 6, 7, 8, 9, 10
2-4	3, 6, 7, 8, 9, 10
2-5	3, 6, 7, 8, 9, 10
2-6	2, 3, 6, 7, 8, 9, 10
2-7	3, 6, 7, 8, 9, 10
2-8	3, 6, 7, 8, 9, 10
3-1	3, 6, 8, 9, 10
3-2 Explore	3, 7, 8
3-2	2, 3, 6, 7, 8, 9, 10
3-3 Explore	2, 6, 7, 8, 9, 10
3-3	2, 3, 6, 8, 9, 10
3-4	2, 3, 6, 8, 9, 10
3-4 Extend	2, 3, 7, 8, 9
3-5	2, 3, 6, 7, 8, 9, 10
3-6 Explore	3, 6
3-6	2, 3, 6, 8, 9, 10
3-6 Extend	3, 7, 8
4-1	3, 6, 8, 9, 10
4-2 Explore	3, 6, 10
4-2	3, 6, 8, 9, 10
4-3	3, 6, 8, 9, 10
4-4	3, 6, 7, 8, 9, 10
4-5	3, 6, 7, 8, 9, 10
4-5 Extend	3, 7, 10

Lesson	NCTM Standards
4-6	3, 6, 7, 8, 9, 10
4-7	3, 6, 7, 8, 9, 10
5-1 Explore	3, 10
5-1	2, 3, 6, 8, 9, 10
5-2	2, 3, 6, 8, 9, 10
5-3	2, 3, 6, 7, 8, 10
5-4 Explore	3, 7, 8, 10
5-4	2, 3, 6, 7, 8, 9, 10
5-5	2, 3, 6, 7, 8, 9, 10
6-1	2, 3, 6, 8, 9, 10
6-1 Extend	2, 3, 6
6-2	2, 3, 6, 8, 9, 10
6-3 Explore	3, 7, 8, 10
6-3	2, 3, 6, 7, 8, 9, 10
6-4	2, 3, 6, 8, 9, 10
6-5	2, 3, 6, 7, 8, 9, 10
6-5 Extend	3, 6
6-6	2, 3, 6, 7, 8, 9, 10
6-7	2, 3, 6, 7, 8, 9, 10
7-1	1, 2, 6, 8, 9, 10
7-1 Extend	1, 6, 8
7-2	1, 2, 3, 6, 8, 9, 10
7-3	1, 2, 3, 6, 8, 9, 10
7-4	1, 2, 3, 6, 8, 9, 10
7-5	1, 2, 3, 6, 8, 9, 10
7-5 Extend	1, 2, 3, 6, 8, 9, 10
8-1	1, 3, 6, 8, 9, 10
8-2 Explore	3, 6
8-2	3, 6, 8, 9, 10
8-3 Explore	3, 4, 7
8-3	3, 6, 8, 9, 10
8-4 Explore	3, 7, 8, 10
8-4	3, 6, 8, 9, 10
8-5	3, 6, 8, 9, 10
8-6	3, 6, 8, 9, 10
8-6 Extend	3, 6
8-7	3, 6, 8, 9, 10

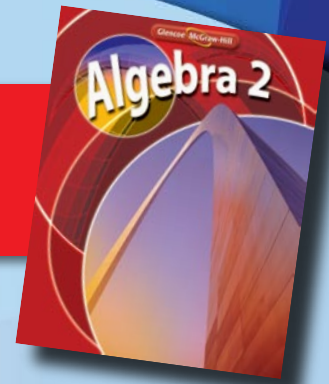
Lesson	NCTM Standards
9-1 Explore	3
9-1	2, 3, 6, 8, 9, 10
9-2	2, 3, 6, 8, 9, 10
9-3	2, 3, 6, 8, 9, 10
9-4	2, 3, 6, 8, 9, 10
9-5	2, 3, 6, 8, 9, 10
9-6	2, 3, 6, 8, 9, 10
9-6 Extend	1, 3, 4, 6, 9
10-1	3, 4, 6, 8, 9, 10
10-2	3, 6, 8, 9, 10
10-3	3, 4, 6, 8, 9, 10
10-4	3, 6, 8, 9, 10
10-5	3, 6, 8, 9, 10
10-5 Extend	3, 6
10-6	3, 6, 8, 9, 10
10-7	3, 4, 6, 8, 9, 10
10-8	3, 4, 6, 8, 9, 10
11-1	3, 6, 8, 9, 10
11-2 Explore	3, 4, 7, 8
11-2	3, 6, 8, 9, 10
11-3 Explore	3, 4
11-3	3, 6, 8, 9, 10
11-4	3, 6, 8, 9, 10
11-5	3, 5, 6, 8, 9, 10
12-1	3, 6, 8, 9, 10
12-2	3, 6, 8, 9, 10
12-3	3, 6, 8, 9, 10
12-4	3, 6, 8, 9, 10
12-5	3, 6, 8, 9, 10
12-6	3, 6, 8, 9, 10
12-6 Extend	3, 8, 9, 10
13-1	2, 3, 6, 8, 9, 10
13-1 Extend	2, 3, 6
13-2	2, 3, 6, 8, 9, 10
13-3	2, 3, 6, 8, 9, 10
13-4	3, 6, 8, 9, 10
13-5	3, 6, 8, 9, 10

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## Correlation to NCTM Standards



Lesson	NCTM Standards
1-1	1, 2, 4, 8, 9
1-2	1, 8, 9
1-3	1, 2, 4, 6, 8, 9
1-4	1, 2, 8, 9, 10
1-5	1, 2, 6, 8, 9
1-6	1, 2, 6, 9, 10
2-1	1, 2, 7, 9, 10
2-2	1, 2, 4, 6, 8, 9
2-3	1, 2, 4, 6, 7, 8, 9, 10
2-3 Extend	2, 6, 7, 8, 9, 10
2-4	1, 2, 6, 8, 9, 10
2-5	1, 2, 5, 6, 8, 9, 10
2-5 Extend	1, 2, 4, 5, 6, 9, 10
2-6	1, 2, 5, 6, 8, 9, 10
2-7	1, 2, 6, 8, 9, 10
3-1	1, 2, 6, 8, 9, 10
3-2	1, 2, 6, 7, 8, 9, 10
3-3	1, 2, 6, 8, 9, 10
3-3 Extend	1, 2
3-4	1, 2, 6, 8, 9, 10
3-5	1, 2, 6, 7, 8, 9, 10
4-1	1, 2, 5, 8, 9, 10
4-1 Extend	1, 5, 10
4-2	1, 2, 6, 8, 9, 10
4-3	1, 2, 3, 6, 8, 9, 10
4-4	1, 2, 6, 8, 9, 10
4-5	1, 2, 4, 6, 7, 8, 9
4-6	1, 2, 6, 8, 9, 10
4-7	1, 2, 6, 8, 9, 10
4-8	1, 2, 6, 7, 8, 9, 10
4-8 Extend	1, 2, 10
5-1	2, 3, 6, 8, 9, 10
5-2	1, 2, 6, 8, 9, 10
5-2 Extend	2, 5, 6, 8, 10
5-3	1, 2, 3, 6, 7, 8, 9
5-4	1, 2, 3, 6, 7, 8, 9, 10
5-5	1, 2, 3, 6, 7, 8, 9, 10
5-6	1, 2, 6, 8, 9

Lesson	NCTM Standards
5-7 Explore	2, 8, 10
5-7	2, 6, 7, 8, 9, 10
5-7 Extend	2, 6, 8, 9, 10
5-8	2, 3, 6, 8, 9, 10
6-1	1, 2, 6, 7, 8, 9, 10
6-2	1, 2, 6, 8, 9, 10
6-3	1, 2, 6, 7, 8, 9
6-4	1, 2, 6, 7, 8, 9, 10
6-5	1, 2, 6, 8, 9, 10
6-5 Extend	2, 5, 6, 9, 10
6-6	1, 2, 3, 4, 6, 8, 9, 10
6-7	1, 2, 3, 6, 8, 9, 10
6-8	1, 2, 3, 4, 6, 7, 8, 9, 10
6-9	1, 2, 3, 4, 6, 7, 8, 9
7-1	1, 2, 6, 7, 8, 9, 10
7-2	1, 2, 3, 4, 6, 7, 8, 9, 10
7-3	1, 2, 6, 7, 8, 9, 10
7-4	1, 2, 6, 7, 8, 9
7-5	1, 2, 6, 7, 8, 9, 10
7-6	1, 2, 6, 8, 9
7-7	1, 2, 6, 8, 9, 10
7-7 Extend	1, 2, 10
8-1	2, 6, 8, 9, 10
8-2	2, 6, 8, 9, 10
8-3	2, 6, 8, 9, 10
8-3 Extend	2, 6, 8
8-4	1, 2, 6, 8, 9, 10
8-5	2, 6, 8, 9, 10
8-6	2, 6, 8, 9, 10
8-6 Extend	2, 6
9-1	1, 2, 3, 4, 6, 8, 9, 10
9-1 Extend	2, 6, 7, 10
9-2	1, 2, 3, 4, 6, 7, 8, 9
9-2 Extend	1, 2, 3, 5, 6, 8, 10
9-3	1, 2, 4, 6, 7, 8, 9
9-4	1, 2, 4, 6, 8, 9
9-4 Extend	1, 2, 3
9-5	1, 2, 3, 4, 6, 7, 8, 9
9-6	1, 2, 4, 6, 8, 9
9-6 Extend	2, 4, 6, 7, 8, 9, 10
10-1	2, 3, 6, 8, 9, 10
10-2	2, 3, 6, 8, 9, 10
10-3	2, 3, 6, 8, 9, 10
10-4 Explore	3, 4, 7, 8

Lesson	NCTM Standards
10-4	2, 3, 6, 8, 9, 10
10-5	2, 3, 6, 8, 9, 10
10-6	2, 3, 6, 8, 9, 10
10-7	2, 3, 6, 8, 9, 10
11-1	1, 6, 7, 8, 9
11-2	1, 6, 7, 8, 9, 10
11-3	1, 2, 6, 7, 8, 9, 10
11-3 Extend	1, 6
11-4	1, 2, 6, 7, 8, 9, 10
11-5	1, 2, 6, 7, 8, 9, 10
11-6 Explore	1, 6, 8, 9, 10
11-6	1, 2, 6, 7, 8, 9, 10
11-6 Extend	1, 3, 4, 6, 7, 8
11-7	1, 2, 6, 8, 9, 10
11-8	2, 6, 7, 8
12-1	1, 5, 6, 8, 9, 10
12-2	1, 5, 6, 8, 9, 10
12-3	1, 5, 6, 8, 9, 10
12-4	1, 5, 6, 8, 9, 10
12-5	1, 5, 6, 8, 9, 10
12-6	1, 5, 6, 8, 9, 10
12-7	1, 5, 6, 8, 9, 10
12-8	1, 5, 6, 8, 9, 10
12-8 Extend	1, 5, 6, 9, 10
12-9	1, 5, 6, 8, 9, 10
12-10 Explore	5, 7, 8, 9, 10
12-10	1, 5, 6, 8, 9, 10
13-1 Explore	2, 3, 6
13-1	2, 3, 6, 8, 9, 10
13-2	1, 3, 4, 6, 8, 9, 10
13-2 Extend	1, 3, 4, 6, 8
13-3	1, 3, 4, 6, 8, 9, 10
13-4	1, 3, 4, 6, 8, 9, 10
13-5	1, 3, 4, 6, 8, 9, 10
13-6	1, 3, 4, 6, 8, 9, 10
13-7	1, 3, 4, 6, 8, 9, 10
14-1	1, 2, 6, 7, 8, 9, 10
14-2	1, 2, 3, 4, 6, 8, 9, 10
14-3	1, 2, 6, 8, 9, 10
14-4	2, 8
14-5	1, 2, 6, 7, 8, 9, 10
14-6	1, 2, 7, 8, 9, 10
14-7 Explore	2, 10
14-7	1, 2, 6, 7, 8, 9, 10

### KEY

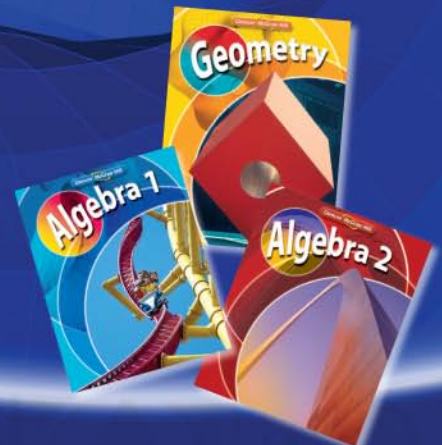
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