

NCTM Strands

Algebra



NCTM Strands

Number and Operations

Algebra

Geometry

Measurement

Data Analysis & Probability

NCTM Strands

Strand 2

Number and Operations

Algebra

Geometry

Measurement

Data Analysis & Probability

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

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Algebra

1

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Algebra

1

Understand patterns

Sort, classify, and order objects by size, number, and other properties



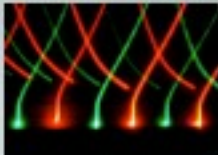
Algebra

1

Understand patterns

Recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another

Copy a pattern
(vertical & horizontal)



Algebra

1

Understand patterns

Recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another

Extend a pattern

A C E G I K M O

Algebra

1

Understand patterns

Recognize, describe, and extend patterns such as sequences of sounds and shapes or simple numeric patterns and translate from one representation to another

What role/function does it have?



Algebra

1

Understand patterns

Analyze how both repeating and growing patterns are generated.



Algebra

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Algebra

2

Understand patterns, relations, and functions

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Algebra

2

Represent & Analyze

Illustrate general principles and properties of operations, such as commutativity, using specific numbers.



Algebra

2

Represent & Analyze

Illustrate general principles and properties of operations, such as commutativity, using specific numbers.

$$1 + 3 = 3 + 1$$

Algebra

2

Represent & Analyze

Use concrete, pictorial, and verbal representations to develop an understanding of invented and conventional symbolic notations.



Algebra

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Algebra

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<http://bit.ly/islandmat>

Algebra

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Algebra

3

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Algebra

3

Use mathematical quantities

Model situations that involve the addition and subtraction of whole numbers, using objects, pictures, and symbols.



Algebra

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Algebra

4

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Algebra

4

Analyze change

Describe qualitative change



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Algebra

4

Analyze change

Describe quantitative change, such as a student's growing two inches in one year.



Algebra

Understand patterns, relations, and functions

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