

What is Algebra



Algebra Basics

History

Laws for Real
Numbers

Stupid
questions

Polynomials

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Algebra Basics for 100.



Variables x, y, z usually represent:

Days of the week

People you know

Calories

Time

Unknown numbers

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Algebra Basics for 200.



n is usually used to symbolize

a name

a coefficient

a fraction

a natural number

a complex number

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Algebra Basics for 300.



a, b, c, d usually symbolize

values

functions

variables

constants

parabolas

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Algebra Basics for 400.



Which of the following is not an algebraic operation?

Addition

Multiplication

Division

Subtraction

Solving

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History for 100.



"Algebra = Calculating by Balancing" in :

Latin

Greek

French

Arabic

English

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History for 200.



Algebra does NOT deal with

algebraic expressions
linear equations
quadratic equations
polynomials
differential equations

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History for 300.



Which of the following equations is not algebraic?

$$0 = 4x - 4y + 3z$$

$$0 = 4x^2 - 4x + 3$$

$$x^2 + y^2 = 1$$

$$\cos x = 1$$

$$0 = x^3 - 4x^2 - 4x + 3$$

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History for 400.



Which of the following curves is not studied by algebra?

- a line
- a parabola
- a cubic curve
- a spiral
- a hyperbola

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Laws for Real Numbers for 100.



The equation $a + b = b + a$ is called

Addition Property

Commutative Property of Multiplication

Commutative Property of Addition

Associative Property

Easy Property

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Laws for Real Numbers for 200.



The equation $ab = ba$ is called

Multiplication Property

Symmetry Property

Cumulative Property of Multiplication

Associative Property

Commutative Property of Multiplication

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Laws for Real Numbers for 300.



The equation $a(b + c) = ab + ac$ is called

Multiplication Law for Three Numbers

Parenthesis Law

Distributive Law

Associative Law

Commutative Law

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Laws for Real Numbers for 400.



The equation $a(bc) = (ab)c = abc$ is called

Multiplication Property for Three Numbers

Parenthesis Property

Associative Property of Addition

Associative Property of Multiplication

Commutative Property of Multiplication

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Stupid questions for 100.



0 is called an identity for addition, because $a + 0 =$

0

1

a

10

$10a$

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Stupid questions for 200.



1 is called an identity for multiplication, because it satisfies $a \cdot 1 =$

1

$1/a$

0

a

a_1

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Stupid questions for 300.



a^{-1} is called and an inverse element for a , because
 $a \times a^{-1} =$

a

a^2

1

0

$1/a$

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Stupid questions for 400.



An equal sign in means

the equation is always true

the equation is true if all variables are zero

the equation is true for any values substituted for variables

the equation is true for integers

the equation is true only for numbers that solve the equation

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Polynomials for 100.



The degree of $y = -6x^4 + 3x^3 + 2x^2 + 7x + 2$

6

-6

2

4

3

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Polynomials for 200.



Let $y = 3x^3 + 2x^2 - 7x - 5$. when $x = 0$ then $y = ?$

2

3

-7

-5

0

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Polynomials for 300.



The graph of $y = -2x^2 + 7x + 2$ is:

- a line
- a hyperbola
- a cubic curve
- a parabola
- a point

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Polynomials for 400.



Let $y = -5x^2 + 7x + 2$. Then when x is very large

$y = 0$

y is very small

y is constant

y is negative

y is very large positive

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