

Learning Outcomes 00020 Fall 2013

00020 Basic Algebra I (2)

Learning Outcomes for Basic Algebra I, MATH-00020

Knowledge

The students should learn the properties of whole numbers, fractions, decimals, percents, signed numbers and order of operations. Should learn how to use mental math and elementary algebraic thinking skills. Should learn not to use calculators.

Comprehension

Should be able to perform operations with whole numbers, fractions, decimals, percents and signed numbers without the use of the calculator.

Application

The main and most important application is to solve many different problems related to the subject.

Analysis

Should be able to use mental math and elementary algebraic thinking skills.

Synthesis

Should start developing abstract thinking.

Evaluation

Should work consistently to complete progress and comprehensive assessments in ALEKS.

Class Activities

To solve problems in class and discuss mathematical ideas.

Out of class Activities

To work regularly to solve problems and add topics to the ALEKS pie.

Learning Outcomes 00021 Fall 2013

00021 Basic Algebra I (2)

Learning Outcomes for Basic Algebra I, MATH-00021

Knowledge

The students should learn operations on integers, fractions, decimals and percents, properties of real numbers. Should be familiar with the first degree equations and start problem-solving with formulas. Should learn how to solve equations and inequalities in one variable, linear equations.

Comprehension

Should understand the notion of the rate of change and slope, should be able to draw graphs in the Cartesian plane.

Application

The main and most important application is to solve many different problems related to the subject.

Analysis

Should be able to solve first degree equations and start problem-solving with formulas

Synthesis

Should start developing abstract thinking.

Evaluation

Should work consistently to complete progress and comprehensive assessments in ALEKS

Class Activities

To solve problems in class and discuss mathematical ideas.

Out of class Activities

To work regularly to solve problems and add topics to the ALEKS pie.

Learning Outcomes 00022 Fall 2013

00022 Basic Algebra II (2)

Learning Outcomes for Basic Algebra II, MATH-00022

Knowledge

The students should learn the notions of functions, systems of linear equations, exponents, polynomial operations, should get acquainted with scientific notation.

Comprehension

Should understand factoring polynomials, solving quadratics by factoring, radicals and rational exponents.

Application

The main and most important application is to solve many different problems related to the subject.

Analysis

Should be able to factor polynomials, and to solve quadratics by factoring, solve problems related to radicals and rational exponents.

Synthesis

Should continue developing abstract thinking.

Evaluation

Should work consistently to complete progress and comprehensive assessments in ALEKS

Class Activities

To solve problems in class and discuss mathematical ideas.

Out of class Activities

To work regularly to solve problems and add topics to the ALEKS pie.

Learning Outcomes 00023 Fall 2013

00023 Basic Algebra III (2)

Learning Outcomes for Basic Algebra III, MATH-00023

Knowledge

The students should learn the notions of zeros of functions, rational expressions and equations, problem-solving with rational expressions, intermediate factoring techniques.

Comprehension

Should be able to understand notions related to Quadratics: functions, graphs, equations, inequalities, "quadratic type" equations.

Application

The main and most important application is to solve many different problems related to the subject.

Analysis

Should be able to analyze the graphs, equations, inequalities related to quadratics.

Synthesis

Should continue developing abstract thinking.

Evaluation

Should work consistently to complete progress and comprehensive assessments in ALEKS

Class Activities

To solve problems in class and discuss mathematical ideas.

Out of class Activities

To work regularly to solve problems and add topics to the ALEKS pie.

Learning Outcomes 00024 Fall 2013

00024 Basic Algebra IV (2)

Learning Outcomes for Basic Algebra IV, MATH-00024

Knowledge

The students should learn the advanced factoring techniques, rational functions, radical equations, absolute value equations and inequalities, exponential and logarithmic functions.

Comprehension

Should be able to solve problems with Exponential and logarithmic functions.

Application

The main and most important application is to solve many different problems related to the subject.

Analysis

Should be able to analyze the graphs of and the information related to the exponential and logarithmic functions.

Synthesis

Should continue developing abstract thinking.

Evaluation

Should work consistently to complete progress and comprehensive assessments in ALEKS

Class Activities

To solve problems in class and discuss mathematical ideas.

Out of class Activities

To work regularly to solve problems and add topics to the ALEKS pie.