

## **Objectives List:** *PreAlgebra*

PA.1.0Definition (regarder exceptions and effect the sign)PA.11.bRewrite addition or multiplication problems using the Associative and/or Commutative PropertiesLesson 2Commutative PropertiesPA.11.cRewrite subtraction problems as addition problems so that the Associative and Commutative Properties to solve equationsPA.2.aRewrite subtraction of a negative as addition of a positive and vice versaPA.11.cRewrite subtraction problems as addition Commutative Properties to solve equationsPA.3.aMultiply integersPA.12.aEsson 12PA.3.bExplain how negative factors affect the sign of the productPA.12.aEsson 12PA.4.aDivide integersPA.12.aExplain how the Distributive Property of Multiplication over AdditionPA.4.bExplain how the signs of the original numbers affect the sign of the quotientPA.12.cRewrite expressions by applying the Distributive Property of Multiplication over AdditionPA.5.aConvert from an exponential expression to a series of factors and vice versaPA.12.cRewrite expressions by finding the coefficient of onePA.5.aExplain how the sign of the equation, place value notation, exponential expression in wordsLesson 13Lesson 5Explain how induger, gimes, and pennies are parallel to units, tenths, and hundredths, respectivelyPA.13.aDefine multiplicative inverse equationsPA.5.bExplain how the use of parentheses affects the suid the value of an integer to a powerPA.14.bExplain the order of operations to solve for an unknown in an equationPA.5.bStyp	Lesson 1		Lesson 11	
of the sumPA.11.b.Rewrite addition or multiplication problems using the Associative and/or Commutative PropertiesLesson 2Subtract integersPA.11.c.Rewrite subtraction problems as addition problems so that the Associative and Commutative Properties can be appliedPA.2.aSubtract integersPA.11.d.Apply the Associative and Commutative Properties can be appliedPA.3.aMultiply integersPA.12.aExplain how the Distributive Property can be used to solve a problemPA.3.aMultiply integersPA.12.b.Explain how the Signs of the original numbers affect the sign of the quotientPA.12.c.Rewrite expressions by applying the Distributive Property of Multiplication over AdditionPA.4.aDivide integersPA.12.c.Rewrite expressions by finding the common the coreLesson 4Convert from an exponential expression to affect the sign of the quotientPA.12.c.Rewrite expressions by finding the common tectorLesson 5Explain how the signs of the original numbers affect the sign of the quotientPA.12.c.Rewrite expressions by finding the common tectorLesson 6Explain how the signs of the original numbers affect the sign of the quotientPA.12.c.Rewrite expressions by applying the Distributive Property of Multiplicative inversePA.5.aConvert from an exponential expression to wordsPA.12.c.Rewrite expressions by applying the Distributive PropertiesPA.5.aExplain how the signs of the original numbers affect the sign of the quotientPA.12.c.Rewrite expressions by applying the Distributive Properties<			PA.11.a	Identify the operations to which the Associative and Commutative Properties apply
PA.2.a       Subtract integers       PA.1.c       Rewrite subtraction problems as addition or a positive and vice versa         PA.2.b       Rewrite subtraction or a negative as addition or a positive and vice versa       PA.1.c       Rewrite subtraction problems as addition problems so that the Associative and Commutative Properties can be applied Commutative Properties can be applied Properties can be applied Commutative Properties to solve equations         PA.3.a       Multiply integers       PA.1.d       Apply the Associative and Commutative Property can be used to solve a problem         PA.4.a       Divide integers       PA.1.2.a       Explain how negative factors affect the sign of the original numbers affect the sign of the quotient       PA.12.b       Rewrite expressions by finding the coefficient or one coefficient or one coefficient or one ecoefficient or one ecoeffi			PA.11.b	using the Associative and/or
PA.2.b     Rewrite subtraction of a negative as addition of a positive and vice versa     Photom     Problems so that the Associative and Commutative Properties to solve equations       PA.3.a     Multiply integers     PA.1.d     Apply the Associative and Commutative Properties to solve equations       PA.3.b     Explain how negative factors affect the sign of the product     PA.1.d     PA.1.a     Explain how the Distributive Property can be used to solve a problem       PA.4.a     Divide integers     PA.1.a     Rewrite expressions by applying the Distributive Property of Multiplication over Addition       PA.5.a     Convert from an exponential expression to a series of factors and vice versa     PA.1.2.c     Rewrite expressions by finding the coefficient are understool to have a coefficient of one       PA.5.b     Express quantities in standard notation, place-value notation, expanded notation, and exponential notation; convert among these notations     PA.1.3.a     Define multiplicative inverse ontations       PA.5.b     Explain how duitars, dimes, and pennies are notations     PA.1.4.a     Explain the order of operations to evaluate expressions to solve equations       PA.7.a     Reise an integer to a power     PA.1.4.a     Explain the variace area of a solid is the sides of an expressions to solve equation       PA.7.a     Reise an integer raised to a power     PA.1.4.c     Use the area of all external surfaces of the solid solve equation       PA.5.b     Explain how duiting the same amount to both sides of an equation does not affect its v				•
Lesson 3       Properties to solve equations         PA.3.a       Multiply integers       PA.3.b       Explain how negative factors affect the sign of the product       PA.12.a       Explain how the Distributive Property can be used to solve a problem         Lesson 4       Divide integers       PA.12.b       Rewrite expressions by applying the Distributive Property of Multiplication over Addition         PA.4.a       Divide integers       PA.12.b       Rewrite expressions by applying the Distributive Property of Multiplication over Addition         PA.5.a       Explain how the signs of the original numbers affect the sign of the quotient       PA.12.C       Rewrite expressions by finding the common factor         PA.5.a       Convert from an exponential expression to a series of factors and vice versa       PA.12.C       Rewrite expressions by finding the coefficient or one         PA.5.b       Express exponential expressions in words       Lesson 13       Explain that variables with no specified coefficient or one         PA.5.b       Express quantities in standard notation, and exponential notation, convert among these notations       PA.13.C       Find the multiplicative inverse to solve equations         PA.6.b       Explain how dollars, dimes, and pennies are parallel to units, tenths, and hundredths, parallel expressions       PA.14.C       Use the order of operations to evaluate expression         PA.7.b       Explain how the use of parentheses affects the value of an integer raised to a power <td></td> <td>Rewrite subtraction of a negative as addition</td> <td>PA.11.c</td> <td>problems so that the Associative and</td>		Rewrite subtraction of a negative as addition	PA.11.c	problems so that the Associative and
PA.3.a       Multiply integers       Lesson 12         PA.3.b       Explain how negative factors affect the sign of the product       PA.12.a       Explain how the Distributive Property can be used to solve a problem         PA.4.a       Divide integers       PA.12.b       Rewrite expressions by applying the Distributive Property of Multiplication over Addition         PA.4.b       Explain how the signs of the original numbers affect the sign of the quotient       PA.12.c       Rewrite expressions by finding the common factor         PA.5.a       Convert from an exponential expression to a series of factors and vice versa       PA.12.d       Explain that variables with no specified coefficient are understoad to have a coefficient of one         PA.5.b       Express exponential expressions in words       Lesson 13         Lesson 6       PA.13.a       Define multiplicative inverse of a number place-value notation, expanded notation, and exponential notation; convert among these notations       PA.13.a       Define multiplicative inverse to solve equations         PA.5.b       Explain how dollars, dimes, and pennies are parallet to units, tenths, and hundredths, respectively       PA.14.b       Use the order of operations to evaluate expression         PA.7.a       Raise an integer to a power       PA.14.c       Use the order of operations to evaluate expressions         PA.7.b       Find the square roots of perfect squares       PA.14.c       Use the order of operations to solve equations	Lesson 3		PA.11.d	
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			PA.17.a	-
			PA.17.b	Convert temperature from degrees Fahrenheit to degrees Celsius



## **Objectives List:** *PreAlgebra*

Lesson 18		Lesson 27	
PA.18.a	Identify the absolute value symbol	PA.27.a	Find the volume of a cone given its altitude
PA.18.b	Determine the absolute value of a number		and its radius or diameter
PA.18.c	Simplify absolute value expressions	PA.27.b	Apply the formula $V = \frac{1}{3}Bh$ to determine the volume of a pyramid and cone
Lesson 19		Lesson 28	
PA.19.a	Explain the meaning of ratio and proportion	PA.28.a	Convert between military time and time on
PA.19.b	Solve problems involving proportions with unknowns		a 12-hour clock
PA.19.c	Write and solve proportions based on word problems	PA.28.b	Perform operations of addition and subtractio with military time
Lesson 20		Lesson 29	
PA.20.a	Write a proportion to solve for the missing side length in a pair of similar polygons	PA.29.a	Perform addition and subtraction with multiple customary units of measure
Lesson 21		Lesson 30	
PA.21.a	Define Least Common Multiple (LCM)	PA.30.a	Explain the difference between a rational and irrational number
PA.21.b	Find the LCM of two numbers by listing their respective multiples	PA.30.b	Identify numbers as rational or irrational
PA.21.c	Find the LCM of two numbers using prime factorization	PA.30.c	Find the square root of a number to the nearest hundredth, without a calculator
Lesson 22			
PA.22.a	Define Greatest Common Factor (GCF)		
PA.22.b	Find the GCF of two numbers by listing factors and selecting the greatest factor common to both lists		
PA.22.c	Find the GCF of two numbers using prime factorization		
Lesson 23			
PA.23.a	Define the terms polynomial, trinomial, binomial, and monomial		
PA.23.b	Show the relationships among physical, pictorial, and symbolic representations of polynomials		
PA.23.c	Calculate the sum of two polynomials		
Lesson 24			
PA.24.a	Find the volume of a cylinder given the height and the radius or diameter		
PA.24.b	Apply the formula <i>V</i> = <i>Bh</i> to determine the volume of a cylinder		
Lesson 25			
PA.25.a	Build a rectangle with blocks to find the product of polynomials		
PA.25.b	Multiply binomials		
PA.25.c	Explain the similarity between multiplication of base-10 numbers and base-x numbers		
Lesson 26			
PA.26.a	Calculate elapsed time in hour and minute units		
PA.26.b	Solve problems involving elapsed time in hours and minutes		