

Algebra 2

Friday 9/5/14

- Discuss sections 1.1 and 1.2
- Review and discuss Section 1.3
- Assignments: 1.10 and 1.30, due Mon 9/8
 - A#1.10 pages 49-50 [#11-27] 25
 - A#1.30 pg 51 [#28-39]

Review of Key Vocabulary

- Variables: Symbols (letters) used to represent unknown quantities.
- Algebraic Expressions: Expressions that contain at least one variable.
- Monomial: An algebraic expression that is a number, variable, or product of a number and one or more variables.
- Constants: Monomials that contain no variables.
- Coefficient: The numerical factor of a monomial.

Review of Key Vocabulary

• Degree: (of a monomial) is the sum of the exponents of its variables.

• Power: An expression in the form of x^n . The word is also used to refer to the exponent itself.

· Polynomial: A monomial or a sum of monomials.

Terms: (of a polynomial) the monomials that make up a polynomial.

Like Monomials that can be combined. The have the same variables to the same powers.

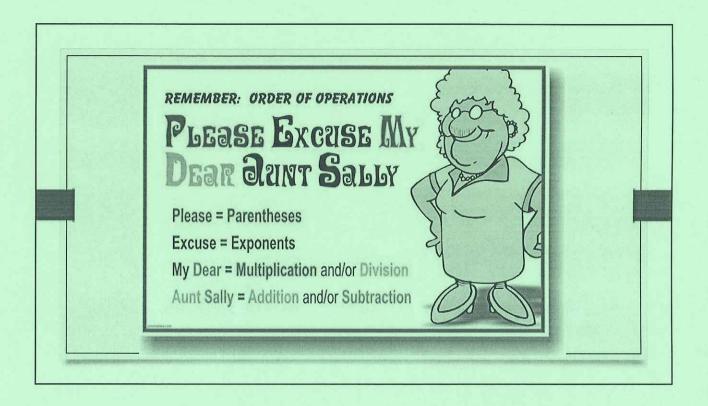
Terms:

Review of Key Vocabulary

• Trinomial: A polynomial that has three unlike terms.

• Binomal: A polynomial that has two unlike terms.

• Formula: A mathematical sentence that expresses the relationship between certain quantities.



Practice Problems – Evaluating Expressions Evaluate each expression if x = 4, y = -2, and z = 3.5. 1. z - x + y 2. x + (y - 1)3 3. x + [3(y + z) - y] 4. $\frac{x^2 - y}{z + 2.5}$ = 3.5 - 4 + (-2) = 4 + 3(-2) - 3 = 4 + [3(-2) + 3(3.5) - (-2)] = -0.5 - 2 = 4 - 4 - 3 = 4 + [6.5] = -2 - 3 = 4 + [6.5]

4

Practice Problems – Using Formulas

Simple interest is calculated using the formula I = prt, where p represents the principal in dollars, rrepresents the annual interest rate, and t represents the time in years. Find the simple interest I given in each set of values.

1.
$$p = $1,800, r = 6\%, t = 4$$
years

$$I = prt$$

= $1800(0.06)(4)$

$$= 1800(0.06)(4)$$

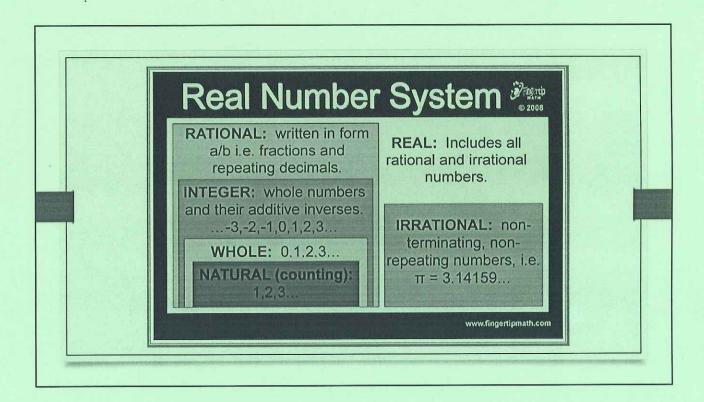
2.
$$p = $31,000, r = 2\frac{1}{2}\%, t = 18$$
 months

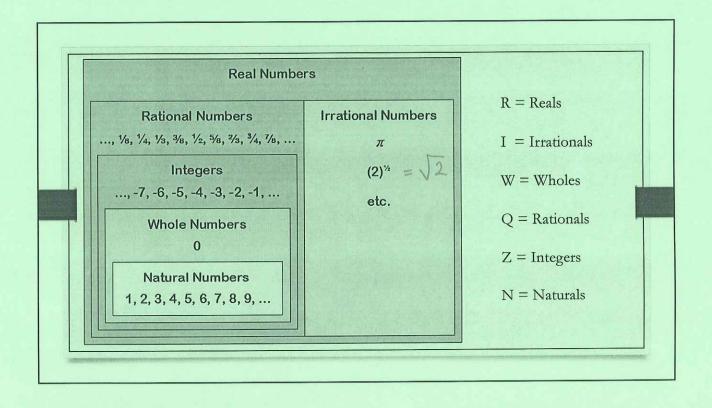
$$I = 31,000 (0.025)(1.5)$$

= 41162.50

Section 1.2

Properties of Real Numbers





Practice – Sets of Numbers

• Name the sets of numbers to which each number belongs:

Properties of Real Numbers

Property	Addition	Multiplication
Commutative	a+b=b+a	a*b=b*a
Associative	(a+b)+c=a+(b+c)	(a*b)*c = a*(b*c)
Identity	a+0=a=0+a	a*1=a=1*a
Inverse -	a + (-a) = 0 = (-a) + a	If $a \neq 0$, then $a * \frac{1}{a} = 1 = \frac{1}{a} * a$
Distributive	a(b+c) = ab + ac and (b+c)a = ba + ca	

Practice - Properties of Real Numbers

• Name the property illustrated by:

$$(-8+8)+15=0+15$$

additive inverse

• Identify the additive inverse and multiplicative inverse for -7.

Practice - Simplifying Expressions

• Simplify:

$$3(4x-2y)-2(3x+y)$$

$$= 12x - 6y - 6x - 2y$$

• Simplify:

$$\frac{1}{2}(16-4a)-\frac{3}{4}(12+20a)$$

