

Unit 1 and 2: Review

Chapter 1: Real numbers, algebra

Chapter 2: Equations and inequalities

(Chapter 1, page 2 ; Chapter 2, page 60)

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<input type="checkbox"/>	Real numbers ---- Natural numbers ---- Whole numbers ---- Integers ---- Rational numbers ---- Irrational numbers	Page 4
<input type="checkbox"/>	Addition, subtraction, multiplication and division -- $\frac{1}{3} + \frac{1}{4} =$ -- $\frac{12}{7} \div \frac{3}{14} =$	
<input type="checkbox"/>	More terms ---- Absolute value ---- Additive inverse or opposite ---- Subtraction, difference, subtrahend ---- Multiplicative inverse, reciprocal ---- Division, quotient ---- Division by zero ---- Binary operation, unary operation	Page 5 Page 6 Page 13

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<input type="checkbox"/>	Expressions	Page 14
<input type="checkbox"/>	Commutative properties -- Addition: -- Multiplication:	Page 15
<input type="checkbox"/>	Associative properties -- Addition: -- Multiplication:	
<input type="checkbox"/>	Identity properties: -- Addition: -- Multiplication:	
<input type="checkbox"/>	Distributive property of multiplication over addition:	Page 20
<input type="checkbox"/>	Multiplication by -1 : ---- Example: Simplify -- $(3x + 6) - (2x - 5)$ -- $3\{-3x - 2[5 - 3(x + 6)]\}$	Page 22

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	Equation	
<input type="checkbox"/>	<p>-- Solution set -- Addition property of equality -- Multiplication property of equality</p> <p>-- Solve $8x + 6 - 2x = -12 - 4x + 5$</p> <p>Check your answer:</p>	Page 26
	<p>Order of operations</p> <p>PEMDAS – Please Excuse My Dear Aunt Sally.</p> <p>-- Parentheses -- Exponents -- Multiplication/Division -- Addition/Subtraction</p> <p>--- Example</p>	

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<input type="checkbox"/>	Exponential notation	Page 35
<input type="checkbox"/>	Base, exponent: _____ to the power of _____ a^m	
<input type="checkbox"/>	Definition of integer exponents: $a^{-m} =$ ---- Example: _____	Definition page 36
<input type="checkbox"/>	Write <u>examples</u> with real numbers to all the below $a \neq 0$ $a^4 = a * a * a * a$ $a^3 = a * a * a$ $a^2 = a * a$ $a^1 = a$ $a^0 = 1$ $a^{-1} = \frac{1}{a^1} = \frac{1}{a}$ $a^{-2} = \frac{1}{a^2}$ $a^m * a^n = a^{m+n}$ $\frac{a^m}{a^n} = a^{m-n}$ $(a^m)^n = a^{m*n}$ $\left(\frac{a^m}{b^n}\right)^p = \frac{a^{m*p}}{b^{n*p}}$	We simplified MANY examples in class. For example: $\left(\frac{-4x^4 y^{-2}}{5x^{-1}y^4}\right)^{-4}$
	Scientific notation $a * 10^n$, where n is integer, and $1 \leq a < 10$. Examples: $5.67 \cdot 10^{-5} =$	Definition page 44

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	Solving equations	
<input type="checkbox"/>	The principles of zero products	Theorem 2-1, page 63
<input type="checkbox"/>	Solve a formula for a specific letter ---- Example: Solve for b $A = \frac{5}{2}(b - 20)$	Page 71
<input type="checkbox"/>	Inequalities	Page 73
	Describing the solution: -- Solution set -- Graph ---- Example:	
<input type="checkbox"/>	Multiplication property of inequality Multiplying by: -- Positive number -- Negative number -- Zero	Theorem 2-3
<input type="checkbox"/>	Addition property of inequality	Theorem 2-2

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<input type="checkbox"/>	Compound inequality -- and; conjunction ; intersection -- or; disjunction ; union	Page 84
<input type="checkbox"/>	Absolute value	
<input type="checkbox"/>	Absolute value: Distance from origin.	
<input type="checkbox"/>	Properties: $ a * b = a * b $ $\left \frac{a}{b} \right = \frac{ a }{ b } \quad ; \quad b \neq 0$ $ a^n = a^n$ in SOME cases. E.g.: If n is even integer	
<input type="checkbox"/>	---- Example: Solve : $ x + 1 < 4 \quad \text{and} \quad x \geq 2$	

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