**Chapter 10 Notes Alg. 1B**

**10.1A “Simplifying Radical Expressions; Product Property”** p. 528-529

* Radical Expression: *contains a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_*
* Radicand: *the expression under the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_*
* Simplify by finding prime factors and taking our the pairs.
* **√1A)**  **B)** 
* **C)**  **D) 3**
* ***Product Property of Square Roots:***

\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_ • \_\_\_\_\_\_\_ where a ≥ 0 and b ≥ 0.

**√2A)**  **B)** 2

* ***Simplify a Square Root With Variables:***

 **√3A)**  **B)** 

Check Your Understanding p. 531-532

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 

**10.1B “Simplifying Radical Expressions: Quotient Property & Rationalize the Denominator”** p. 529-531

* ***Quotient Property of Square Roots:***
	+ - \_\_\_\_\_\_\_\_\_ = \_\_\_\_\_ where a ≥ 0 and b > 0
* ***Rationalize the Denominator:*** A simplified square root cannot have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**√4A)**  **B)** 

**C)** **D)** $\frac{5}{\sqrt{15}}$

* ***Simplest form of a radical expression:*** an expression that has:
	+ no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ factors other than 1 in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the radicand
	+ no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the denominator of the fraction.

Check Your Understanding p. 532 # 11-13, 33, 34

**10-2A “Operations with Radical Expressions: Add and Subtract”** p. 536-537

|  |  |  |
| --- | --- | --- |
| **Operation** | **Variable Terms** | **Radical Terms** |
| + |  |  |
|  |  |  |

**√1A)**  **B)** 

 **C)** 

* + - A radical expression is simplified when all the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
		- Before you begin, make sure \_\_\_\_\_\_\_\_\_\_\_ radical is in simplest form; look for perfect square \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ within the radicand.

**√2A)**  **B)** 

 **C)**  **D)** 

Check Your Understanding p. 538 #1-6

**10-2B “Operations with Radical Expressions: Multiply and Divide”** p. 537-538

|  |  |  |
| --- | --- | --- |
| **Operation** | **Variable Terms** | **Radical Terms** |
| x |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |   |

**√3A)**  **B)** 

 **C)** **D.** 

**Check Your Understanding p. 538 #7-10**

**10-1C “Simplifying Radical Expressions: Multiply by the Conjugate”**

* + - ***Conjugates:*** binomials in the form of \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_
			* Use the pattern of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to find their product. 
			* Ex: 

**√1A)** 

**B)** 

**10-3A “Solving Radical Equations”** p. 541-543

**Steps:**

1. Isolate the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ first by any of the 4 operations.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ each side of the equation.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the appropriate method.
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ the solution(s) by substituting in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ equation.
	* Extraneous Solution: \_\_\_\_\_\_\_\_ \_\_\_\_\_\_ make a true statement when substituted; must \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ because it is not a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Check:**

**√2A)** 

 **B)** 

 **C)** $4\sqrt{3}=\sqrt{x}$

**Check for Understanding: p. 543 # 1-3, 5-7, 14**

**10-3B “Solving Radical Equations”** TWO SOLUTIONS p. 541-543

**√1A)**  **CHECK:**

 **B)** 

Check Your Understanding p. 543 #8-10, 20, 25