SECONDARY MATH 2

**CORE STANDARDS**

II.1.N.RN.1

II.1.N.RN.2

II.1.N.RN.3

LESSON

**1-3**

OBJECTIVE **1. SWBAT simplify expressions with radical (roots) or rational (fraction) exponents.**

NOTES PROPERTIES OF RADICALS & RATIONAL EXPONENTS



radicand

index

Product Property of Roots 

Quotient Property of Roots 

Radical to Rational Exponents  or 

* Properties of Exponents from **WS 1-2** will still work even when those exponents are fractions.
* The term **rational exponent** refers to an exponent that can be written as a fraction of positive integers.
* If no index is explicitly given for a radical, it is assumed to be 2 (square root).
* A radical is simplified when: 1) The radicand is not a fraction, 2) There are no radicals in the denominator of the expression, and 3) The radicand has no perfect index factors.

EXAMPLES Simplify. Write each answer in radical form as necessary.

**1.**  **2.** 

**3.**  **4.** 

**5.**  **6.** 

**7.**  **8.** 

PRACTICE **1-3** NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[SHOW YOUR WORK] [WRITE ALL ANSWERS IN SIMPLIFIED FORM]

Simplify. Write each answer in radical form as necessary.

1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 
10. 
11. 
12. 
13. 
14. 
15. 
16. 
17. 
18. 
19. 
20. 
21. 
22. 

Simplify. REVIEW 1-2

1. 
2. 
3. 
4. 