**Unit 7: Factoring**

**Lesson 5: Simplifying Radicals & Rational/Irrational Numbers**

**Objectives:**

* I can identify the subsets of real numbers.
* I can identify the subsets of real numbers that a number belongs to
* I can simplify radicals.

**Agenda:**

* Video
* Practice
* Application

**Focus Questions:**

* What are the subsets of real numbers?
* What are the differences between these subsets?
* How can simplify radicals using perfect squares?

**Vocabulary:**

* **Natural numbers, whole numbers, integers, rationals, real numbers, Radicals, Radican, index.**

**Homework: HW 7-5**



PLAY THE POWER POINT; **Sets of Real Numbers:**

**Simplifying Radicals**: <https://www.youtube.com/watch?v=u2Z1hoXSrXk>

 **Practice: Now let’s simplify the following square roots: Lesson 7-5**

1. $\sqrt{75}$ 2. $\sqrt{80}$ 3. $\sqrt{8} $ 4. ****

1. 6.7. 8. $\sqrt{18}$

9. $\sqrt{32}$ 10. $-2\sqrt{12}$ 11. $4\sqrt{108}$ 12. $3\sqrt{125}$

13. $\sqrt{50}$ 14. $\sqrt{20}$ 15. $- \sqrt{500}$ 16. $\sqrt{175}$

17.  18. 19.20.

**Open the link below and follow the practice**

<https://mathbitsnotebook.com/Algebra1/Radicals/RADSimpPractice.html>

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_ Date: Homework 7-5**

 1. $5\sqrt{45}$ 2. $5\sqrt{45}$ **3.** $\sqrt{400}$ **4.** $-3\sqrt{75}$

5)Simplify the following Radicals: Remember to look for the largest perfect square and the irrational number should end up on the left of the perfect square.

a. $\sqrt{338}$ b. $-4\sqrt{243}$ c. $-3\sqrt{250}$

6. Factor completely the following expressions:

a) $8x^{3}+24x^{2}-80x $ $ $b) $x^{4}-16$ c)$8x^{2}-14x-15$

d)$3x^{2}+16x+5 $e) $10x^{2}+15x-10 $ f) $3x^{2}-21x+36 $

Please continue on your flip booklet, you should work on page 7 tonight { 3 examples}