**Unit 7: Factoring: Lesson 6: Operations with Radicals**

**Objectives:**

* I can add and subtract radicals
* I can multiply radicals
* I can add, subtract and multiply rational with irrational numbers

**Agenda:**

* Video
* Practice

**Focus Questions:**

* To what subset of real number does the product of a rational number and irrational number belong? and why?
* Explain the similarities between adding and multiplying variables and radicals

**Vocabulary:**

* **Radicals, Radican, index**

**Homework: HW 7-6**

Factoring February:

|  |  |
| --- | --- |
|  |  |

**Factor completely using GCF, Conjugate pairs of DOPS and Guess and Check for trinomials:**

|  |  |
| --- | --- |
|  |  |

**Warm up: Log online:**

[**https://prezi.com/5nvvjafdrxq0/irrational-numbers/**](https://prezi.com/5nvvjafdrxq0/irrational-numbers/)

**Define in your own words rational vs irrational and provide some concrete examples;**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Answer the following questions based on the operation: Base your responses on calculations.**

|  |
| --- |
| 1. Ra times Irra rational Irrational |
| 1. rational Irrational |
| 1. rational Irrational |
| 1. rational Irrational |

**Make sure you justify:**

|  |
| --- |
| 1. rational Irrational |
| 1. rational Irrational |
| 1. rational Irrational |

**Day 2 Radicals: SIMPLIFY Radicals:**

**1.**  2. 3.

Play this first: <https://www.youtube.com/watch?v=PMam2c_eXj4>

Now let’s take a look at these:

4. 5. 6.

**7** 8. 9.

**Adding and Subtracting Radicals**

[**https://www.youtube.com/watch?v=QsHJStWF-MM**](https://www.youtube.com/watch?v=QsHJStWF-MM)

1. 2. 3.

4.  5.  6.

**7.  8. **

Stop: play this video first: <https://www.youtube.com/watch?v=DjUAL43NYos>

7.  8.  9. 

10.

Play here: <https://www.quia.com/pop/37541.html?AP_rand=412904526>

Name:: \_\_\_\_\_\_\_\_\_\_\_\_ Homework 7-6 Multiple Choice:

2. 2 b. c. d.
4. b. c. d.
6. b. c. d.
8. b. c. d.

a. b. c. d.

6. Given the following expressions: Which expression(s) result in an irrational number? Justify:

I minus 5 eighths + 3 fifths II. 1 half + square root of 2 III. square root of 5 times square root of 5 IV. 3 times square root of 49

1. II, only b. III, only c. I, III, IV d. II, III, IV
   1. Is the sum of 3square root of 2 and 4square root of 2 rational or irrational? Explain your answer.

