Unit 9 Name _____

Remediation Objective 3

Addition or Subtraction of Radical Expressions:

1. To add or to subtract radicals, the radicals must be exactly the same. The radicand and the index must be exactly the same.
2. The numerical coefficients are then added or subtracted. The radical part stays the same.

Ex. $4\sqrt{2} + 2\sqrt{2} = 6\sqrt{2}$

Ex. $-4\sqrt{5} + 2\sqrt{5} = -2\sqrt{5}$

Ex. $5\sqrt{7} - 7\sqrt{5} - 2\sqrt{7} = 3\sqrt{7} - 7\sqrt{5}$

Practice:

1. $6\sqrt{3} - 8\sqrt{3} =$ _____ 2. $-3\sqrt{5} - \sqrt{5} =$ _____

3. $8\sqrt{2} + 4\sqrt{2} =$ _____ 4. $2\sqrt{7} - 7\sqrt{7} =$ _____

5. $-2\sqrt{11} + 4\sqrt{11} + \sqrt{11}$ $=$ _____

6. $8\sqrt{6} + 2\sqrt{7} - 3\sqrt{6} - 5\sqrt{7}$ $=$ _____

7. $2\sqrt{3} - 7\sqrt{11} + 2\sqrt{11} + 4\sqrt{3}$ $=$ _____

8. $-\sqrt{10} + 8\sqrt{15} + 2\sqrt{15} - 6\sqrt{10} =$ _____

9. $9\sqrt{11} + 5\sqrt{5} - 8\sqrt{11} + 3\sqrt{11}$ $=$ _____

10. $-10\sqrt{2} + 4\sqrt{2} + 8\sqrt{7} - \sqrt{7}$ $=$ _____

11. $7\sqrt{17} + 6\sqrt{15} - 4\sqrt{15} - 8\sqrt{17} =$ _____

12. $-12\sqrt{3} - 4\sqrt{3} + 3\sqrt{5} + 7\sqrt{5}$ $=$ _____