9.1 Simplifying Radical Expressions
DAY FOUR: Operations with Radical Expressions

$+ - * \div$

$+/-$ exact same

$*/\div$ does not matter

GCF

Review: $3x + 5x = x(3 + 5) = 8x$

Combining like radicals: $3\sqrt{5} + 7\sqrt{5} = \sqrt{5}(3 + 7) = 10\sqrt{5}$

$3x + 5y$ $3x + 7x$

$x = \sqrt{5}$

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Simplify each.

$6\sqrt{5} + 2\sqrt{5} - 4\sqrt{5} = \boxed{4\sqrt{5}}$

$6x + 2x - 4x$

$x\sqrt{5}$

$7\sqrt{2} + 8\sqrt{2} + 9\sqrt{2} - 5\sqrt{2} =$

$7x + 8x + 9x - 5x$

$15 + 4$

$\boxed{19\sqrt{2}}$

More Practice: 1 4 9 16 25 36 49 64 81 100
121 144 169

$7\sqrt{2} + 8\sqrt{11} - 4\sqrt{11} - 6\sqrt{2}$

$7x + 8y - 4y - 6x$

$$\boxed{1\sqrt{2} + 4\sqrt{11}}$$

$6\sqrt{27} + 8\sqrt{12} + 2\sqrt{75}$

$18\sqrt{3} + 16\sqrt{3} + 10\sqrt{3}$

$$\boxed{44\sqrt{3}}$$

1. Reduce 1st
2. Combine like radicals.

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Find the area of the rectangle.

$$\boxed{A = bh}$$ $4\sqrt{6} - 2\sqrt{10} = h$

$b = 5\sqrt{3} + 7\sqrt{5}$

$A = (5\sqrt{3} + 7\sqrt{5})(4\sqrt{6} - 2\sqrt{10})$ FOIL

$20\sqrt{18} - 10\sqrt{30} + 28\sqrt{30} - 14\sqrt{50}$

$60\sqrt{2} + 18\sqrt{30} - 70\sqrt{2}$

$$A = \boxed{18\sqrt{30} - 10\sqrt{2} \ u^2}$$

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HW Assignment 9.1 DAY FOUR

9.1 Study Guide & Intervention

Operations with Radical Expressions WS

(front Add/Subtract Evens &

back Multiply/Distribute Evens)