



Objective: Multiplying and Dividing Radicals

Homework RX3 – NYA p.619 #14 – 18, 59, 61, p.625 #18 – 20, 22

Do Now: Simplify

1. $2\sqrt{5} + \sqrt{5} - 8\sqrt{5} =$	2. $4\sqrt{64} + 2\sqrt{64} =$	3. $5\sqrt{9} + 10\sqrt{3} =$
---	--------------------------------	-------------------------------

Exam Prep: What is the value of $\frac{2\sqrt{36}}{\sqrt{9}}$? A) 1 B) $\frac{2\sqrt{36}}{\sqrt{9}}$ C) 2 D) 4



**Multiplying / Dividing Radicals is mostly simpler than you think...
Do you need LIKE TERMS?**

Multiplying and Dividing Radicals (You gotta keep 'em separated!)

Numbers outside radicals operate on each other, and numbers inside the radicals (radicands) operate on each other. Always simplify your answers.

$a\sqrt{b} \cdot c\sqrt{d} = ab\sqrt{cd}$	$8\sqrt{5} \cdot 7\sqrt{2} = 56\sqrt{10}$
$\frac{a\sqrt{c}}{b\sqrt{d}} = \frac{a}{b} \sqrt{\frac{c}{d}}$	$\frac{27\sqrt{14}}{3\sqrt{2}} = 3\sqrt{7}$

Basic Practice

1. $9\sqrt{3} \cdot 4\sqrt{2} =$	2. $2\sqrt{5} \cdot y\sqrt{x} =$	3. $\frac{20\sqrt{15}}{2\sqrt{5}} =$
4. $\sqrt{5} \cdot 6\sqrt{10} =$	5. $\frac{24\sqrt{22}}{4\sqrt{2}} =$	6. $\frac{-20\sqrt{32}}{5\sqrt{8}} =$

Need More?? Let's Make Some!

Advanced Practice

1. $3\sqrt{2}(\sqrt{7} + 10\sqrt{3}) =$

2. $\sqrt{2}(\sqrt{8} - 4) =$

3. $\sqrt{6}(\sqrt{6} - 5) =$

4. $(\sqrt{2} + 1)(6\sqrt{5} + 3) =$

5. $(2\sqrt{11} + 5)(\sqrt{11} + 2) =$

6. $(\sqrt{7} - 2)^2 =$

Need More?? Let's Make Some!