Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples	
Type 1: Dividing by a Monomial	**To simplify when there is a monomial in the denominator**: Rationalize by multiplying the numerator and denominator by the radical in the denominator then simplify.	
	Directions: Find each quotient. Write your answer in simplest radical form.	
	1. $\frac{2+\sqrt{5}}{\sqrt{2}}$	**2.** $\frac{4-\sqrt{3}}{\sqrt{3}}$
	3. $\frac{4-6\sqrt{2}}{\sqrt{2}}$	**4.** $\frac{5+\sqrt{3}}{\sqrt{18}}$
	5. $\frac{2-\sqrt{5}}{\sqrt{12}}$	**6.** $\frac{5-\sqrt{5}}{4\sqrt{8}}$
Type 2: Dividing by a Binomial	**To simplify when there is a binomial in the denominator:** Multiply the numerator and denominator by the **conjugate**, then simplify. **What is a congugate?** _____ _____	
Practice with Conjugates	**Directions:** Multiply each expression by its conjugate, then simplify.	
	7. $3+\sqrt{5}$	**8.** $1-7\sqrt{2}$

Directions: Find each quotient. Write your answer in simplest radical form.

9. $\frac{4}{\sqrt{5}+\sqrt{3}}$

10. $\frac{4}{2-\sqrt{3}}$

11. $\frac{3}{3-\sqrt{3}}$

12. $\frac{\sqrt{2}}{3\sqrt{5}+3}$

13. $\frac{3-\sqrt{2}}{5+\sqrt{2}}$

14. $\frac{5+\sqrt{2}}{4-2\sqrt{2}}$

15. The area of a rectangle is $(14+7\sqrt{2})$ square meters. If the length of the square is $(4+\sqrt{2})$ meters, find the width as a radical in simplest form.