

Name:

Date:

Topic:

Class:

Main Ideas/Questions	Notes/Examples	
<h2>Dividing Radicals</h2>	①	Break apart the radicands using the the QUOTIENT RULE: $\sqrt{\frac{a}{b}} =$
	②	Look for perfect square radicals and simplify them.
	③	Simplify (divide/reduce) the radicands, if possible.
	④	Simplify the resulting radical, along with any coefficients.
<h2>Examples</h2>	Directions: Find each quotient. Write your answer in simplest radical form.	
	1. $\frac{\sqrt{49}}{\sqrt{100}}$	2. $\frac{\sqrt{8}}{\sqrt{32}}$
	3. $\frac{\sqrt{3}}{\sqrt{16}}$	4. $\frac{\sqrt{7}}{\sqrt{49}}$
	5. $\frac{\sqrt{10}}{\sqrt{45}}$	6. $\frac{\sqrt{12}}{\sqrt{36}}$
	7. $\frac{\sqrt{96}}{\sqrt{3}}$	8. $\frac{7\sqrt{108}}{\sqrt{6}}$
	9. $\frac{3\sqrt{5}}{\sqrt{45}}$	10. $\frac{4\sqrt{15}}{3\sqrt{27}}$
11. $\frac{10\sqrt{48}}{2\sqrt{3}}$	12. $\frac{3\sqrt{84}}{15\sqrt{7}}$	

Rationalizing the Denominator

To be **fully simplified** means there is **no radical left in the denominator**. Sometimes this can occur with dividing. The process of eliminating the radical is called **rationalizing the denominator**.

To rationalize a denominator, _____ both the numerator and denominator by the radical in the denominator, then simplify.

Examples

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

13. $\frac{4}{\sqrt{7}}$

14. $\frac{\sqrt{5}}{\sqrt{2}}$

15. $\frac{\sqrt{81}}{2}$

16. $\frac{\sqrt{6}}{\sqrt{18}}$

17. $\frac{4\sqrt{3}}{\sqrt{2}}$

18. $\frac{\sqrt{4}}{10\sqrt{3}}$

19. $\frac{5\sqrt{12}}{\sqrt{10}}$

20. $\frac{2}{5\sqrt{6}}$

21. $\frac{4\sqrt{5}}{6\sqrt{2}}$

22. $\frac{2\sqrt{3}}{3\sqrt{6}}$

23. $\frac{\sqrt{3}}{2\sqrt{8}}$

24. $\frac{4\sqrt{5}}{\sqrt{12}}$