Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples
ADDING & SUBTRACTING RADICALS	① **SIMPLIFY** all radicals. ② Identify radicals with the **SAME INDEX** and **SAME RADICAND.** Only these can be combined! ③ For common radicals, **add/subtract the coefficients** and **KEEP THE COMMON RADICAL.** **EXAMPLE:** $-2\sqrt{20}-2\sqrt{5}$
More Examples	**Directions:** Find each sum or difference. Make sure you simplify FIRST! **1.** $3\sqrt{6}-2\sqrt{6}$ **2.** $2\sqrt{5}+2\sqrt{5}$ **3.** $10\sqrt{7}+2\sqrt{63}$ **4.** $\sqrt{15}-6\sqrt{60}$ **5.** $2\sqrt{32}-3\sqrt{18}$ **6.** $-4\sqrt{28}+4\sqrt{112}$ **7.** $-4\sqrt{160}-2\sqrt{90}$ **8.** $4\sqrt{45}+3\sqrt{245}$

9. $-2\sqrt{10}-3\sqrt{6}-2\sqrt{10}$

10. $2\sqrt{7}+5\sqrt{3}+4\sqrt{7}$

11. $-3\sqrt{50}+\sqrt{18}-3\sqrt{3}$

12. $2\sqrt{8}+4\sqrt{96}-\sqrt{24}$

13. $-5\sqrt{8}+2\sqrt{45}+3\sqrt{200}$

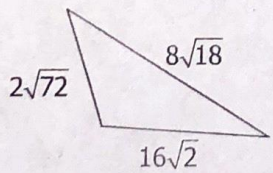
14. $10\sqrt{6}+18\sqrt{150}-4\sqrt{54}$

15. $-\sqrt{5}+3\sqrt{7}-\sqrt{5}-2\sqrt{5}$

16. $-3\sqrt{6}-5\sqrt{6}+4\sqrt{8}+4\sqrt{2}$

Applications

17. Write the perimeter of the triangle as an expression in simplest radical form.



18. The length and width of a rectangle is represented by the expressions $2\sqrt{405}$ and $9\sqrt{48}$. Write an expression to represent the perimeter of the rectangle in simplest radical form.