

Algebra II
Section 8-3 Review
Part II E15

Name _____
Hw# _____

Multiply (FOIL) the following problems. Make sure you write your answer in "simplest form".

1) $(2 - 7\sqrt{3})(2 + 7\sqrt{3})$

2) $(5 + \sqrt{6})^2$

3) $(4 + 3\sqrt{5})(8 - \sqrt{5})$

4) $(10 - \sqrt{2})(1 - 4\sqrt{7})$

Name the conjugate.

5) $8 + 11\sqrt{11}$ _____

6) $-1 - \sqrt{21}$ _____

7) $\sqrt{6} + 9\sqrt{5}$

Simplify (rationalize the denominator) by using the conjugate.

8) $\frac{8}{3 - \sqrt{7}}$

9) $\frac{\sqrt{2}}{1 + 2\sqrt{3}}$

10) $\frac{4 + \sqrt{5}}{2 - \sqrt{5}}$

Add or subtract the following radicals.

11) $12\sqrt{17} + 8\sqrt{17} - 11\sqrt{17}$

12) $\sqrt[3]{9} - 4\sqrt{10} + 5\sqrt[3]{9}$

13) $8\sqrt{24} - 7\sqrt{54}$

14) $-2\sqrt[3]{80} + 3\sqrt[3]{270}$

15) $\sqrt{50} + \sqrt{27} + \sqrt{32} + 5\sqrt{12}$

16) $\sqrt[3]{16} - 7\sqrt[3]{-250}$

17) $-4\sqrt{49} + 2\sqrt{63} - 5\sqrt{9}$

18) $\sqrt{40} + \sqrt{200} + \sqrt[3]{128}$