**Algebra 2 Homework Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Simplifying Radicals by Distributing Period: \_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_**

1. $-2\sqrt{5}\left(4+3\sqrt{15}\right)$ 2. $6\sqrt{10}\left(\sqrt{2}+\sqrt{4}\right)$

3. $-2\sqrt{12}\left(\sqrt{2}+3\sqrt{8}\right)$ 4. $3\sqrt{5}\left(\sqrt{10}+\sqrt{40}\right)$

5. $-\sqrt{6}\left(3\sqrt{2}+\sqrt{27}\right)$ 6. $7\sqrt{5}\left(\sqrt{2}+\sqrt{5}\right)$

**REVIEW - Adding and Subtracting Radicals**

7. $7\sqrt[3]{5}+12\sqrt[3]{5}-10\sqrt[ ]{5}-\sqrt[3]{5} $ 8. $\sqrt[ ]{10}-2\sqrt[ ]{5}+6\sqrt[ ]{10}-2\sqrt[ ]{10}$

**REVIEW - Multiplying Radicals**

9. $\sqrt[4]{24} ∙\sqrt[4]{14}$ 10. $\sqrt[3]{20} ∙7\sqrt[3]{25}$

11. $5\sqrt[3]{10} ∙2\sqrt[3]{50}$ 12. $2\sqrt[4]{100} ∙3\sqrt[4]{50}$

**REVIEW – Simplifying Radicals with variables**

13. $\sqrt[ ]{20xy^{10}z^{3} }$ 14. $\sqrt[3]{8x^{9}y }$

15. $\sqrt[3]{54x^{12}y^{2} }$ 16. $\sqrt[4]{48x^{6}y^{8}z }$