

Name: _____ Date: _____

Simplifying Radicals

Fully simplify the following radicals:

1) $\sqrt{16}$

2) $\sqrt{512}$

3) $-3\sqrt{72}$

4) $\sqrt{49v^4}$

5) $-3\sqrt{200a^7}$

6) $5\sqrt{98r^{124}}$

7) $\sqrt{147x^3y^2}$

8) $6\sqrt{64a^4b^8}$

9) $-2\sqrt{252c^4d}$

10) $\sqrt{72p^2q^2r^4}$

11) $\sqrt{320x^{14}yz^3}$

12) $-\sqrt{175g^3h^8j^4}$

Operations with Radicals**Multiply:**

1. $\sqrt{18} \cdot \sqrt{5}$

2. $\sqrt{12} \cdot 2\sqrt{6}$

3. $3\sqrt{2} \cdot 5\sqrt{4}$

4. $5\sqrt{2}(4 - \sqrt{3})$

5. $\sqrt{3} \cdot \sqrt{12}$

6. $\sqrt{5}(\sqrt{2} + 1)$

Add or Subtract:

7. $4\sqrt{3} - 2\sqrt{3}$

8. $\sqrt{32} + 2\sqrt{2}$

9. $\sqrt{2} + 2\sqrt{3}$

10. $\sqrt{8y} - \sqrt{2y}$

11. $\sqrt{18ab} + \sqrt{2ab}$

12. $5y\sqrt{3} - \sqrt{12y^2}$

13. $\sqrt{8} + \sqrt{50}$

14. $-\sqrt{12} + \sqrt{300}$

15. $3\sqrt{20} + 8\sqrt{45}$
