Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Simplifying Radicals

Simplify. Assume all variables represent positive val

1. $\sqrt{x^{2}}$ 2. $\sqrt[3]{y^{3}}$ 3. $\sqrt[3]{a^{9}}$ 4. $\sqrt{b^{4}}$

5. $\sqrt{a^{4}b^{2}}$ 6. $\sqrt[4]{a^{8}b^{8}}$ 7. $\sqrt[4]{x^{20}y^{16}z^{4}}$ 8. $\sqrt{4x^{4}y^{2}}$

9. $\sqrt[3]{-27a^{9}b^{6}}$ 10. $\sqrt[3]{-8x^{12}y^{18}}$ 11. $\sqrt[4]{16x^{32}y^{16}}$ 12. $\sqrt[4]{81x^{8}y^{12}}$

13. $\sqrt[4]{81x^{16}y^{8}z^{4}}$ 14. $\sqrt{49x^{8}y^{6}z^{30}}$ 15. $\sqrt[5]{-32x^{5}y^{30}z^{45}}$ 16. $\sqrt[4]{a^{16}b^{20}c^{4}}$

17. $\sqrt{8}$ 18. $\sqrt{12}$ 19. $\sqrt{18}$ 20. $\sqrt[3]{16}$

21. $\sqrt{a^{3}}$ 22. $\sqrt[2]{x^{5}}$ 23. $\sqrt[2]{x^{8}}$ 24. $\sqrt{a^{5}}$

25. $\sqrt{x^{3}y^{5}}$ 26. $\sqrt{x^{7}y^{4}}$ 27. $\sqrt[3]{a^{6}b^{10}}$ 28. $\sqrt[3]{x^{2}y^{14}}$

29. $\sqrt[4]{48}$ 30. $\sqrt[4]{x^{9}y^{15}}$