Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**Assignment: Simplifying Square Roots and Cube Roots**

**Simplify. Show Work!**

1. $\sqrt{81}$ 2. $\sqrt{180x^{2}}$ 3. $\sqrt{32x^{4}y^{3}}$

4. $\sqrt[3]{135}$ 5. $\sqrt[3]{-8x^{5}}$ 6. $\sqrt{648}$

7. $\sqrt{20a^{2}b^{3}}$ 8. $\sqrt[3]{-1024a^{15}b^{18}}$ 9. $5\sqrt[3]{162x^{17}}$

10. $-5x^{5}\sqrt{12x^{3}y^{2}}$ 11. $-12\sqrt[3]{a^{10}b^{3}}$ 12. $\sqrt[3]{1458}$

13. $\sqrt[3]{40a^{13}b^{3}}$ 14. $\sqrt{216a^{2}b^{7}}$ 15. $3\sqrt{48}$

16. $\sqrt{a^{3}b^{5}c^{2}}$ 17. $\sqrt[3]{96a^{2}b^{8}}$ 18. $\sqrt[3]{12a^{18}}$

19. $-2a^{4}\sqrt{125a^{9}}$ 20. $\sqrt[3]{56x^{9}y^{2}}$ 21. $\sqrt[3]{-256a^{11}}$

22. $\sqrt{96xy^{15}}$ 23. $-7a^{2}\sqrt[3]{64a^{9}}$ 24. $8\sqrt{49x^{6}}$