

Name _____ Date _____ Period _____

WORKSHEET – RATIONAL EXPONENTS

Evaluate.

1. $\left(\frac{9}{25}\right)^{\frac{1}{2}}$

2. $\left(\frac{27}{8}\right)^{-\frac{2}{3}}$

3. $125^{\frac{1}{3}}$

4. $25^{-\frac{1}{2}}$

5. $\left(-\frac{1}{64}\right)^{\frac{2}{3}}$

6. $\sqrt{4^4}$

Write each expression in simplified form, using positive rational exponents.

7. $\sqrt[3]{y^2}$

8. $\sqrt[3]{8x^7}$

9. $(\sqrt[4]{16x})$

10. $\sqrt[3]{27x^{-6}y^2}$

11. $\sqrt[4]{x} \cdot \sqrt[3]{x} + \sqrt[9]{x}$

12. $(16^{-3/5})^{5/4}$

13. $(3^{-2} + 4^{-2})^{-1/2}$

14. $(16^{1/2} + 4^{1/2})^2$