

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