

Name: _____ Hour: _____

Rational Exponents and Radicals Worksheet (7.2B & 7.2C)

Rewrite each expression in radical notation.

1. $4^{\frac{1}{5}}$

2. $x^{\frac{3}{2}}$

3. $(7y)^{\frac{3}{2}}$

5. $4v^{\frac{2}{5}}$

Rewrite each expression in rational exponent notation.

6. \sqrt{p}

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

8. $2(\sqrt[5]{50})^2$

9. $\sqrt[9]{m^3}$

Simplify each expression.

10. $16^{\frac{1}{2}}$

11. $(\sqrt{9})^2$

12. $27^{-\frac{3}{2}}$

13. $(\sqrt[3]{125})^4$

Simplify each expression. Use absolute value symbols where required.

14. $\sqrt{100}$

15. $\sqrt[3]{125x^3}$

16. $\sqrt[4]{1000m^8}$

17. $\sqrt[5]{32p^{10}r^{15}}$

18. $\sqrt[4]{\frac{81a^4b^{12}}{16c^8}}$

19. $(8x^6y^9z^3)^{\frac{2}{3}}$

20. $\left(\frac{243p^{10}}{q^{20}r^5}\right)^{\frac{2}{5}}$

21. $\left(\frac{256a^{12}b^{16}}{625c^4d^{16}}\right)^{-\frac{1}{4}}$