

Radicals 3 – nth Roots & Rational Exponents

Name _____

Homework #9

Per _____ Date _____

In 1 & 2 rewrite using rational exponent notation.

1. $\sqrt[3]{11}$

2. $(\sqrt[9]{16})^5$

In 3–5, rewrite using radical notation.

3. $6^{1/3}$

4. $10^{3/7}$

5. $8^{7/4}$

In 6–11, Evaluate the expression without using a calculator.

6. $\sqrt[3]{-1000}$

7. $9^{-1/2}$

8. $-(256^{1/4})$

9. $(\sqrt[3]{-27})^{-4}$

10. $-(25^{-3/2})$

11. $(-125)^{-2/3}$

In 12–17, Evaluate the expression using a calculator. Round to two decimal places when appropriate.

12. $\sqrt[9]{1124}$

13. $4^{1/10}$

14. $-(1331^{1/3})$

15. $(\sqrt[7]{-280})^3$

16. $(-190)^{-4/5}$

17. $522^{2/7}$

In 18-21, solve the equation. Round your answer to two decimal places when appropriate.

18. $6x^3 = -1296$

19. $(x - 4)^4 = 81$

20. $-12x^4 = -48$

21. $x^3 - 14 = 22$

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