

Day 1 Homework: Rational Exponents

Rewrite the expression using rational exponent notation.

1. $\sqrt[3]{7}$
 $7^{1/3}$

2. $(\sqrt[3]{6})^2$
 $6^{2/3}$

3. $(\sqrt[5]{14})^4$
 $14^{4/5}$

4. $(\sqrt[3]{-21})^3$
 $(-21)^{3/3}$

5. $(\sqrt[8]{11})^7$
 $11^{7/8}$

6. $(\sqrt[9]{-2})^4$
 $(-2)^{4/9}$

Rewrite the expression using radical notation.

7. $17^{1/3}$
 $\sqrt[3]{17}$

8. $44^{1/6}$
 $\sqrt[6]{44}$

9. $33^{2/3}$
 $\sqrt[3]{33^2}$

10. $9^{5/3}$
 $\sqrt[3]{9^5}$

11. $(-28)^{7/5}$
 $(\sqrt[5]{-28})^7$

12. $39^{4/7}$
 $(\sqrt[7]{39})^4$

Evaluate the expression without using a calculator.

13. $(\sqrt[3]{8})^2$
 $(2)^2 = 4$

14. $(\sqrt[5]{16})^3$
 $(2)^3 = 8$

15. $(\sqrt[4]{81})^4$
 $(3)^4 = 81$

16. $36^{3/2}$
 $(\sqrt{36})^3 = (6)^3 = 216$

17. $4^{5/2}$
 $(\sqrt{4})^5 = 2^5 = 32$

18. $27^{2/3}$
 $(\sqrt[3]{27})^2 = 3^2 = 9$

Day 2 Homework: Solving Radical Equations

Solve the following for x using the notes from the video! You may work with your peers. Be sure to check for extraneous solutions. Show all your work on a separate sheet of paper.