

Alg II

1-6B support

09/14/2017

I 1) $\sqrt[n]{x}$ $n = \text{index}$ $x = \text{radicand}$

2) $\sqrt[n]{b^a} = b^{\frac{\text{power}}{\text{index}}}$ or $b^{\frac{a}{n}}$

3) $(\sqrt[n]{b})^a = b^{\frac{\text{power}}{\text{index}}}$ or $b^{\frac{a}{n}}$

II 1) $(\sqrt[3]{6})^2 = 6^{\frac{2}{3}}$ 4) $9^{\frac{5}{3}} = \sqrt[3]{9^5}$ or $(\sqrt[3]{9})^5$

2) $\sqrt[7]{-2^3} = -2^{\frac{3}{7}}$ 5) $-28^{\frac{7}{5}} = \sqrt[5]{-28^7}$ or $(\sqrt[5]{-28})^7$

3) $(\sqrt[8]{11})^7 = 11^{\frac{7}{8}}$ 6) $39^{\frac{4}{7}} = \sqrt[7]{39^4}$ or $(\sqrt[7]{39})^4$

III 7) $(\sqrt[3]{8})^2 = 2^2 = 4$ 11) $\sqrt[4]{81^4} = (\sqrt[4]{81})^4 = 3^4 = 81$

8) $4^{\frac{5}{2}} = 2^5 = 32$ 12) $27^{\frac{2}{3}} = 3^2 = 9$

9) $(-32)^{\frac{3}{5}} = -2^3 = -8$ 13) $125^{\frac{4}{3}} = 5^4 = 625$

10) $(\sqrt[4]{16})^3 = 2^3 = 8$ 14) $-8^{\frac{1}{3}} = -2$