September 11, 2015

8.2

$\sqrt{x^2} = \sqrt[2]{(x^1)^2} = x$

$\sqrt{x^3}$

Sep 11-9:53 AM

$\sqrt{x^1}$ Simplified

$x^{2/2} = \sqrt{x^2} = \sqrt[2]{(x^1)^2} = x$

$\sqrt{x^3} = \sqrt[2]{(x^1)^2 \cdot x^1} = x\sqrt{x}$

$\sqrt{x^2 \cdot x^1}$

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$\sqrt[4]{x^3} = x^{3/4}$

$2^{3/2} = \sqrt[2]{2^3} = \sqrt[2]{(\ )^3} = \left(\sqrt[2]{(\ )^2}\right)^3$

$2^{2/3} = \sqrt[3]{2^2} = \sqrt[3]{4} = \sqrt[3]{(\ )^3}$

$\sqrt{x^2} = \left(x^2\right)^{1/2} = x^{2/2} = x^1 = x$

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$\sqrt{x^{11}} = \sqrt[2]{(x^5)^2 \cdot x^1} = x^5\sqrt{x}$

$\sqrt{x^{361}} = \sqrt[2]{(x^{180})^2 \cdot x^1} = x^{180}\sqrt{x}$

$2 \overline{)361}$ 180, -360, 1

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$\sqrt[5]{x^{19}} = \sqrt[5]{(x^3)^5 \cdot x^4} = x^3\sqrt[5]{x^4}$

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#51) odd $\sqrt[3]{-x^4y^8}$

$\sqrt[3]{-(x^1)^3 \cdot x\ (y^2)^3 \cdot y^2}$

$-xy^2\sqrt[3]{xy^2}$

$\sqrt[3]{(-x^1)^3 \cdot (y^2)^3 \cdot xy^2}$

$(-x)^3 = (-x)\cdot(-x)\cdot(-x) = x^2 \cdot (-x) = -x^3$ ☺

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$\sqrt{50} = \sqrt{25 \cdot 2} = \sqrt{25} \cdot \sqrt{2} = 5\sqrt{2}$

$5\sqrt{2} = \sqrt{(5)^2 \cdot 2} = \sqrt{25 \cdot 2} = \sqrt{50}$

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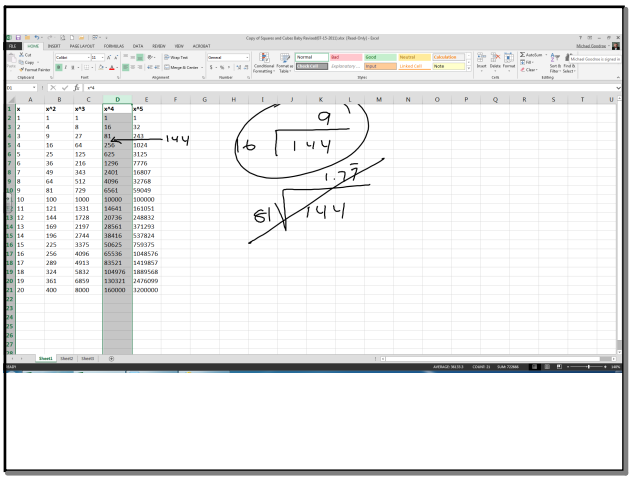
$\sqrt[4]{144x^{10}y^7} = \sqrt[4]{16 \cdot 9 \cdot x^{10} \cdot y^7}$

$= \sqrt[4]{(2)^4 \cdot 9 \cdot (x^2)^4 \cdot x^2 \cdot (y)^4 \cdot y^3}$

$= 2x^2y\sqrt[4]{9x^2y^3}$

Sep 11-10:37 AM



Sep 11-10:41 AM