

September 11, 2015

$$8.2 \quad \sqrt{x^2} = \sqrt{(x')^2} = x$$

$$\sqrt{x^3}$$

Sep 11-9:53 AM

$\sqrt{x'}$  simplified

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

$$\sqrt{x^3} = \sqrt{(x')^2 \cdot x'} = x \sqrt{x}$$

$$\downarrow$$

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

Sep 11-10:13 AM

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

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

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

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

Sep 11-10:14 AM

$$\sqrt{x^{11}} = \sqrt{(x^5)^2 \cdot x'} = x^5 \sqrt{x}$$

$$\sqrt{x^{361}} = \sqrt{(x^{180})^2 \cdot x'} = x^{180} \sqrt{x}$$

$$\begin{array}{r} 2 \overline{) 361} \\ \underline{-360} \\ 1 \end{array}$$

Sep 11-10:21 AM

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

Sep 11-10:25 AM

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

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

$$-x y^2 \sqrt[3]{x y^2}$$


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

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

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

$$= -x^3 \quad \text{☺}$$

Sep 11-10:27 AM

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

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

Sep 11-10:31 AM

$$\sqrt[4]{144x^6y^3} = \sqrt[4]{16 \cdot 9 \cdot x^6 \cdot y^3}$$

$$= \sqrt[4]{(2^4) \cdot 3^2 \cdot (x^2)^4 \cdot x^2 \cdot (y^1)^4 \cdot y^3}$$

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

Sep 11-10:37 AM

The screenshot shows a spreadsheet with columns A through U and rows 1 through 20. The data in the spreadsheet is as follows:

A	B	C	D	E
1	1	1	1	1
2	4	8	16	32
3	9	27	81	243
4	16	64	256	1024
5	25	125	625	3125
6	36	216	1296	7776
7	49	343	2401	16807
8	64	512	4096	32768
9	81	729	6561	59049
10	100	1000	10000	100000
11	121	1331	16641	214361
12	144	1728	248832	2985984
13	169	2197	371293	5314419
14	196	2744	551368	8374784
15	225	3375	8150625	126676875
16	256	4096	11809984	183746064
17	289	4913	14049537	221391393
18	324	5832	17714736	270625268
19	361	6859	22471861	329647829
20	400	8000	28000000	390600000

Handwritten annotations on the spreadsheet include:

- A circled '9' in cell D10.
- '16 | 144' in cell D11, with a vertical line between 16 and 144.
- '6 | 144' in cell D12, with a vertical line between 6 and 144.
- A '9' with a diagonal slash through it in cell D13.

Sep 11-10:41 AM