September 15, 2014

* Quiz #4 - Tomorrow

8.1, 8.2, 8.3

Sep 15-9:51 AM

8.2

#9)

$9\sqrt[3]{17} + 7\sqrt[3]{2} - 4\sqrt[3]{17} - \sqrt[3]{2}$

$9x + 7y - 4x - y$

$5x + 6y$

$5\sqrt[3]{17} + 6\sqrt[3]{2}$

Sep 15-10:04 AM

#18)

$\sqrt[4]{32t^5} - t\sqrt[4]{192t}$

$32 = 2^5$

$192 = 2^6 \cdot 3$

$\sqrt[4]{(2)^4 \cdot 2 \cdot (t')^4 \cdot t}$

$2t\sqrt[4]{2t} - t\sqrt[4]{(2)^4 \cdot 2^2 \cdot 3 \cdot t}$

$2t\sqrt[4]{2t} - 2t\sqrt[4]{12t}$

* Unlike Radicands

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#19)

$\sqrt[3]{16t^4} - t\sqrt[3]{54t}$

$\sqrt[3]{(2)^3 \cdot 2 \cdot (t')^3 \cdot t} - t\sqrt[3]{(3)^3 \cdot 2 \cdot t}$

$2t\sqrt[3]{2t} - 3t\sqrt[3]{2t}$

like

$2t - 3t\ \sqrt[3]{2t}$

$-t\sqrt[3]{2t}$

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Multiplication of Radicals

addition $2x + 3x = x(2+3)$

$= 5x$

multiplication $2 \cdot x \cdot 3 \cdot x = 2 \cdot 3 \cdot x^{1+1} \cdot x^1$

$= 6 \cdot x^2$

$= 6x^2$

$\sqrt[n]{ab} = \sqrt[n]{a} \cdot \sqrt[n]{b}$

$\sqrt[2]{3x^4} \cdot 4\sqrt[2]{4x}$

$4\sqrt[2]{3x^4 \cdot 4x}$

$4\sqrt{12x^5}$

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

$4 \cdot 2x^2\sqrt{3x}$

$8x^2\sqrt{3x}$

$12 = 2^2 \cdot 3$

Sep 15-10:32 AM

$\left(\sqrt{7}\right)^2 = \sqrt{7} \cdot \sqrt{7}$

$= \sqrt{7 \cdot 7}$

$= \sqrt{49}$

$= 7$

* when we square a square root we get the radicand.

Sep 15-10:41 AM

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

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$$\left(\sqrt{13}\right)^2 = 13$$

Sep 15-10:45 AM

$$\sqrt{7}\left(4 + \sqrt{3}\right)$$
$$\sqrt{7} \cdot 4 + \sqrt{7} \cdot \sqrt{3}$$
$$4\sqrt{7} + \sqrt{7 \cdot 3}$$
$$\boxed{4\sqrt{7} + \sqrt{21}}$$

Sep 15-10:45 AM