5) Simplify

$10\sqrt[3]{5} + 18\sqrt[3]{40} - \sqrt[3]{5} - 7\sqrt[3]{3}$

$18\sqrt[3]{8\cdot 5}$

$10\sqrt[3]{5} + 36\sqrt[3]{5} - \sqrt[3]{5} - 7\sqrt[3]{3}$

$45\sqrt[3]{5} - 7\sqrt[3]{3}$

6) Multiply $(3\sqrt{2}+5)(\sqrt{6}+8)$

$3\sqrt{12} + 24\sqrt{2} + 5\sqrt{6} + 40$

$6\sqrt{3} + 24\sqrt{2} + 5\sqrt{6} + 40$

Feb 24-8:23 AM

3) Rationalize the denominator

$\frac{5\sqrt{6}}{2\sqrt{15}} \cdot \frac{\sqrt{15}}{\sqrt{15}} = \frac{5\sqrt{90}}{2(15)}$

$= \frac{5\sqrt{3\cdot 3\cdot 2\cdot 5}}{30} = \frac{15\sqrt{10}}{30}$

$= \frac{1}{2}\sqrt{10}$

$\frac{3\sqrt{2}}{2+3\sqrt{5}} \cdot \frac{(2-3\sqrt{5})}{(2-3\sqrt{5})}$

$= \frac{6\sqrt{2} - 9\sqrt{10}}{4 - 9(5)} = \frac{6\sqrt{2} - 9\sqrt{10}}{-41}$

Feb 24-8:25 AM

3) Rationalize the denominator

$\frac{13\sqrt{10}}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} = \frac{13\sqrt{60}}{6} = \frac{26\sqrt{15}}{6} = \frac{13\sqrt{15}}{3}$

4) $\frac{20}{2+\sqrt{7}} \cdot \frac{(2-\sqrt{7})}{(2-\sqrt{7})}$

$4 - 7$

$= \frac{40 - 20\sqrt{7}}{-3}$

$\frac{-40 + 20\sqrt{7}}{3}$

Sep 12-7:25 AM

(36) $\frac{2}{(1-\sqrt{3})} \cdot \frac{(1+\sqrt{3})}{(1+\sqrt{3})} = \frac{2+2\sqrt{3}}{1-3}$

$= \frac{2+2\sqrt{3}}{-2}$

$= \frac{1+\sqrt{3}}{-1}$

$= -1 - \sqrt{3}$

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8) Simplify $-16\sqrt[3]{56} + \sqrt[3]{7}$

9) Multiply $-10\sqrt{7}(2\sqrt{7} - 12)$

10) $\sqrt{5} * \sqrt{35}$

11) $(10 + 4\sqrt{11})(1 - 7\sqrt{11})$

$10 - 70\sqrt{11} + 4\sqrt{11} - 28(11)$ (308)

$-298 - 66\sqrt{11}$

$4\sqrt{11} \cdot (-7\sqrt{11})$

$-28\sqrt{121}$

Sep 12-7:27 AM

Warm-up:

1) Describe each transformation

a) $y = 3\sqrt{x} + 2$

b) $y = -\sqrt{x-5}$

c) $y = \frac{2}{5}\sqrt{x+3} - 1$

*Make sure you are paying attention to order of operations.

2) Solve equation. Remember to check for extraneous solutions.

$4 + 2\sqrt[3]{-x+5} = 8$

$4 + 2\sqrt[3]{-x+5} = 8$

$\sqrt[3]{-x+5} = 2$

$(\sqrt[3]{-x+5})^3 = (2)^3$

$-x + 5 = 8$

$-x = 3$

$x = -3$ ✓

-3 570 x

Sep 12-7:19 AM