

September 21, 2015
 Dividing Radicals HO

#9)

$$\frac{\sqrt{3}}{-1 - \sqrt{5}} = \frac{\sqrt{3}}{-(1 + \sqrt{5})} = \frac{-\sqrt{3}}{1 + \sqrt{5}}$$

FACT

$$-\frac{a}{b} = \frac{-a}{b} = \frac{a}{-b}$$

$$\frac{-\sqrt{3}}{(1 + \sqrt{5})} \cdot \frac{(1 - \sqrt{5})}{(1 - \sqrt{5})} = \frac{-\sqrt{3} + \sqrt{15}}{1 - \sqrt{5} + \sqrt{5} - 5}$$

$$= \frac{-\sqrt{3} + \sqrt{15}}{-4}$$

$$= \frac{-(-\sqrt{3} + \sqrt{15})}{4}$$

$$= \frac{\sqrt{3} - \sqrt{15}}{4}$$

Sep 21-10:01 AM

Rationalizing the Denominator
 (Division of Radicals)

① $\frac{2}{\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \frac{2\sqrt{7}}{7}$

② $\frac{2}{3\sqrt{7}} \cdot \frac{\sqrt{7}}{\sqrt{7}} = \frac{2\sqrt{7}}{3 \cdot 7} = \frac{2\sqrt{7}}{21}$
multiplier!

③ $\frac{2}{(3 + \sqrt{7})} \cdot \frac{(3 - \sqrt{7})}{(3 - \sqrt{7})} = \frac{6 - 2\sqrt{7}}{9 - 3\sqrt{7} + 3\sqrt{7} - 7}$
Sum *Difference* $= \frac{6 - 2\sqrt{7}}{2}$
 $= \frac{3 - \sqrt{7}}{1}$

$(a + b)(a - b) = a^2 - ab + ab - b^2$
 $= a^2 - b^2$

Conjugate Pairs Difference of Two Squares

Sep 21-10:12 AM

#10)

$$\frac{\sqrt{5}}{(5 + \sqrt{2})} \cdot \frac{(5 - \sqrt{2})}{(5 - \sqrt{2})} = \frac{5\sqrt{5} - \sqrt{10}}{25 - 2}$$

$$= \frac{5\sqrt{5} - \sqrt{10}}{23}$$

Sep 21-10:27 AM

#14)

$$\frac{3}{-4k^2 - 5\sqrt{k^4}} = \frac{3}{-4k^2 - 5k^2}$$

$$= \frac{3}{-9k^2}$$

$$= -\frac{1}{3k^2}$$

Sep 21-10:32 AM

$$\frac{4}{\sqrt[3]{3}} \cdot \frac{\sqrt[3]{3}}{\sqrt[3]{3}} = \frac{4\sqrt[3]{3}}{\sqrt[3]{9}}$$

Still have a Radical!

$$\frac{4}{\sqrt[3]{3}} \cdot \frac{\sqrt[3]{9}}{\sqrt[3]{9}} = \frac{4\sqrt[3]{9}}{\sqrt[3]{27}} = \frac{4\sqrt[3]{9}}{3}$$

"one" Perfect Root

1	1
2	8
3	27

Sep 21-10:36 AM

#22)

$$\frac{\sqrt[3]{10}}{\sqrt[3]{32}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{\sqrt[3]{20}}{\sqrt[3]{64}} = \frac{\sqrt[3]{20}}{4}$$

Sep 21-10:44 AM

Do 8.5 1-12 all

Sep 21-10:47 AM