

September 4, 2015

3 hrs of prep  
1 hr of class

Sep 4-10:01 AM

8.1  
#12)  $\left(\frac{25}{9}\right)^{3/2} = \left[\left(\frac{25}{9}\right)^{1/2}\right]^3$   
 $= \left(\frac{\sqrt{25}}{\sqrt{9}}\right)^3$   
 $= \left(\frac{5}{3}\right)^3$   
 $= \frac{5^3}{3^3} = \frac{125}{27}$

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#45)  $-1 \cdot \left(\frac{7x^{-4/7}y}{24x^{-7/3}y^{1/3}}\right)^{-1} = \frac{7^{-1} \cdot (x^{-4/7})^{-1} \cdot y^{-1}}{24^{-1} \cdot (x^{-7/3})^{-1} \cdot (y^{1/3})^{-1}}$   
 $= \frac{24x^{7/3}y^{1/3}}{7x^{4/7}y}$   
 $= \frac{24x^{7/3-4/7}y^{1/3-1}}{7}$   
 $= \frac{24x^{21/21-12/21}y^{1/3-1}}{7} = \frac{24x^{9/21}y^{1/3-1}}{7}$

$\frac{4}{7} - \frac{1}{3} = \frac{12-7}{21} = \frac{5}{21}$   
 $\frac{4}{3} - \frac{1}{1} = \frac{4-3}{3} = \frac{1}{3}$

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

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$(2x)^3 = (2x) \cdot (2x) \cdot (2x) = 8x^3$   
 $\downarrow$   
 $2^3 \cdot x^3$   
 $8x^3$

Sep 4-10:25 AM

#69)  $2x\sqrt[3]{y^2}$   
 $2x y^{1/3} 2^{1/3}$   
 $A^{m/n} = \sqrt[n]{A^m}$

Sep 4-10:34 AM

#51)  $\left[\frac{(81a^{-7/2})^{-7/2}}{b^{-7/2}}\right]^{-7/2}$   
 $\left[\frac{81^{-7/2} (a^{-7/2})^{-7/2}}{(b^{-7/2})^{-7/2}}\right]^{-7/2}$   
 $\left[\frac{a^{49/4}}{81^{7/2} b^{7/2}}\right]^{-7/2}$   
 $\frac{a^{-49/4} \cdot (b^{7/2})^{-7/2}}{81^{-7/2} \cdot b^{7/2}} = \frac{8^{7/2} b^{7/2}}{81^{7/2} b^{7/2}}$   
 $= \frac{\sqrt[7]{81} \cdot b^{7/2}}{a^{7/2}}$   
 $= \frac{3b^{7/2}}{a^{7/2}}$

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