Test Review - 8.1, 8.2, 7.2-7.5

$$\frac{m-7}{8m^2-9bm} = \frac{m+1}{8m} = \frac{1}{8m}$$
 $\frac{m+0}{m\neq 0} = \frac{m+1}{m+1}$

2) $\frac{m^2+m-12}{m^2-m-12} = \frac{m+4}{(m-3)(m+2)} = \frac{m+4}{m+2} = \frac{m+4}{(m-3)(m+2)} = \frac{m+4}{m+2} = \frac{m+4}{m+3} = \frac{m+2}{m+2}$

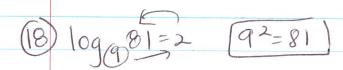
3) $\frac{x^2-5x+4}{3-3x} \cdot \frac{2x^2+12x}{2x^2-8x} = \frac{(x-4)(x-1)}{3(1-x)} \cdot \frac{2x(x+16)}{2x(x+16)} = \frac{-(x+16)}{3}$

4) $\frac{10r^3+10r^2}{r+1} \cdot \frac{3r^2-21r}{10r^3-90r^2} = \frac{10r^2(r+1)}{r+1} \cdot \frac{3r(r-9)}{10r^3-90r^2} = \frac{3r}{r+1}$

5) $\frac{n^2-13n+40}{7n-35} = \frac{n^2-16n+64}{n^2-64} = \frac{(n-8)(n-5)}{7(n-5)} = \frac{(n-8)(n-8)}{(n-8)(n+8)}$
 $\frac{(n-8)(n+8)}{7(n-8)} = \frac{n-8}{7(n-8)} = \frac{n-8}{7(n-8)}$

10)
$$\frac{2}{x-5} - \frac{10}{x+10} = \frac{2(x+0)}{(x-5)(x+0)} - \frac{10(x-5)}{(x-5)(x+0)} = \frac{2x+12}{(x-5)(x+0)} = \frac{2(x+1)}{(x-5)(x+0)} = \frac{2x+12}{(x-5)(x+0)} = \frac{-4x+42}{(x-5)(x+0)} = \frac{-2(2x-21)}{(x-5)(x+0)}$$

11) $\frac{8}{x} + \frac{9}{y} = \frac{8}{y} + \frac{9(m+5)}{(m+5)(m-5)} = \frac{8+9m+45}{y} = \frac{9m+53}{y} = \frac{9m+53}{y} = \frac{2x+1}{x} =$



$$\frac{7}{9} \log_{6} \frac{7}{9^{3}} = \log_{6} 7 - \log_{6} 9^{3}$$

$$= \log_{6} 7 - 3\log_{6} 9$$

(2)
$$\log_5 9 y^3 \sqrt{x} = \log_5 9 + \log_5 y^3 + \log_5 x^{\frac{1}{2}}$$

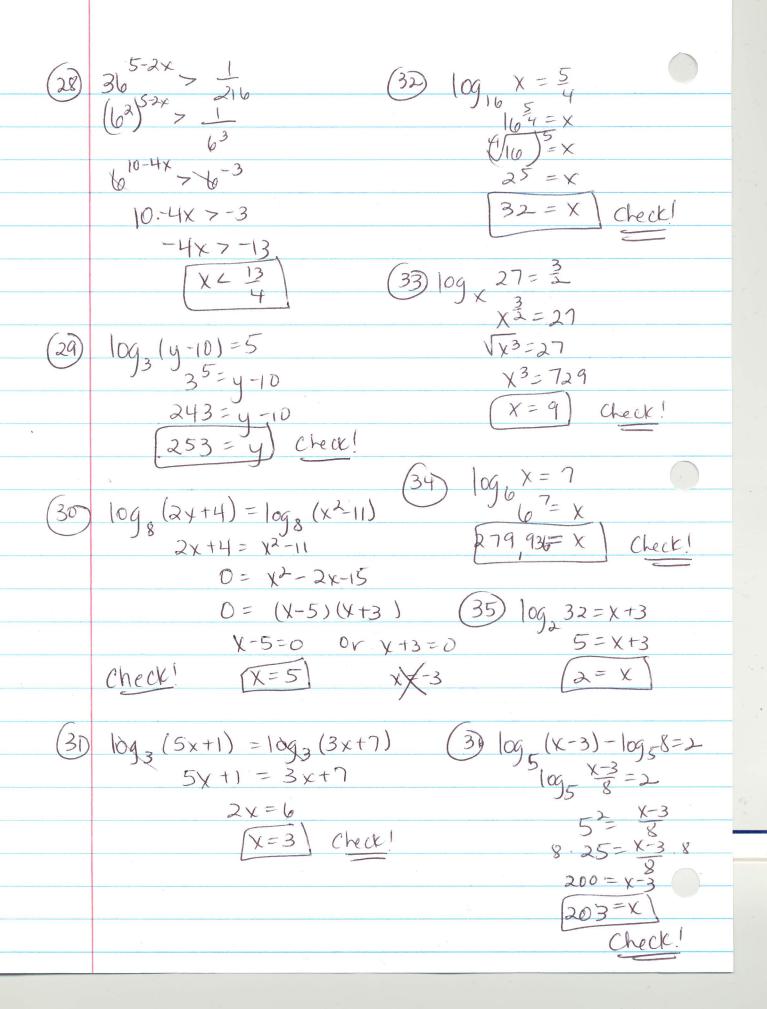
= $\log_5 9 + 3\log_5 y + \frac{1}{2}\log_5 x$

(29) (3)
$$\log_7 4x + \log_7 3y = \log_7 (4x)^3 + \log_7 3y = \log_7 64x^3 \cdot 3y$$

= $\log_7 192x^3y$

$$(25) \left(\frac{1}{2} \log x - 2 \log z + \log y \right) = \log x^{\frac{1}{2}} - \log z^{2} + \log y = \log z^{2} + \log y$$

$$= \left(\log \frac{y \sqrt{x}}{z^{2}} \right)$$



(37)
$$\log_3 x + \log_3 3x = 5$$

 $\log_3 3x^2 = 5$
 $3^5 = 3x^2$
 $243 = 3x^2$
 $81 = x^2$
 $\pm 9 = x$ Check
 $x = 9$

$$\begin{array}{c}
(3) A = P(1+r)^n \\
A = 10,000(1+.04)^5 \\
A = $12,166.53 G
\end{array}$$

$$| 39 | \log_{2} 8 = x$$

$$2^{x} = 8$$

$$2^{x} = 2^{3}$$

$$x = 3 | A|$$

$$(41) \log_{2} 24 - \log_{2} 3 = \log_{5} X$$
 $\log_{2} \frac{24}{3} = \log_{5} X$
 $\log_{2} 8 = \log_{5} X$
 $3 = \log_{5} X$
 $5^{3} = X$