HW: Pg 233 1c,11,17
Pg 243 5,9,13,25,27,34b(don't cheat!)

11) a) $y' = 2x+8$ $f'(x)$ changes sign

b) $y' = 10x^4+3x^2+3$ 1-1 !

c) $y' = 2+\cos x$

17) $y = 3x^3-5$

$x = 3y^3-5$

$x+5 = 3y^3$

$y^3 = \frac{x+5}{3}$

$y = \sqrt[3]{\frac{x+5}{3}}$

2.4.3

5) a) $2^x = 16$ (4)

b) $y = \log_2\left(\frac{1}{32}\right)$

$2^y = \frac{1}{32}$ $y = -5$

c) 1

d) $\frac{1}{2}$ "9 to what power = 3"?

9) $\ln a^2\sqrt{bc}$

a) $\ln a^2 + \ln \sqrt{bc}$

b)

$2\ln a + \frac{1}{2}\ln bc$

$2\ln a + \frac{1}{2}\ln b + \frac{1}{2}\ln c$

13) $4\log 2 - \log 3 + \log 16$

$\log 16 - \log 3 + \log 16$

$2\log 16 - \log 3$

$\log 256 - \log 3$

$\log \frac{256}{3}$

25) $\ln\left(\frac{1}{x}\right)+\ln(2x^3)=\ln 3$

$-\ln x+\ln 2+\ln x^3=\ln 3$

$-\ln x+\ln 2+3\ln x=\ln 3$

$2\ln x+\ln 2=\ln 3$

$\ln x=\frac{\ln 3-\ln 2}{2}$

$\ln x=\frac{1}{2}\ln\frac{3}{2}$

$\ln x=\ln\sqrt{\frac{3}{2}}$

$e^{\ln x}=e^{\ln\sqrt{\frac{3}{2}}}$

$x=\sqrt{\frac{3}{2}}$

27) $5^{-2x} = 3$

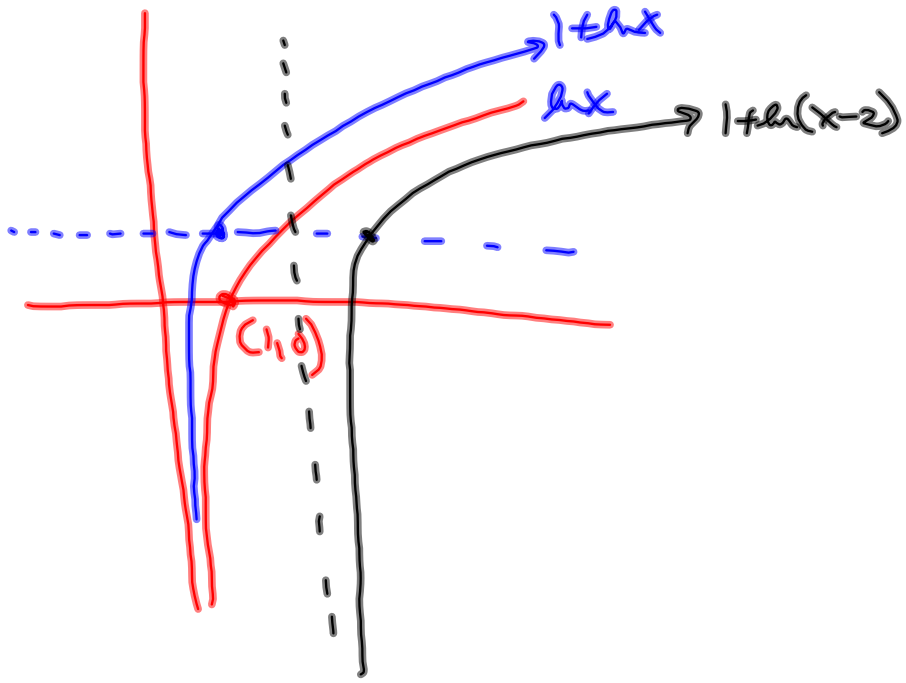
$\ln 5^{-2x} = \ln 3$

$-2x \ln 5 = \ln 3$

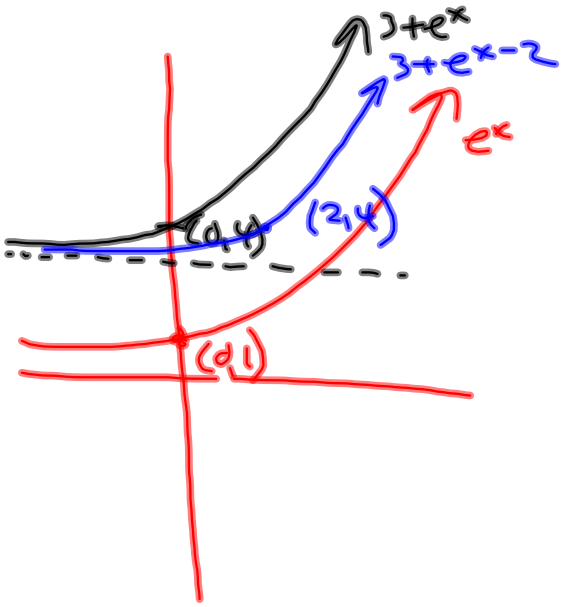
$-2x = \frac{\ln 3}{\ln 5}$

$x = -\frac{\ln 3}{2 \ln 5} = -\frac{\ln 3}{\ln 25}$

34a) $1+\ln(x-2)$



34 b) $y = 3 + e^{x-2}$



$f(x) = 3 + e^x$

$f(x-h) = 3 + e^{x-h}$

$h = 2$