MATH 1216 HW #1 Batu Sensoy

Section 2.3:

(8) $H(u) = (3u-1)(u+2)$

$3u^2 + 6u - u - 2 = 3u^2 + 5u - 2 \quad H'(u) = 6u+5$ //

(12) $y = x^{5/3} - x^{2/3}$

$y' = \frac{5}{3}x^{\frac{2}{3}} - \frac{2}{3}x^{-\frac{1}{3}}$ //

(17) $y = \frac{x^2+4x+3}{\sqrt{x}}$

$= (x^2+4x+3)\,x^{-\frac{1}{2}}$

$= x^{3/2} + 4x^{\frac{1}{2}} + 3x^{-\frac{1}{2}}$

$y' = \frac{3}{2}x^{\frac{1}{2}} + 2x^{-\frac{1}{2}} - \frac{3}{2}x^{-\frac{3}{2}}$ //

(33) $y = \frac{t^3+3t}{t^2-4t+3}$

$2t-4$

$y' = \frac{(t^3+3t)' \cdot (t^2-4t+3) - (t^2-4t+3)' \cdot (t^3+3t)}{(t^2-4t+3)^2}$

$3t^2+3$

$y' = \frac{(3t^2+3)(t^2-4t+3) - (2t-4)\cdot(t^3+3t)}{(t^2-4t+3)^2}$ //