15.22 1)

α) $\left(\eta\mu^7 x\right)' = 7\eta\mu^6 x \cdot \left(\eta\mu x\right)' = 7\eta\mu^6 x \cdot \sigma\upsilon\nu x$

β) $\left(\ln^3 x\right)' = 3\ln^2 x\left(\ln x\right)' = 3\ln^2 x \cdot \dfrac{1}{x} = \dfrac{3\ln^2 x}{x}$

15.22 2)

$3\left(x^4+x\right)^2 \cdot \left(x^4+x\right)' = 3\left(x^4+x\right)^2 \cdot \left(4x^3+1\right)$

15.22 3)

$5\left(3x^3-1\right)^4 \cdot \left(3x^3-1\right)' = 5\left(3x^3-1\right)^4 \cdot 9x^2 = 45x^2\left(3x^3-1\right)^4$

15.22 4)

$3\eta\mu^2 x \cdot \left(\eta\mu x\right)' = 3\eta\mu^2 x \cdot \sigma\upsilon\nu x$

15.22 5)

$4\sigma\upsilon\nu^3 x \cdot \left(\sigma\upsilon\nu x\right)' = -4\sigma\upsilon\nu^3 x \cdot \eta\mu x$

15.22 6)

$5\varepsilon\varphi^4 x \cdot \left(\varepsilon\varphi x\right)' = \dfrac{5\varepsilon\varphi^4 x}{\sigma\upsilon\nu^2 x}$

15.22 7)

$6\sigma\varphi^5 x \cdot \left(\sigma\varphi x\right)' = -\dfrac{6\sigma\varphi^5 x}{\eta\mu^2 x}$

15.22 8)

$7\ln^6 x \cdot \left(\ln x\right)' = \dfrac{7\ln^6 x}{x}$

15.22 9)

$9\sqrt{x}^8\left(\sqrt{x}\right)' = \dfrac{9x^4}{2\sqrt{x}}$

15.22 10)

$5^{4x}\ln 5 \cdot \left(4x\right)' = 4 \cdot 5^{4x}\ln 5$

15.22 11)

$e^{6x}\left(6x\right)' = 6e^{6x}$