15.4 1)

α) $\left(2x^3-3x^2+5x-7\right)'=\left(2x^3\right)'-\left(3x^2\right)'+\left(5x\right)'-\left(7\right)'=6x^2-6x+5$

β) $\left(-x^4+3x^3-5x^2+x-11\right)'=\left(-x^4\right)'+\left(3x^3\right)'-\left(5x^2\right)'+\left(x\right)'-\left(11\right)'=$

$=-4x^3+9x^2-10x+1$

15.4 2)

$\left(3x^2+2x-6\right)'=\left(3x^2\right)'+\left(2x\right)'-\left(6\right)'=6x+2+0=6x+2$

15.4 3)

$\left(x^3-5x^2-7x+1\right)'=\left(x^3\right)'-\left(5x^2\right)'-\left(7x\right)'+\left(1\right)'=3x^2-10x-7+0=3x^2-10x-7$

15.4 4)

$\left(2x^3+4x^2+5x-3\right)'=\left(2x^3\right)'+\left(4x^2\right)'+\left(5x\right)'-\left(3\right)'=6x^2+8x+5+0=6x^2+8x+5$

15.4 5)

$\left(x^{10}+x^5-x^3+1\right)'=\left(x^{10}\right)'+\left(x^5\right)'-\left(x^3\right)'+\left(1\right)'=10x^9+5x^4-3x^2+0=$

$=10x^9+5x^4-3x^2$

15.4 6)

$\left(x^3-5x^2+6x+\sqrt{3}\right)'=\left(x^3\right)'-\left(5x^2\right)'+\left(6x\right)'+\left(\sqrt{3}\right)'=3x^2-10x+6+0=$

$=3x^2-10x+6$

15.4 7)

$\left(\alpha x^3+\beta x^2+\gamma x+\delta\right)'=\left(\alpha x^3\right)'+\left(\beta x^2\right)'+\left(\gamma x\right)'+\left(\delta\right)'=3\alpha x^2+2\beta x+\gamma+0=$

$=3\alpha x^2+2\beta x+\gamma$