

$$-3j^2 + (-3)^2 j^2 - 35j^2 + (30j)^2$$

$$= -3j^2 + 9j^2 - 35j^2 + 30^2 j^2$$

$$= -3j^2 + 9j^2 - 35j^2 + 900j^2$$

$$= (-3 + 9 - 35 + 900)j^2$$

$$= 871j^2$$

$$30^2 x^2 + 30^3 x^3 + 30^4 x^2 - 20 x^3$$

$$= 900 x^2 + 27.000 x^3 + 810.000 x^2 - 20 x^3$$

$$= 900 x^2 + 810.000 x^2 + 27.000 x^3 - 20 x^3$$

$$= (900 + 810.000) x^2 + (27.000 - 20) x^3$$

$$= 810.900 x^2 + 26.980 x^3$$

$$\begin{aligned}
& 1x + 1^2x^2 + 1^3x^3 + (-1)x + (-1)^2x^2 + (-1)^3x^3 \\
&= 1x + 1x^2 + 1x^3 + (-1)x + 1x^2 + (-1)x^3 \\
&= 1x + (-1)x + 1x^2 + 1x^2 + 1x^3 + (-1)x^3 \\
&= (1 + (-1))x + (1 + 1)x^2 + (1 + (-1))x^3 \\
&= (1 - 1)x + 2x^2 + (1 - 1)x^3 \\
&= 0x + 2x^2 + 0x^3 \\
&= 2x^2
\end{aligned}$$

$$2j - 9j + 5j^2$$

$$= (2-9)j + 5j^2$$

$$= -7j + 5j^2$$

$$7j^8 + 2j^4 - 3j^8$$

$$= 7j^8 - 3j^8 + 2j^4$$

$$= (7-3)j^8 + 2j^4$$

$$= 4j^8 + 2j^4$$

$$\begin{aligned} & 3z^2 - 8z^2 - 3z^2 + 6z^6 \\ &= (3 - 8 - 3)z^2 + 6z^6 \\ &= -8z^2 + 6z^6 \end{aligned}$$

$$\begin{aligned} & 4\theta^5 - 35\theta^{10} + 3\theta^5 - \theta^{10} \\ &= 4\theta^5 + 3\theta^5 - 35\theta^{10} - \theta^{10} \\ &= (4 + 3)\theta^5 + (-35 - 1)\theta^{10} \\ &= 7\theta^5 + (-36)\theta^{10} \\ &= 7\theta^5 - 36\theta^{10} \end{aligned}$$

$$\begin{aligned}
 & 4\eta^8 - 8\eta^7 + 9\eta^7 - \eta^8 + \eta^7 \\
 &= 4\eta^8 - \eta^8 - 8\eta^7 + 9\eta^7 + \eta^7 \\
 &= (4-1)\eta^8 + (-8+9+1)\eta^7 \\
 &= 3\eta^8 + 2\eta^7
 \end{aligned}$$

$$\begin{aligned}
 & \theta + \theta^2 + \theta^3 + \theta^4 - \theta - 2\theta^2 - 3\theta^3 - 4\theta^4 \\
 &= \theta - \theta + \theta^2 - 2\theta^2 + \theta^3 - 3\theta^3 + \theta^4 - 4\theta^4 \\
 &= (1-1)\theta + (1-2)\theta^2 + (1-3)\theta^3 + (1-4)\theta^4 \\
 &= 0\theta + (-1)\theta^2 + (-2)\theta^3 + (-3)\theta^4 \\
 &= -1\theta^2 - 2\theta^3 - 3\theta^4
 \end{aligned}$$

$$4\theta^5 - 2\theta^4 - \theta^4 + 3\theta^5 - \theta^4$$

$$= 4\theta^5 + 3\theta^5 - 2\theta^4 - \theta^4 - \theta^4$$

$$= (4+3)\theta^5 + (-2-1-1)\theta^4$$

$$= 7\theta^5 + (-4)\theta^4$$

$$= 7\theta^5 - 4\theta^4$$