

$$F^j \alpha(x) = e_x \frac{([k+j]!)([2p-k-1]!)}{([k]!)([2p-k-j-1]!)} E^{p-k-j-1} x_{2p-1}$$

$$E^j \beta(x) = f_x \frac{([2p-k+j-1]!)([k]!)}{([2p-k-1]!)([k-j]!)} F^{k-p-j} x_0$$