

$$A_k: x_1^{k+1} + x_2^2 + \cdots + x_n^2$$

$$D_k: x_1 (x_1^{k-2} + x_2^2) + x_3^2 + \cdots + x_n^2$$

$$E_6: x_1^4 + x_2^2 + x_3^2 + \cdots + x_n^2$$

$$E_7: x_2 (x_1^3 + x_2^2) + x_3^2 + \cdots + x_n^2$$

$$E_8: x_1^5 + x_2^3 + x_3^2 + \cdots + x_n^2$$