

Dokaz

$$b_0(t) = (1-t)^3$$

$$b_1(t) = 3t(1-t)^2$$

$$b_2(t) = 3t^2(1-t)$$

$$b_3(t) = t^3$$

$$\begin{aligned} f(u) &= b_0(u)p_0 + b_1(u)p_1 + b_2(u)p_2 + b_3(u)p_3 \\ &= (1-u)^3 p_0 + 3u(1-u)^2 p_1 + 3u^2(1-u)p_2 + u^3 p_3 \end{aligned}$$

$$\begin{aligned} b_0 &= (1-u)((1-u)p_0 + up_1) + u((1-u)p_1 + up_2) \\ &= (1-u)^2 p_0 + u(1-u)p_1 + u(1-u)p_1 + u^2 p_2 \\ &= (1-u)^2((1-u)p_0 + up_1) + 2u(1-u)((1-u)p_1 + up_2) + u^2((1-u)p_2 + up_3) \\ &= (1-u)^3 p_0 + u(1-u)^2 p_1 + 2u(1-u)^2 p_1 + 2u^2(1-u)p_2 + u^2(1-u)p_2 + u^3 p_3 \\ &= (1-u)^3 p_0 + 3u(1-u)^2 p_1 + 3u^2(1-u)p_2 + u^3 p_3 \\ &= f(u) \end{aligned}$$