

جداول گوس ۱، ۲ و ۳ نقطه‌ای برای المان چهارگوش ۴ گره‌ای ایزوپارامتریک (Q4) :

جدول گوس ۱ نقطه‌ای :

نقطه گوسی	r	s	w_i	w_j	N_1	N_2	N_3	N_4	$\frac{\partial N_1}{\partial r}$	$\frac{\partial N_2}{\partial r}$	$\frac{\partial N_3}{\partial r}$	$\frac{\partial N_4}{\partial r}$	$\frac{\partial N_1}{\partial s}$	$\frac{\partial N_2}{\partial s}$	$\frac{\partial N_3}{\partial s}$	$\frac{\partial N_4}{\partial s}$
GP1	0	0	2	2	0.25	0.25	0.25	0.25	-0.25	0.25	0.25	-0.25	-0.25	-0.25	0.25	0.25

جدول گوس ۲ نقطه‌ای :

نقطه گوسی	r	s	w_i	w_j	N_1	N_2	N_3	N_4	$\frac{\partial N_1}{\partial r}$	$\frac{\partial N_2}{\partial r}$	$\frac{\partial N_3}{\partial r}$	$\frac{\partial N_4}{\partial r}$	$\frac{\partial N_1}{\partial s}$	$\frac{\partial N_2}{\partial s}$	$\frac{\partial N_3}{\partial s}$	$\frac{\partial N_4}{\partial s}$
GP1	-0.57735	-0.57735	1	1	0.622008	0.166667	0.044658	0.166667	-0.39434	0.394338	0.105662	-0.10566	-0.39434	-0.10566	0.105662	0.394338
GP2	-0.57735	0.57735	1	1	0.166667	0.044658	0.166667	0.622008	-0.10566	0.105662	0.394338	-0.39434	-0.39434	-0.10566	0.105662	0.394338
GP3	0.57735	-0.57735	1	1	0.166667	0.622008	0.166667	0.044658	-0.39434	0.394338	0.105662	-0.10566	-0.10566	-0.39434	0.394338	0.105662
GP4	0.57735	0.57735	1	1	0.044658	0.166667	0.622008	0.166667	-0.10566	0.105662	0.394338	-0.39434	-0.10566	-0.39434	0.394338	0.105662

جدول گوس ۳ نقطه‌ای :

نقطه گوسی	r	s	w_i	w_j	N_1	N_2	N_3	N_4	$\frac{\partial N_1}{\partial r}$	$\frac{\partial N_2}{\partial r}$	$\frac{\partial N_3}{\partial r}$	$\frac{\partial N_4}{\partial r}$	$\frac{\partial N_1}{\partial s}$	$\frac{\partial N_2}{\partial s}$	$\frac{\partial N_3}{\partial s}$	$\frac{\partial N_4}{\partial s}$
GP1	-0.774597	-0.774597	0.555556	0.555556	0.787298	0.1	0.012702	0.1	-0.443649	0.443649	0.056351	-0.056351	-0.443649	-0.056351	0.056351	0.443649
GP2	-0.774597	0	0.555556	0.888889	0.443649	0.056351	0.056351	0.443649	-0.25	0.25	0.25	-0.25	-0.443649	-0.056351	0.056351	0.443649
GP3	-0.774597	0.774597	0.555556	0.555556	0.1	0.012702	0.1	0.787298	-0.056351	0.056351	0.443649	-0.443649	-0.443649	-0.056351	0.056351	0.443649
GP4	0	-0.774597	0.888889	0.555556	0.443649	0.443649	0.056351	0.056351	-0.443649	0.443649	0.056351	-0.056351	-0.25	-0.25	0.25	0.25
GP5	0	0	0.888889	0.888889	0.25	0.25	0.25	0.25	-0.25	0.25	0.25	-0.25	-0.25	-0.25	0.25	0.25
GP6	0	0.774597	0.888889	0.555556	0.056351	0.056351	0.443649	0.443649	-0.056351	0.056351	0.443649	-0.443649	-0.25	-0.25	0.25	0.25
GP7	0.774597	-0.774597	0.555556	0.555556	0.1	0.787298	0.1	0.012702	-0.443649	0.443649	0.056351	-0.056351	-0.056351	-0.443649	0.443649	0.056351
GP8	0.774597	0	0.555556	0.888889	0.056351	0.443649	0.443649	0.056351	-0.25	0.25	0.25	-0.25	-0.056351	-0.443649	0.443649	0.056351
GP9	0.774597	0.774597	0.555556	0.555556	0.012702	0.1	0.787298	0.1	-0.056351	0.056351	0.443649	-0.443649	-0.056351	-0.443649	0.443649	0.056351