

■ TABLE 11.3

Average Run Lengths (zero state) for the MEWMA Control Chart [from Prabhu and Runger (1997)]

p	δ	λ							
		0.05	0.10	0.20	0.30	0.40	0.50	0.60	0.80
2		$H = 7.35$	8.64	9.65	10.08	10.31	10.44	10.52	10.58
	0.0	199.93	199.98	199.91	199.82	199.83	200.16	200.04	200.20
	0.5	26.61	28.07	35.17	44.10	53.82	64.07	74.50	95.88
	1.0	11.23	10.15	10.20	11.36	13.26	15.88	19.24	28.65
	1.5	7.14	6.11	5.49	5.48	5.78	6.36	7.25	10.28
	2.0	5.28	4.42	3.78	3.56	3.53	3.62	3.84	4.79
	3.0	3.56	2.93	2.42	2.20	2.05	1.95	1.90	1.91
4		$H = 11.22$	12.73	13.87	14.34	14.58	14.71	14.78	14.85
	0.0	199.84	200.12	199.94	199.91	199.96	200.05	199.99	200.05
	0.5	32.29	35.11	46.30	59.28	72.43	85.28	97.56	120.27
	1.0	13.48	12.17	12.67	14.81	18.12	22.54	28.06	42.58
	1.5	8.54	7.22	6.53	6.68	7.31	8.40	10.03	15.40
	2.0	6.31	5.19	4.41	4.20	4.24	4.48	4.93	6.75
	3.0	4.23	3.41	2.77	2.50	2.36	2.27	2.24	2.37
6		$H = 14.60$	16.27	17.51	18.01	18.26	18.39	18.47	18.54
	0.0	200.11	200.03	200.11	200.18	199.81	200.01	199.87	200.17
	0.5	36.39	40.38	54.71	70.30	85.10	99.01	111.65	133.91
	1.0	15.08	13.66	14.63	17.71	22.27	28.22	35.44	53.51
	1.5	9.54	8.01	7.32	7.65	8.60	10.20	12.53	20.05
	2.0	7.05	5.74	4.88	4.68	4.80	5.20	5.89	8.60
	3.0	4.72	3.76	3.03	2.72	2.58	2.51	2.51	2.77
10		$H = 20.72$	22.67	24.07	24.62	24.89	25.03	25.11	25.17
	0.0	199.91	199.95	200.08	200.01	199.98	199.84	200.12	200.00
	0.5	42.49	48.52	67.25	85.68	102.05	116.25	128.82	148.96
	1.0	17.48	15.98	17.92	22.72	29.47	37.81	47.54	69.71
	1.5	11.04	9.23	8.58	9.28	10.91	13.49	17.17	28.33
	2.0	8.15	6.57	5.60	5.47	5.77	6.48	7.68	12.15
	3.0	5.45	4.28	3.43	3.07	2.93	2.90	2.97	3.54
15		$H = 27.82$	30.03	31.59	32.19	32.48	32.63	32.71	32.79
	0.0	199.95	199.89	200.08	200.03	199.96	199.91	199.93	200.16
	0.5	48.20	56.19	78.41	98.54	115.36	129.36	141.10	159.55
	1.0	19.77	18.28	21.40	28.06	36.96	47.44	59.03	83.86
	1.5	12.46	10.41	9.89	11.08	13.53	17.26	22.38	37.07
	2.0	9.20	7.36	6.32	6.30	6.84	7.97	9.80	16.36
	3.0	6.16	4.78	3.80	3.43	3.29	3.31	3.49	4.49