

Options: no recentering, queue, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.67	1.83	1.89	2.01	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	2.25	2.32	2.59	2.62	0.00	0.00	0.00	0.00
p3	26	28	26	28	28	2.29	2.25	2.43	2.64	7.69	0.00	7.69	7.69
p4	32	32	32	32	32	2.26	2.27	2.83	2.59	0.00	0.00	0.00	0.00
p5	29	29	29	30	29	2.03	1.97	2.48	2.52	0.00	0.00	3.45	0.00
p6	31	32	32	32	32	2.00	2.23	2.48	2.47	3.23	3.23	3.23	3.23
p7	30	33	32	31	32	2.19	2.35	2.84	2.67	10.00	6.67	3.33	6.67
p8	31	31	31	31	32	1.96	1.97	2.44	2.31	0.00	0.00	0.00	3.23
p9	28	29	29	29	29	2.00	2.01	2.33	2.50	3.57	3.57	3.57	3.57
p10	32	36	35	35	36	2.24	2.23	2.65	2.38	12.50	9.38	9.38	12.50
p11	19	21	24	23	22	20.70	23.59	28.79	33.35	10.53	26.32	21.05	15.79
p12	20	24	23	23	25	20.58	23.08	31.69	31.00	20.00	15.00	15.00	25.00
p13	20	21	23	22	23	19.52	22.87	28.65	32.17	5.00	15.00	10.00	15.00
p14	20	23	23	22	23	21.45	25.84	30.06	34.53	15.00	15.00	10.00	15.00
p15	21	23	24	23	24	21.40	24.03	30.59	37.20	9.52	14.29	9.52	14.29
p16	20	22	23	21	23	23.18	27.15	33.46	36.01	10.00	15.00	5.00	15.00
p17	22	24	24	24	24	20.52	26.13	29.34	35.00	9.09	9.09	9.09	9.09
p18	21	23	23	23	23	18.98	24.75	24.30	33.70	9.52	9.52	9.52	9.52
p19	21	22	23	23	23	21.82	25.83	32.10	36.78	4.76	9.52	9.52	9.52
p20	21	24	24	23	24	20.70	27.25	26.89	34.69	14.29	14.29	9.52	14.29
Avg.						11.59	13.60	16.04	18.36	7.24	8.29	6.94	8.97

Options: approximate recentering, queue, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	31	1.16	1.43	1.41	1.53	0.00	0.00	0.00	6.90
p2	33	33	33	33	33	1.67	1.78	2.26	2.39	0.00	0.00	0.00	0.00
p3	26	26	28	26	26	1.61	1.72	2.11	2.15	0.00	7.69	0.00	0.00
p4	32	32	32	32	32	1.72	1.92	2.38	2.30	0.00	0.00	0.00	0.00
p5	29	30	29	29	29	1.43	1.65	1.96	2.00	3.45	0.00	0.00	0.00
p6	31	32	32	32	31	1.54	1.79	2.09	2.03	3.23	3.23	3.23	0.00
p7	30	30	32	32	33	1.76	1.88	2.17	2.28	0.00	6.67	6.67	10.00
p8	31	32	31	31	32	1.42	1.65	1.86	1.92	3.23	0.00	0.00	3.23
p9	28	29	29	29	28	1.40	1.55	1.85	1.87	3.57	3.57	3.57	0.00
p10	32	36	35	36	36	1.56	1.77	2.10	2.10	12.50	9.38	12.50	12.50
p11	19	23	24	22	21	10.72	15.61	20.45	22.68	21.05	26.32	15.79	10.53
p12	20	22	23	24	23	11.72	16.41	21.48	23.23	10.00	15.00	20.00	15.00
p13	20	23	23	22	23	10.12	15.64	19.50	21.98	15.00	15.00	10.00	15.00
p14	20	22	21	21	23	11.70	18.59	20.56	26.26	10.00	5.00	5.00	15.00
p15	21	23	24	23	24	10.55	16.60	20.80	22.64	9.52	14.29	9.52	14.29
p16	20	22	21	22	21	12.27	18.38	23.34	25.30	10.00	5.00	10.00	5.00
p17	22	24	24	25	24	11.19	17.69	20.35	25.26	9.09	9.09	13.64	9.09
p18	21	23	24	23	23	9.71	16.67	16.61	21.06	9.52	14.29	9.52	9.52
p19	21	23	23	23	23	12.40	18.48	22.39	27.95	9.52	9.52	9.52	9.52
p20	21	23	24	24	24	10.54	18.25	17.97	23.78	9.52	14.29	14.29	14.29
Avg.						6.41	9.47	11.18	12.94	6.96	7.92	7.16	7.49

Options: exact recentering, queue, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	2.95	3.46	3.22	3.74	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	3.99	4.30	4.88	5.63	0.00	0.00	0.00	0.00
p3	26	28	26	28	28	3.73	4.25	4.76	4.67	7.69	0.00	7.69	7.69
p4	32	32	32	32	32	4.15	4.43	4.95	4.96	0.00	0.00	0.00	0.00
p5	29	29	29	29	29	3.39	3.86	4.24	4.06	0.00	0.00	0.00	0.00
p6	31	32	32	32	32	3.50	4.15	4.31	4.81	3.23	3.23	3.23	3.23
p7	30	32	32	33	30	3.67	4.65	4.90	5.32	6.67	6.67	10.00	0.00
p8	31	32	34	31	31	3.43	3.98	4.20	4.34	3.23	9.68	0.00	0.00
p9	28	29	29	29	29	3.18	3.67	3.68	3.97	3.57	3.57	3.57	3.57
p10	32	36	36	32	36	3.48	3.71	4.17	4.28	12.50	12.50	0.00	12.50
p11	19	23	23	22	22	43.70	72.14	61.13	83.41	21.05	21.05	15.79	15.79
p12	20	23	24	22	23	42.45	66.57	64.90	86.50	15.00	20.00	10.00	15.00
p13	20	21	21	22	23	41.24	65.45	60.07	78.38	5.00	5.00	10.00	15.00
p14	20	21	23	23	23	39.19	69.51	59.10	83.52	5.00	15.00	15.00	15.00
p15	21	22	24	23	23	41.10	72.29	59.33	87.27	4.76	14.29	9.52	9.52
p16	20	21	21	21	22	43.43	73.18	67.13	87.27	5.00	5.00	5.00	10.00
p17	22	24	24	23	24	41.17	71.06	61.54	82.34	9.09	9.09	4.55	9.09
p18	21	23	23	23	23	39.80	66.94	53.03	77.50	9.52	9.52	9.52	9.52
p19	21	22	24	23	23	41.15	76.28	63.99	90.32	4.76	14.29	9.52	9.52
p20	21	22	23	23	23	38.05	72.85	50.33	83.95	4.76	9.52	9.52	9.52
Avg.						22.44	37.34	32.19	44.16	6.04	7.92	6.15	7.25

Options: no recentering, queue, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	30	1.66	1.69	1.91	2.15	0.00	0.00	0.00	3.45
p2	33	33	33	33	33	2.27	2.27	2.70	2.65	0.00	0.00	0.00	0.00
p3	26	28	28	28	26	2.33	2.18	2.56	2.61	7.69	7.69	7.69	0.00
p4	32	32	32	32	32	2.22	2.26	2.77	2.57	0.00	0.00	0.00	0.00
p5	29	30	30	30	30	2.09	1.94	2.29	2.36	3.45	3.45	3.45	3.45
p6	31	32	32	32	32	2.09	2.08	2.63	2.55	3.23	3.23	3.23	3.23
p7	30	32	33	32	32	2.24	2.30	2.86	2.63	6.67	10.00	6.67	6.67
p8	31	32	32	31	32	1.94	2.08	2.44	2.44	3.23	3.23	0.00	3.23
p9	28	29	29	29	29	2.06	1.83	2.50	2.15	3.57	3.57	3.57	3.57
p10	32	36	36	36	37	2.20	2.17	2.67	2.69	12.50	12.50	12.50	15.62
p11	19	23	22	22	23	18.99	22.30	26.25	30.82	21.05	15.79	15.79	21.05
p12	20	24	25	24	22	20.22	21.56	29.66	32.44	20.00	25.00	20.00	10.00
p13	20	23	23	22	23	19.04	20.80	26.77	31.88	15.00	15.00	10.00	15.00
p14	20	22	23	21	23	19.84	23.38	28.87	32.36	10.00	15.00	5.00	15.00
p15	21	22	22	24	24	21.10	22.72	29.53	32.79	4.76	4.76	14.29	14.29
p16	20	23	22	21	21	22.52	22.77	31.10	34.37	15.00	10.00	5.00	5.00
p17	22	23	25	24	25	20.05	24.83	29.42	31.55	4.55	13.64	9.09	13.64
p18	21	22	23	23	23	16.87	21.75	23.93	29.67	4.76	9.52	9.52	9.52
p19	21	23	23	23	23	21.21	23.13	31.04	34.32	9.52	9.52	9.52	9.52
p20	21	23	23	24	23	20.07	26.42	27.46	32.76	9.52	9.52	14.29	9.52
Avg.						11.15	12.52	15.47	17.29	7.72	8.57	7.48	8.09

Options: approximate recentering, queue, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.13	1.17	1.19	1.28	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	1.59	1.89	2.12	2.28	0.00	0.00	0.00	0.00
p3	26	28	28	28	28	1.54	1.65	2.07	2.06	7.69	7.69	7.69	7.69
p4	32	32	32	32	32	1.59	1.86	2.17	2.13	0.00	0.00	0.00	0.00
p5	29	29	30	30	30	1.33	1.47	1.81	1.59	0.00	3.45	3.45	3.45
p6	31	32	32	32	32	1.31	1.54	1.81	1.79	3.23	3.23	3.23	3.23
p7	30	32	32	32	32	1.59	1.76	2.20	2.04	6.67	6.67	6.67	6.67
p8	31	31	31	32	32	1.39	1.51	1.77	1.79	0.00	0.00	3.23	3.23
p9	28	29	29	29	29	1.29	1.46	1.72	1.73	3.57	3.57	3.57	3.57
p10	32	36	36	35	35	1.45	1.58	2.11	2.08	12.50	12.50	9.38	9.38
p11	19	20	22	22	21	8.34	11.63	13.81	16.08	5.26	15.79	15.79	10.53
p12	20	21	22	22	25	8.37	11.89	14.49	17.01	5.00	10.00	10.00	25.00
p13	20	22	21	21	23	7.79	10.87	12.91	13.42	10.00	5.00	5.00	15.00
p14	20	21	20	21	21	9.02	12.91	14.99	16.56	5.00	0.00	5.00	5.00
p15	21	22	23	21	22	7.99	10.97	13.68	16.30	4.76	9.52	0.00	4.76
p16	20	21	21	21	21	9.46	13.87	16.06	18.20	5.00	5.00	5.00	5.00
p17	22	24	24	24	23	9.15	13.19	14.88	17.08	9.09	9.09	9.09	4.55
p18	21	23	21	22	23	7.41	11.03	11.55	13.07	9.52	0.00	4.76	9.52
p19	21	22	22	21	23	8.66	12.74	16.36	17.62	4.76	4.76	0.00	9.52
p20	21	23	23	23	23	8.66	14.26	13.45	16.60	9.52	9.52	9.52	9.52
Avg.						5.05	6.96	8.06	8.94	5.08	5.29	5.07	6.78

Options: exact recentering, queue, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	2.65	3.35	3.07	3.36	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	3.86	4.27	4.50	5.01	0.00	0.00	0.00	0.00
p3	26	26	26	26	26	3.45	3.89	4.06	4.28	0.00	0.00	0.00	0.00
p4	32	32	32	32	32	3.83	4.12	4.78	4.59	0.00	0.00	0.00	0.00
p5	29	29	29	30	29	3.63	3.78	4.07	4.25	0.00	0.00	3.45	0.00
p6	31	32	31	31	32	3.05	3.65	3.78	4.00	3.23	0.00	0.00	3.23
p7	30	33	32	33	30	3.78	4.41	4.80	4.44	10.00	6.67	10.00	0.00
p8	31	31	32	31	31	3.24	3.66	3.88	3.91	0.00	3.23	0.00	0.00
p9	28	29	28	29	29	3.07	3.34	3.60	3.53	3.57	0.00	3.57	3.57
p10	32	36	35	36	36	3.15	3.73	4.06	3.99	12.50	9.38	12.50	12.50
p11	19	22	22	22	20	35.92	52.58	53.79	65.49	15.79	15.79	15.79	5.26
p12	20	22	23	22	24	35.05	50.25	50.70	59.12	10.00	15.00	10.00	20.00
p13	20	21	22	21	21	32.69	49.98	47.35	59.33	5.00	10.00	5.00	5.00
p14	20	21	22	21	21	33.70	51.40	44.60	63.04	5.00	10.00	5.00	5.00
p15	21	23	24	22	24	35.87	53.88	48.59	60.91	9.52	14.29	4.76	14.29
p16	20	21	21	20	21	37.86	51.23	54.23	64.22	5.00	5.00	0.00	5.00
p17	22	23	23	23	23	34.62	53.41	50.66	64.40	4.55	4.55	4.55	4.55
p18	21	22	23	23	21	29.83	47.84	40.57	51.21	4.76	9.52	9.52	0.00
p19	21	23	23	22	23	36.56	54.69	52.38	63.27	9.52	9.52	4.76	9.52
p20	21	23	24	23	23	34.51	59.36	45.82	68.56	9.52	14.29	9.52	9.52
Avg.						19.12	28.14	26.46	32.95	5.40	6.36	4.92	4.87

Options: no recentering, stack, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.68	1.80	2.20	2.12	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	2.28	2.22	2.93	2.90	0.00	0.00	0.00	0.00
p3	26	28	28	26	26	2.29	2.26	2.86	2.86	7.69	7.69	0.00	0.00
p4	32	32	32	32	32	2.31	2.31	3.11	2.94	0.00	0.00	0.00	0.00
p5	29	30	29	29	30	1.97	2.23	2.51	2.44	3.45	0.00	0.00	3.45
p6	31	32	32	32	32	2.03	2.22	2.85	2.79	3.23	3.23	3.23	3.23
p7	30	32	30	33	32	2.33	2.39	3.11	3.14	6.67	0.00	10.00	6.67
p8	31	31	31	32	31	2.21	2.19	2.69	2.77	0.00	0.00	3.23	0.00
p9	28	29	29	29	29	2.03	1.97	2.56	2.36	3.57	3.57	3.57	3.57
p10	32	36	37	37	36	2.15	2.32	2.78	2.82	12.50	15.62	15.62	12.50
p11	19	23	24	23	23	20.68	26.25	34.07	39.89	21.05	26.32	21.05	21.05
p12	20	25	25	24	23	22.27	26.05	37.85	38.94	25.00	25.00	20.00	15.00
p13	20	23	22	22	24	21.58	25.10	35.30	40.30	15.00	10.00	10.00	20.00
p14	20	22	23	21	23	22.92	27.63	32.05	41.71	10.00	15.00	5.00	15.00
p15	21	22	24	23	24	22.28	26.53	34.64	40.28	4.76	14.29	9.52	14.29
p16	20	20	21	23	21	23.94	27.96	39.29	46.70	0.00	5.00	15.00	5.00
p17	22	24	24	23	25	21.97	28.47	35.09	40.19	9.09	9.09	4.55	13.64
p18	21	23	23	23	24	19.72	27.20	28.93	39.93	9.52	9.52	9.52	14.29
p19	21	23	23	23	22	24.46	28.93	41.25	45.72	9.52	9.52	9.52	4.76
p20	21	22	23	24	24	21.21	29.76	32.01	42.58	4.76	9.52	14.29	14.29
Avg.						12.22	14.79	18.90	22.07	7.29	8.17	7.71	8.34

Options: approximate restart, stack, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.14	1.30	1.64	1.59	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	1.72	1.91	2.54	2.62	0.00	0.00	0.00	0.00
p3	26	28	28	28	28	1.65	1.79	2.26	2.44	7.69	7.69	7.69	7.69
p4	32	32	32	32	32	1.80	1.85	2.50	2.51	0.00	0.00	0.00	0.00
p5	29	29	29	29	30	1.57	1.75	2.10	2.08	0.00	0.00	0.00	3.45
p6	31	32	32	32	32	1.57	1.62	2.12	2.16	3.23	3.23	3.23	3.23
p7	30	32	33	33	33	1.65	1.94	2.29	2.34	6.67	10.00	10.00	10.00
p8	31	34	32	31	31	1.45	1.67	2.10	2.05	9.68	3.23	0.00	0.00
p9	28	29	29	29	29	1.41	1.54	1.85	2.13	3.57	3.57	3.57	3.57
p10	32	37	35	36	37	1.67	1.79	2.24	2.19	15.62	9.38	12.50	15.62
p11	19	22	24	23	23	11.36	16.58	21.15	25.93	15.79	26.32	21.05	21.05
p12	20	22	25	25	25	13.02	19.34	25.55	28.21	10.00	25.00	25.00	25.00
p13	20	22	22	22	23	11.72	16.44	23.33	25.95	10.00	10.00	10.00	15.00
p14	20	21	22	23	23	12.56	20.31	24.30	29.71	5.00	10.00	15.00	15.00
p15	21	22	24	23	24	11.85	17.97	21.94	27.16	4.76	14.29	9.52	14.29
p16	20	23	23	23	21	13.84	20.76	25.57	30.63	15.00	15.00	15.00	5.00
p17	22	24	24	24	25	12.68	19.16	22.54	29.94	9.09	9.09	9.09	13.64
p18	21	23	24	23	24	11.03	18.56	19.19	23.59	9.52	14.29	9.52	14.29
p19	21	23	23	23	23	13.90	20.16	27.74	32.20	9.52	9.52	9.52	9.52
p20	21	24	25	22	25	11.81	20.10	20.33	28.23	14.29	19.05	4.76	19.05
Avg.						7.07	10.33	12.66	15.08	7.47	9.48	8.27	9.77

Options: exact recentering, stack, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	2.89	3.37	3.91	4.10	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	4.17	4.80	5.38	5.85	0.00	0.00	0.00	0.00
p3	26	26	26	26	28	3.81	4.36	5.13	5.30	0.00	0.00	0.00	7.69
p4	32	32	32	32	32	4.11	4.11	5.39	5.81	0.00	0.00	0.00	0.00
p5	29	30	30	29	29	3.69	4.06	4.63	4.95	3.45	3.45	0.00	0.00
p6	31	32	32	32	32	3.26	4.34	4.56	4.81	3.23	3.23	3.23	3.23
p7	30	33	33	32	33	3.94	4.32	5.27	5.41	10.00	10.00	6.67	10.00
p8	31	31	32	32	31	3.45	4.12	4.58	4.67	0.00	3.23	3.23	0.00
p9	28	29	29	29	29	3.33	3.89	3.96	4.38	3.57	3.57	3.57	3.57
p10	32	36	35	35	35	3.50	3.89	4.71	4.76	12.50	9.38	9.38	9.38
p11	19	22	24	23	23	45.39	75.35	68.05	97.23	15.79	26.32	21.05	21.05
p12	20	21	24	22	21	47.09	73.12	75.93	100.18	5.00	20.00	10.00	5.00
p13	20	21	23	20	21	42.59	71.92	70.98	96.85	5.00	15.00	0.00	5.00
p14	20	21	22	22	22	41.29	76.37	65.68	95.76	5.00	10.00	10.00	10.00
p15	21	22	25	23	23	43.89	78.32	71.91	96.76	4.76	19.05	9.52	9.52
p16	20	21	22	20	23	46.41	77.42	78.27	104.07	5.00	10.00	0.00	15.00
p17	22	24	23	24	25	42.05	76.53	66.69	93.91	9.09	4.55	9.09	13.64
p18	21	23	24	23	23	39.77	69.71	58.61	88.18	9.52	14.29	9.52	9.52
p19	21	23	23	23	23	48.99	77.19	74.16	98.92	9.52	9.52	9.52	9.52
p20	21	23	24	23	24	41.75	75.61	61.51	90.87	9.52	14.29	9.52	14.29
Avg.						23.87	39.64	36.97	50.54	5.55	8.79	5.72	7.32

Options: no recentering, stack, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.71	1.72	2.27	2.16	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	2.23	2.28	2.94	2.83	0.00	0.00	0.00	0.00
p3	26	28	28	28	26	2.31	2.30	3.17	2.98	7.69	7.69	7.69	0.00
p4	32	32	32	32	32	2.33	2.15	3.01	3.07	0.00	0.00	0.00	0.00
p5	29	29	29	30	30	1.95	2.20	2.72	2.59	0.00	0.00	3.45	3.45
p6	31	32	32	32	32	2.27	2.31	2.86	2.86	3.23	3.23	3.23	3.23
p7	30	33	30	32	30	2.31	2.21	3.08	3.09	10.00	0.00	6.67	0.00
p8	31	31	31	31	31	2.12	2.08	2.76	2.76	0.00	0.00	0.00	0.00
p9	28	29	29	29	29	2.16	2.13	2.63	2.49	3.57	3.57	3.57	3.57
p10	32	32	32	36	37	2.33	2.31	3.08	2.72	0.00	0.00	12.50	15.62
p11	19	23	22	22	22	20.58	24.01	31.58	36.79	21.05	15.79	15.79	15.79
p12	20	24	24	23	25	20.66	24.08	37.36	39.94	20.00	20.00	15.00	25.00
p13	20	22	22	21	23	18.88	23.47	33.44	33.74	10.00	10.00	5.00	15.00
p14	20	23	23	22	23	21.11	26.74	33.31	40.31	15.00	15.00	10.00	15.00
p15	21	23	24	23	24	22.06	26.33	34.85	37.07	9.52	14.29	9.52	14.29
p16	20	21	21	21	24	22.21	26.15	36.97	41.48	5.00	5.00	5.00	20.00
p17	22	24	25	24	25	20.93	27.55	33.56	39.06	9.09	13.64	9.09	13.64
p18	21	23	23	22	24	18.56	25.15	28.66	34.76	9.52	9.52	4.76	14.29
p19	21	23	24	23	23	23.19	27.00	34.86	42.52	9.52	14.29	9.52	9.52
p20	21	23	25	21	23	20.67	27.65	31.14	38.59	9.52	19.05	0.00	9.52
Avg.						11.63	13.99	18.21	20.49	7.14	7.55	6.04	8.90

Options: approximate recentering, stack, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.03	1.20	1.30	1.42	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	1.68	1.78	2.15	2.46	0.00	0.00	0.00	0.00
p3	26	28	26	28	26	1.45	1.69	2.30	2.05	7.69	0.00	7.69	0.00
p4	32	32	32	32	32	1.84	1.76	2.36	2.32	0.00	0.00	0.00	0.00
p5	29	29	30	30	29	1.37	1.48	1.83	1.89	0.00	3.45	3.45	0.00
p6	31	32	32	32	32	1.33	1.49	1.84	1.88	3.23	3.23	3.23	3.23
p7	30	31	32	32	33	1.58	1.80	2.07	2.21	3.33	6.67	6.67	10.00
p8	31	32	34	31	31	1.38	1.65	1.91	1.85	3.23	9.68	0.00	0.00
p9	28	29	29	29	29	1.31	1.55	1.78	1.86	3.57	3.57	3.57	3.57
p10	32	35	35	35	32	1.53	1.67	2.19	2.12	9.38	9.38	9.38	0.00
p11	19	21	22	22	21	10.29	12.33	16.21	19.14	10.53	15.79	15.79	10.53
p12	20	23	24	25	23	9.53	13.13	18.76	18.68	15.00	20.00	25.00	15.00
p13	20	22	22	20	22	8.21	11.79	14.91	16.42	10.00	10.00	0.00	10.00
p14	20	20	21	21	22	9.10	13.41	17.13	20.70	0.00	5.00	5.00	10.00
p15	21	23	24	24	23	9.29	12.58	16.18	17.43	9.52	14.29	14.29	9.52
p16	20	21	23	21	21	10.12	13.88	20.59	23.52	5.00	15.00	5.00	5.00
p17	22	23	23	24	23	10.31	13.00	18.27	21.71	4.55	4.55	9.09	4.55
p18	21	23	23	21	23	8.02	12.95	12.19	14.63	9.52	9.52	0.00	9.52
p19	21	22	22	22	23	9.92	13.42	19.19	21.70	4.76	4.76	4.76	9.52
p20	21	23	21	23	23	9.99	15.92	15.42	21.56	9.52	0.00	9.52	9.52
Avg.						5.57	7.42	9.43	10.68	5.44	6.74	6.12	5.50

Options: exact recentering, stack, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	2.88	3.34	3.33	3.66	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	3.87	4.16	5.31	5.67	0.00	0.00	0.00	0.00
p3	26	28	26	26	26	3.47	3.95	4.72	4.88	7.69	0.00	0.00	0.00
p4	32	32	32	32	32	4.16	4.64	4.93	5.03	0.00	0.00	0.00	0.00
p5	29	29	30	29	30	3.57	3.84	4.46	4.81	0.00	3.45	0.00	3.45
p6	31	32	32	32	32	3.38	3.70	4.26	4.64	3.23	3.23	3.23	3.23
p7	30	30	33	30	30	3.80	4.48	4.82	5.21	0.00	10.00	0.00	0.00
p8	31	32	31	32	31	3.36	4.00	4.39	4.71	3.23	0.00	3.23	0.00
p9	28	29	29	29	29	3.33	3.65	4.04	4.19	3.57	3.57	3.57	3.57
p10	32	35	32	35	36	3.39	3.70	4.30	4.58	9.38	0.00	9.38	12.50
p11	19	22	22	21	22	38.49	56.97	59.51	71.51	15.79	15.79	10.53	15.79
p12	20	21	22	22	23	39.40	51.01	55.24	77.74	5.00	10.00	10.00	15.00
p13	20	20	22	20	22	37.67	50.48	57.68	63.45	0.00	10.00	0.00	10.00
p14	20	20	22	20	23	36.30	58.48	52.74	73.97	0.00	10.00	0.00	15.00
p15	21	22	23	21	22	38.43	57.53	57.89	72.16	4.76	9.52	0.00	4.76
p16	20	21	22	20	21	39.69	57.83	61.73	75.81	5.00	10.00	0.00	5.00
p17	22	23	24	23	24	38.77	60.43	55.70	77.82	4.55	9.09	4.55	9.09
p18	21	22	22	23	22	31.98	52.91	47.06	59.60	4.76	4.76	9.52	4.76
p19	21	22	22	22	23	40.73	62.37	60.91	79.73	4.76	4.76	4.76	9.52
p20	21	23	24	22	23	34.52	63.56	51.34	76.49	9.52	14.29	4.76	9.52
Avg.						20.66	30.55	30.22	38.68	4.06	6.02	3.18	6.06

Options: no recentering, priority queue, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.85	1.88	2.35	2.15	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	2.74	2.70	3.21	3.30	0.00	0.00	0.00	0.00
p3	26	28	26	26	26	2.72	2.76	2.99	3.13	7.69	0.00	0.00	0.00
p4	32	32	32	32	32	2.60	2.71	3.08	3.10	0.00	0.00	0.00	0.00
p5	29	29	29	30	29	2.22	2.18	2.62	2.70	0.00	0.00	3.45	0.00
p6	31	32	32	32	32	2.56	2.37	3.01	2.96	3.23	3.23	3.23	3.23
p7	30	32	33	32	32	2.79	2.66	3.28	3.13	6.67	10.00	6.67	6.67
p8	31	32	32	32	32	2.44	2.35	2.80	2.63	3.23	3.23	3.23	3.23
p9	28	29	29	29	29	2.28	2.42	2.73	2.63	3.57	3.57	3.57	3.57
p10	32	36	35	37	35	2.50	2.62	2.98	3.22	12.50	9.38	15.62	9.38
p11	19	20	22	22	23	25.24	28.14	30.58	37.56	5.26	15.79	15.79	21.05
p12	20	24	25	25	24	26.89	27.05	35.54	39.85	20.00	25.00	25.00	20.00
p13	20	21	23	23	23	24.42	27.65	32.82	35.80	5.00	15.00	15.00	15.00
p14	20	23	23	21	23	26.41	30.29	34.54	40.94	15.00	15.00	5.00	15.00
p15	21	24	24	23	23	25.81	27.65	33.79	37.68	14.29	14.29	9.52	9.52
p16	20	23	22	21	23	28.67	29.27	37.86	41.15	15.00	10.00	5.00	15.00
p17	22	23	24	23	25	24.57	30.13	32.89	38.00	4.55	9.09	4.55	13.64
p18	21	23	23	23	24	21.80	28.91	29.01	35.96	9.52	9.52	9.52	14.29
p19	21	23	23	23	24	28.69	31.04	37.10	42.37	9.52	9.52	9.52	14.29
p20	21	23	23	23	26	23.90	31.43	29.12	39.15	9.52	9.52	9.52	23.81
Avg.						14.16	15.81	18.12	20.77	7.23	8.11	7.21	9.38

Options: approximate recentering, priority queue, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.45	1.59	1.80	1.67	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	2.27	2.28	2.65	2.99	0.00	0.00	0.00	0.00
p3	26	26	28	26	28	1.99	2.23	2.39	2.59	0.00	7.69	0.00	7.69
p4	32	32	32	32	32	2.18	2.31	2.51	2.56	0.00	0.00	0.00	0.00
p5	29	29	29	29	30	1.84	2.05	2.14	2.17	0.00	0.00	0.00	3.45
p6	31	32	32	32	32	1.74	2.14	2.19	2.40	3.23	3.23	3.23	3.23
p7	30	33	30	33	33	2.24	2.32	2.51	2.64	10.00	0.00	10.00	10.00
p8	31	31	32	32	32	1.89	2.07	2.25	2.26	0.00	3.23	3.23	3.23
p9	28	29	29	29	29	1.93	1.89	2.03	2.23	3.57	3.57	3.57	3.57
p10	32	37	37	36	36	1.94	2.20	2.44	2.33	15.62	15.62	12.50	12.50
p11	19	22	23	23	23	14.66	19.33	22.69	26.76	15.79	21.05	21.05	21.05
p12	20	22	23	23	24	17.30	22.76	26.09	29.14	10.00	15.00	15.00	20.00
p13	20	24	23	23	24	15.46	19.53	21.99	26.88	20.00	15.00	15.00	20.00
p14	20	20	24	22	22	16.97	23.04	23.67	30.86	0.00	20.00	10.00	10.00
p15	21	24	21	24	24	15.27	20.52	22.73	27.85	14.29	0.00	14.29	14.29
p16	20	21	21	22	22	18.52	22.08	28.62	31.91	5.00	5.00	10.00	10.00
p17	22	23	25	24	25	17.43	21.20	24.16	27.71	4.55	13.64	9.09	13.64
p18	21	23	23	23	23	15.07	20.41	20.03	25.80	9.52	9.52	9.52	9.52
p19	21	23	23	24	23	16.27	22.66	27.00	31.08	9.52	9.52	14.29	9.52
p20	21	23	24	24	24	14.83	21.59	21.71	27.66	9.52	14.29	14.29	14.29
Avg.						9.16	11.71	13.08	15.37	6.53	7.82	8.25	9.30

Options: exact recentering, priority queue, random restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	3.30	3.44	3.65	4.16	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	4.50	5.35	4.80	5.52	0.00	0.00	0.00	0.00
p3	26	28	28	28	26	4.23	4.72	4.61	5.38	7.69	7.69	7.69	0.00
p4	32	32	32	32	32	4.37	4.68	4.85	5.43	0.00	0.00	0.00	0.00
p5	29	29	29	29	29	4.04	3.93	4.59	4.43	0.00	0.00	0.00	0.00
p6	31	32	32	32	32	3.72	4.19	4.21	4.65	3.23	3.23	3.23	3.23
p7	30	33	33	30	33	4.25	4.88	5.16	5.57	10.00	10.00	0.00	10.00
p8	31	31	32	34	32	3.99	4.37	4.15	4.48	0.00	3.23	9.68	3.23
p9	28	29	29	29	29	3.48	3.82	3.66	3.81	3.57	3.57	3.57	3.57
p10	32	36	35	35	35	3.90	3.85	4.35	4.57	12.50	9.38	9.38	9.38
p11	19	22	23	23	23	45.00	72.77	61.02	86.54	15.79	21.05	21.05	21.05
p12	20	23	24	23	25	47.72	65.63	67.35	86.97	15.00	20.00	15.00	25.00
p13	20	22	23	22	23	45.06	64.56	62.88	78.44	10.00	15.00	10.00	15.00
p14	20	20	22	20	23	43.68	69.56	59.99	84.32	0.00	10.00	0.00	15.00
p15	21	23	23	22	23	47.20	68.19	62.27	81.86	9.52	9.52	4.76	9.52
p16	20	23	23	21	23	50.89	71.98	68.35	86.83	15.00	15.00	5.00	15.00
p17	22	24	24	23	24	45.99	70.88	60.83	82.95	9.09	9.09	4.55	9.09
p18	21	23	23	22	23	40.38	67.31	51.64	74.33	9.52	9.52	4.76	9.52
p19	21	23	23	23	24	47.99	70.71	64.30	85.48	9.52	9.52	9.52	14.29
p20	21	23	24	23	23	41.58	68.06	54.39	80.70	9.52	14.29	9.52	9.52
Avg.						24.86	36.64	32.85	43.72	7.00	8.51	5.89	8.62

Options: no recentering, priority queue, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	2.16	1.93	2.37	2.57	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	2.83	2.71	3.36	3.13	0.00	0.00	0.00	0.00
p3	26	26	26	28	28	2.63	2.62	3.18	3.45	0.00	0.00	7.69	7.69
p4	32	32	32	32	32	2.68	2.66	3.13	3.12	0.00	0.00	0.00	0.00
p5	29	29	29	30	29	2.33	2.23	2.81	2.88	0.00	0.00	3.45	0.00
p6	31	32	32	32	32	2.42	2.31	3.04	2.96	3.23	3.23	3.23	3.23
p7	30	33	32	30	32	2.73	2.82	3.25	3.13	10.00	6.67	0.00	6.67
p8	31	31	32	31	31	2.48	2.35	2.96	2.85	0.00	3.23	0.00	0.00
p9	28	29	29	29	29	2.50	2.35	2.85	2.67	3.57	3.57	3.57	3.57
p10	32	36	37	37	35	2.62	2.55	2.95	2.97	12.50	15.62	15.62	9.38
p11	19	22	23	22	24	24.26	26.38	32.07	34.65	15.79	21.05	15.79	26.32
p12	20	22	24	25	24	23.77	24.76	34.06	36.25	10.00	20.00	25.00	20.00
p13	20	23	22	22	23	23.62	24.33	33.62	31.60	15.00	10.00	10.00	15.00
p14	20	22	21	22	23	26.01	28.51	33.13	37.94	10.00	5.00	10.00	15.00
p15	21	23	24	21	23	25.08	26.92	34.42	38.16	9.52	14.29	0.00	9.52
p16	20	21	23	22	23	25.92	29.25	35.84	38.80	5.00	15.00	10.00	15.00
p17	22	23	24	24	25	24.18	28.26	33.08	35.76	4.55	9.09	9.09	13.64
p18	21	23	23	23	23	20.95	25.93	28.98	34.11	9.52	9.52	9.52	9.52
p19	21	22	23	23	23	26.88	28.21	35.87	37.53	4.76	9.52	9.52	9.52
p20	21	23	24	23	25	23.03	27.73	29.34	37.12	9.52	14.29	9.52	19.05
Avg.						13.56	14.74	18.02	19.48	6.15	8.00	7.10	9.16

Options: approximate recentering, priority queue, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	1.29	1.40	1.50	1.55	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	2.07	2.18	2.46	2.75	0.00	0.00	0.00	0.00
p3	26	26	26	26	28	1.88	1.90	2.18	2.18	0.00	0.00	0.00	7.69
p4	32	32	32	32	32	2.02	2.23	2.44	2.53	0.00	0.00	0.00	0.00
p5	29	29	29	29	30	1.69	1.68	1.86	2.11	0.00	0.00	0.00	3.45
p6	31	32	32	32	32	1.77	1.94	2.08	1.96	3.23	3.23	3.23	3.23
p7	30	30	33	33	33	1.93	2.15	2.47	2.46	0.00	10.00	10.00	10.00
p8	31	31	31	31	31	1.70	1.94	1.95	2.04	0.00	0.00	0.00	0.00
p9	28	29	29	29	29	1.65	1.66	1.77	1.99	3.57	3.57	3.57	3.57
p10	32	37	36	32	35	1.82	1.98	2.26	2.29	15.62	12.50	0.00	9.38
p11	19	23	23	23	23	12.10	15.66	16.07	19.05	21.05	21.05	21.05	21.05
p12	20	23	23	23	22	12.50	15.17	18.22	19.27	15.00	15.00	15.00	10.00
p13	20	22	22	21	21	11.01	14.31	14.70	16.54	10.00	10.00	5.00	5.00
p14	20	21	21	21	21	11.84	16.15	18.47	21.22	5.00	5.00	5.00	5.00
p15	21	21	24	22	23	10.81	14.76	16.93	18.79	0.00	14.29	4.76	9.52
p16	20	20	21	22	21	13.91	16.31	20.36	21.57	0.00	5.00	10.00	5.00
p17	22	24	24	23	24	12.00	16.89	18.14	19.19	9.09	9.09	4.55	9.09
p18	21	23	22	22	22	10.54	12.48	14.78	17.33	9.52	4.76	4.76	4.76
p19	21	23	23	22	23	12.61	16.80	19.16	21.20	9.52	9.52	4.76	9.52
p20	21	23	23	22	23	12.38	17.50	17.36	21.67	9.52	9.52	4.76	9.52
Avg.						6.98	8.75	9.76	10.78	5.56	6.63	4.82	6.29

Options: exact recentering, priority queue, perturbation restart

Pr. No.	Objective Value					Time				% Deviation			
	Opt	1S	tS	1B	tB	1S	tS	1B	tB	1S	tS	1B	tB
p1	29	29	29	29	29	3.03	3.17	3.24	3.78	0.00	0.00	0.00	0.00
p2	33	33	33	33	33	4.38	4.72	4.66	5.46	0.00	0.00	0.00	0.00
p3	26	26	28	28	28	3.96	4.28	4.20	4.29	0.00	7.69	7.69	7.69
p4	32	32	32	32	32	4.20	4.31	4.70	4.80	0.00	0.00	0.00	0.00
p5	29	29	29	29	29	3.52	3.95	3.87	4.26	0.00	0.00	0.00	0.00
p6	31	32	32	32	32	3.43	4.09	3.82	4.27	3.23	3.23	3.23	3.23
p7	30	32	31	30	30	4.20	4.81	4.84	5.21	6.67	3.33	0.00	0.00
p8	31	31	31	32	31	3.57	4.05	4.02	4.54	0.00	0.00	3.23	0.00
p9	28	29	29	29	29	3.15	3.78	3.60	3.78	3.57	3.57	3.57	3.57
p10	32	36	36	35	36	3.43	3.92	3.82	4.31	12.50	12.50	9.38	12.50
p11	19	22	23	22	22	39.09	57.79	49.06	66.26	15.79	21.05	15.79	15.79
p12	20	22	20	22	22	39.86	55.60	48.53	61.94	10.00	0.00	10.00	10.00
p13	20	21	21	21	22	37.51	52.55	49.58	59.50	5.00	5.00	5.00	10.00
p14	20	21	22	21	22	40.61	52.52	49.41	64.53	5.00	10.00	5.00	10.00
p15	21	22	23	22	23	39.39	50.82	51.60	65.31	4.76	9.52	4.76	9.52
p16	20	20	23	20	21	42.46	55.39	55.23	64.64	0.00	15.00	0.00	5.00
p17	22	23	24	24	23	38.98	54.19	51.75	63.51	4.55	9.09	9.09	4.55
p18	21	22	23	23	23	32.80	45.99	41.46	53.28	4.76	9.52	9.52	9.52
p19	21	22	23	22	22	40.77	55.91	51.65	65.46	4.76	9.52	4.76	4.76
p20	21	23	24	22	23	38.57	57.91	48.53	67.28	9.52	14.29	4.76	9.52
Avg.						21.45	28.99	26.88	33.72	4.51	6.67	4.79	5.78