

LAMPIRAN A

Tabel A.1 Data harga produk untuk masing-masing pemasok

No	Produk	Pemasok							
		Samudera	Rajawali Sakti	Megah Jaya	Sehat Sentosa	Kemuning	Jaya Abadi	Makmur Sejahtera	
1	Laurier softcare regular 8 pads	Rp2,760.00	Rp2,760.00	Rp2,850.00	Rp2,970.00	Rp2,760.00	Rp2,970.00	Rp2,850.00	
2	Laurier softcare regular 10 pads	Rp3,255.00	Rp3,220.00	Rp3,325.00	Rp3,465.00	Rp3,255.00	Rp3,150.00	Rp3,465.00	
3	Laurier softcare regular 20 pads	Rp6,603.00	Rp6,390.00	Rp6,745.00	Rp7,029.00	Rp6,603.00	Rp6,745.00	Rp6,461.00	
4	Laurier softcare regular 30 pads	Rp8,835.00	Rp9,025.00	Rp9,025.00	Rp9,405.00	Rp8,835.00	Rp9,405.00	Rp8,740.00	
5	Laurier softcare regular wing 10 pads	Rp4,650.00	Rp4,950.00	Rp4,500.00	Rp4,950.00	Rp4,550.00	Rp4,550.00	Rp4,650.00	
6	Laurier softcare regular wing 20 pads	Rp8,910.00	Rp8,100.00	Rp8,550.00	Rp8,910.00	Rp8,190.00	Rp8,280.00	Rp8,370.00	
7	Laurier softcare regular wing 30 pads	Rp13,500.00	Rp14,250.00	Rp13,950.00	Rp14,850.00	Rp14,250.00	Rp13,950.00	Rp14,250.00	
8	Laurier softcare maxi 10 pads	Rp3,420.00	Rp3,564.00	Rp3,240.00	Rp3,564.00	Rp3,420.00	Rp3,348.00	Rp3,420.00	
9	Laurier softcare maxi 20 pads	Rp7,425.00	Rp6,825.00	Rp7,125.00	Rp7,425.00	Rp7,125.00	Rp6,900.00	Rp7,425.00	
10	Laurier softcare maxi 30 pads	Rp10,010.00	Rp10,120.00	Rp10,890.00	Rp10,890.00	Rp10,450.00	Rp10,230.00	Rp10,010.00	
11	Laurier softcare maxi wing 10 pads	Rp5,060.00	Rp5,115.00	Rp5,005.00	Rp5,445.00	Rp5,225.00	Rp5,115.00	Rp5,060.00	
12	Laurier softcare maxi wing 20 pads	Rp8,091.00	Rp8,004.00	Rp8,004.00	Rp8,613.00	Rp8,265.00	Rp8,091.00	Rp7,830.00	
13	Laurier softcare maxi wing 30 pads	Rp14,415.00	Rp14,105.00	Rp13,950.00	Rp13,950.00	Rp14,725.00	Rp14,725.00	Rp14,725.00	
14	Laurier relax night 27 cm 10 pads	Rp6,324.00	Rp6,460.00	Rp6,120.00	Rp6,460.00	Rp6,460.00	Rp6,732.00	Rp6,732.00	
No	Produk	Pemasok							
		Samudera	Rajawali Sakti	Megah Jaya	Sehat Sentosa	Kemuning	Jaya Abadi	Makmur Sejahtera	
15	Laurier relax night 27 cm 20 pads	Rp12,276.00	Rp12,540.00	Rp12,540.00	Rp13,068.00	Rp11,880.00	Rp12,012.00	Rp11,880.00	
16	Laurier relax night 30 cm 8 pads	Rp7,125.00	Rp6,750.00	Rp7,425.00	Rp6,825.00	Rp7,125.00	Rp6,900.00	Rp7,125.00	
17	Laurier relax night 35 cm 6 pads	Rp7,600.00	Rp7,600.00	Rp7,280.00	Rp7,360.00	Rp7,920.00	Rp7,600.00	Rp7,920.00	
18	Laurier relax night 35 cm 12 pads	Rp14,130.00	Rp15,543.00	Rp14,444.00	Rp14,601.00	Rp14,287.00	Rp14,601.00	Rp14,287.00	
19	You C-1000 lemon	Rp4,750.00	Rp4,550.00	Rp4,650.00	Rp4,950.00	Rp4,600.00	Rp4,500.00	Rp4,600.00	
20	You C-1000 orange	Rp5,148.00	Rp4,784.00	Rp4,836.00	Rp4,680.00	Rp4,836.00	Rp4,940.00	Rp4,836.00	
21	Larutan penyegar cap kaki 3 botol 200ml	Rp2,730.00	Rp2,790.00	Rp2,790.00	Rp2,850.00	Rp2,790.00	Rp2,970.00	Rp2,970.00	
22	Adem sari 48gr	Rp6,164.00	Rp6,365.00	Rp6,231.00	Rp6,633.00	Rp6,633.00	Rp6,164.00	Rp6,097.00	
23	Vegeta lychee	Rp6,789.00	Rp7,227.00	Rp6,716.00	Rp6,643.00	Rp6,570.00	Rp6,789.00	Rp6,716.00	
24	Vegeta orange	Rp7,222.00	Rp7,143.50	Rp7,771.50	Rp7,222.00	Rp7,065.00	Rp7,300.50	Rp7,457.50	
25	Vegeta orange-manggo	Rp7,326.00	Rp6,808.00	Rp6,734.00	Rp6,734.00	Rp7,030.00	Rp6,882.00	Rp7,326.00	
26	Vegeta herbal	Rp9,555.00	Rp9,765.00	Rp9,555.00	Rp9,660.00	Rp10,395.00	Rp10,395.00	Rp9,555.00	
27	M150 150ml	Rp2,275.00	Rp2,375.00	Rp2,300.00	Rp2,275.00	Rp2,250.00	Rp2,275.00	Rp2,300.00	
28	Kratingdaeng	Rp2,912.00	Rp3,168.00	Rp3,040.00	Rp2,912.00	Rp2,976.00	Rp2,944.00	Rp2,880.00	
29	Kratingdaeng SP 150ml	Rp4,180.00	Rp4,004.00	Rp4,180.00	Rp4,356.00	Rp4,180.00	Rp4,180.00	Rp4,180.00	

Tabel A.2 Data biaya *lost sales* produk untuk masing-masing pemasok

No	Produk	Pemasok								
		Samudera	Rajawali Sakti	Megah Jaya	Sehat Sentosa	Kemuning	Jaya Abadi	Makmur Sejahtera	Subur Abadi	Berl
1	Laurier softcare regular 8 pads	Rp138.00	Rp138.00	Rp142.50	Rp148.50	Rp138.00	Rp148.50	Rp142.50	Rp138.00	Rp14
2	Laurier softcare regular 10 pads	Rp162.75	Rp161.00	Rp166.25	Rp173.25	Rp162.75	Rp157.50	Rp173.25	Rp162.75	Rp15
No	Produk	Pemasok								
		Samudera	Rajawali Sakti	Megah Jaya	Sehat Sentosa	Kemuning	Jaya Abadi	Makmur Sejahtera	Subur Abadi	Berl
3	Laurier softcare regular 20 pads	Rp330.15	Rp319.50	Rp337.25	Rp351.45	Rp330.15	Rp337.25	Rp323.05	Rp337.25	Rp32
4	Laurier softcare regular 30 pads	Rp441.75	Rp451.25	Rp451.25	Rp470.25	Rp441.75	Rp470.25	Rp437.00	Rp427.50	Rp44
5	Laurier softcare regular wing 10 pads	Rp232.50	Rp247.50	Rp225.00	Rp247.50	Rp227.50	Rp227.50	Rp232.50	Rp237.50	Rp23
6	Laurier softcare regular wing 20 pads	Rp445.50	Rp405.00	Rp427.50	Rp445.50	Rp409.50	Rp414.00	Rp418.50	Rp409.50	Rp41
7	Laurier softcare regular wing 30 pads	Rp675.00	Rp712.50	Rp697.50	Rp742.50	Rp712.50	Rp697.50	Rp712.50	Rp675.00	Rp69
8	Laurier softcare maxi 10 pads	Rp171.00	Rp178.20	Rp162.00	Rp178.20	Rp171.00	Rp167.40	Rp171.00	Rp171.00	Rp16
9	Laurier softcare maxi 20 pads	Rp371.25	Rp341.25	Rp356.25	Rp371.25	Rp356.25	Rp345.00	Rp371.25	Rp348.75	Rp34
10	Laurier softcare maxi 30 pads	Rp500.50	Rp506.00	Rp544.50	Rp544.50	Rp522.50	Rp511.50	Rp500.50	Rp495.00	Rp54
11	Laurier softcare maxi wing 10 pads	Rp253.00	Rp255.75	Rp250.25	Rp272.25	Rp261.25	Rp255.75	Rp253.00	Rp261.25	Rp25
12	Laurier softcare maxi wing 20 pads	Rp404.55	Rp400.20	Rp400.20	Rp430.65	Rp413.25	Rp404.55	Rp391.50	Rp430.65	Rp40
13	Laurier softcare maxi wing 30 pads	Rp720.75	Rp705.25	Rp697.50	Rp697.50	Rp736.25	Rp736.25	Rp736.25	Rp767.25	Rp69
14	Laurier relax night 27 cm 10 pads	Rp316.20	Rp323.00	Rp306.00	Rp323.00	Rp323.00	Rp336.60	Rp336.60	Rp309.40	Rp32
15	Laurier relax night 27 cm 20 pads	Rp613.80	Rp627.00	Rp627.00	Rp653.40	Rp594.00	Rp600.60	Rp594.00	Rp607.20	Rp65
16	Laurier relax night 30 cm 8 pads	Rp356.25	Rp337.50	Rp371.25	Rp341.25	Rp356.25	Rp345.00	Rp356.25	Rp337.50	Rp33
17	Laurier relax night 35 cm 6 pads	Rp380.00	Rp380.00	Rp364.00	Rp368.00	Rp396.00	Rp380.00	Rp396.00	Rp380.00	Rp37
18	Laurier relax night 35 cm 12 pads	Rp706.50	Rp777.15	Rp722.20	Rp730.05	Rp714.35	Rp730.05	Rp714.35	Rp777.15	Rp70
19	You C-1000 lemon	Rp237.50	Rp227.50	Rp232.50	Rp247.50	Rp230.00	Rp225.00	Rp230.00	Rp227.50	Rp23
No	Produk	Pemasok								
		Samudera	Rajawali Sakti	Megah Jaya	Sehat Sentosa	Kemuning	Jaya Abadi	Makmur Sejahtera	Subur Abadi	Berl
20	You C-1000 orange	Rp257.40	Rp239.20	Rp241.80	Rp234.00	Rp241.80	Rp247.00	Rp241.80	Rp241.80	Rp25
21	Larutan penyegar cap kaki 3 botol 200ml	Rp136.50	Rp139.50	Rp139.50	Rp142.50	Rp139.50	Rp148.50	Rp148.50	Rp135.00	Rp13
22	Adem sari 48gr	Rp308.20	Rp318.25	Rp311.55	Rp331.65	Rp331.65	Rp308.20	Rp304.85	Rp331.65	Rp30
23	Vegeta lychee	Rp339.45	Rp361.35	Rp335.80	Rp332.15	Rp328.50	Rp339.45	Rp335.80	Rp332.15	Rp36
24	Vegeta orange	Rp361.10	Rp357.18	Rp388.58	Rp361.10	Rp353.25	Rp365.03	Rp372.88	Rp361.10	Rp35
25	Vegeta orange-manggo	Rp366.30	Rp340.40	Rp336.70	Rp336.70	Rp351.50	Rp344.10	Rp366.30	Rp333.00	Rp34
26	Vegeta herbal	Rp477.75	Rp488.25	Rp477.75	Rp483.00	Rp519.75	Rp519.75	Rp477.75	Rp498.75	Rp47
27	M150 150ml	Rp113.75	Rp118.75	Rp115.00	Rp113.75	Rp112.50	Rp113.75	Rp115.00	Rp123.75	Rp11
28	Kratingdaeng	Rp145.60	Rp158.40	Rp152.00	Rp145.60	Rp148.80	Rp147.20	Rp144.00	Rp152.00	Rp15
29	Kratingdaeng SP 150ml	Rp209.00	Rp200.20	Rp209.00	Rp217.80	Rp209.00	Rp209.00	Rp209.00	Rp198.00	Rp20

Tabel A.3 Data permintaan untuk masing-masing produk

Periode	Laurier softcare regular 8 pads	Laurier softcare regular 10 pads	Laurier softcare regular 20 pads	Laurier softcare regular 30 pads	Laurier softcare regular wing 10 pads	Laurier softcare regular wing 20 pads	La
1	166	173	150	127	264	219	
2	137	170	145	125	258	212	
3	124	182	160	128	266	217	
4	152	175	159	131	274	212	
5	212	184	154	128	260	212	
6	203	182	159	123	264	213	
7	151	155	151	132	269	207	
8	127	180	161	125	273	218	
9	172	162	157	132	263	228	
10	127	197	162	128	270	225	
11	192	177	158	126	269	217	
Periode	Laurier softcare regular 8 pads	Laurier softcare regular 10 pads	Laurier softcare regular 20 pads	Laurier softcare regular 30 pads	Laurier softcare regular wing 10 pads	Laurier softcare regular wing 20 pads	La
12	175	185	152	129	280	214	
13	243	206	153	127	279	218	
14	222	178	163	119	268	203	
15	167	176	157	126	260	218	
16	266	171	158	125	269	221	
17	171	204	164	128	273	219	
18	172	176	162	128	272	218	
19	85	181	161	123	255	213	
20	190	156	157	123	251	214	
21	154	172	159	125	257	211	
22	137	179	158	123	265	214	
23	125	206	154	125	260	201	
24	164	166	170	125	271	211	
25	207	159	159	129	257	212	
26	234	197	156	133	260	216	
27	120	178	151	126	270	207	
28	201	185	162	126	260	208	
29	175	174	153	123	266	216	
30	176	171	158	125	258	216	
31	121	148	160	134	269	210	
32	167	169	161	125	265	219	
33	233	195	153	125	266	207	
34	120	180	158	123	261	210	
35	161	184	161	119	269	208	
36	225	177	159	120	268	231	
37	167	157	153	128	258	205	
38	188	188	159	126	262	216	
39	161	191	163	132	262	226	
Periode	Laurier softcare regular 8 pads	Laurier softcare regular 10 pads	Laurier softcare regular 20 pads	Laurier softcare regular 30 pads	Laurier softcare regular wing 10 pads	Laurier softcare regular wing 20 pads	La
40	156	166	161	129	264	205	
41	161	196	165	131	266	219	
42	222	181	150	126	272	229	
43	105	158	160	122	258	213	
44	145	172	157	128	272	216	
45	200	168	159	129	257	229	

46	161	182	158	121	270	202	
47	233	201	153	123	251	218	
48	250	167	152	130	269	220	
49	220	172	162	126	267	215	
50	263	184	158	123	270	215	
51	141	173	155	128	263	217	
52	131	215	149	127	276	217	
total	9078	9281	8189	6568	13796	11177	

Tabel A.3 Data permintaan untuk masing-masing produk (lanjutan untuk produk Laurier softcare maxi 10 pads - Laurier relax night 27 cm 10 pads)

Periode	Laurier softcare maxi 10 pads	Laurier softcare maxi 20 pads	Laurier softcare maxi 30 pads	Laurier softcare maxi wing 10 pads	Laurier softcare maxi wing 20 pads	Laurier softcare maxi wing 30 pads	Laurier relax night 27 cm 10 pads
1	245	231	206	398	350	321	90
2	252	188	191	375	343	318	71
3	247	184	216	372	337	317	87
4	255	204	205	332	324	334	62
5	260	205	198	356	350	317	74
6	247	189	211	358	374	317	83
7	245	196	230	391	363	293	87
Periode	Laurier softcare maxi 10 pads	Laurier softcare maxi 20 pads	Laurier softcare maxi 30 pads	Laurier softcare maxi wing 10 pads	Laurier softcare maxi wing 20 pads	Laurier softcare maxi wing 30 pads	Laurier relax night 27 cm 10 pads
8	244	206	192	382	373	311	85
9	264	228	199	380	351	293	75
10	247	210	193	404	378	299	86
11	239	232	218	414	338	322	79
12	238	195	232	365	367	288	83
13	257	202	208	405	341	310	59
14	249	197	218	366	368	320	85
15	247	215	194	401	319	317	77
16	242	182	204	367	334	316	74
17	251	207	190	361	359	322	80
18	254	195	194	392	346	316	81
19	250	192	201	361	345	362	81
20	243	220	211	384	352	321	86
21	244	208	208	380	332	322	86
22	246	235	208	384	358	321	88
23	253	198	203	386	338	326	75
24	259	183	205	417	330	334	88
25	251	212	201	385	338	311	74
26	252	235	203	347	313	312	89
27	263	227	221	365	339	337	77
28	240	238	214	375	366	313	74
29	268	212	187	399	341	301	83
30	248	208	193	392	366	272	70
31	249	224	175	386	335	320	81

32	238	208	221	390	333	337	74
33	252	206	190	377	328	321	78
34	249	195	192	386	339	338	86
35	253	203	186	389	337	319	98
Periode	Laurier softcare maxi 10 pads	Laurier softcare maxi 20 pads	Laurier softcare maxi 30 pads	Laurier softcare maxi wing 10 pads	Laurier softcare maxi wing 20 pads	Laurier softcare maxi wing 30 pads	Laurier relax night 27 cm 10 pads
36	255	183	178	391	351	307	82
37	253	202	215	380	343	311	74
38	258	205	201	404	350	315	71
39	246	197	220	362	366	320	78
40	247	228	209	378	363	312	82
41	251	241	232	378	358	314	87
42	254	213	233	377	320	299	73
43	254	236	207	425	356	314	66
44	246	215	215	394	366	291	57
45	257	220	189	349	347	338	88
46	261	218	222	414	355	311	63
47	243	200	195	384	336	311	80
48	243	194	206	387	338	323	66
49	238	210	191	415	367	301	81
50	262	221	207	394	371	335	65
51	252	224	206	367	367	327	72
52	245	234	195	382	350	304	71
total	13006	10911	10639	19903	18109	16431	4062

Tabel A.3 Data permintaan untuk masing-masing produk (lanjutan untuk produk Laurier relax night 27 cm 20 pads - Adem sari 48gr)

Periode	Laurier relax night 27 cm 20 pads	Laurier relax night 30 cm 8 pads	Laurier relax night 35 cm 6 pads	Laurier relax night 35 cm 12 pads	You C-1000 lemon	You C-1000 orange	
1	74	50	57	44	205	271	
2	65	63	54	42	142	227	
3	82	59	58	46	194	146	
Periode	Laurier relax night 27 cm 20 pads	Laurier relax night 30 cm 8 pads	Laurier relax night 35 cm 6 pads	Laurier relax night 35 cm 12 pads	You C-1000 lemon	You C-1000 orange	
4	79	53	56	44	160	186	
5	73	57	49	45	169	91	
6	71	50	55	48	175	130	
7	73	51	49	46	235	254	
8	76	59	58	49	141	116	
9	71	58	51	48	139	262	
10	73	71	57	50	207	189	

11	73	54	56	45	240	243	
12	72	40	52	48	196	274	
13	79	45	54	49	121	130	
14	73	53	55	48	246	133	
15	73	45	51	47	228	159	
16	62	49	52	50	189	269	
17	75	64	46	50	183	179	
18	79	58	52	50	120	189	
19	73	57	59	49	213	210	
20	82	56	55	47	196	244	
21	75	51	56	45	130	190	
22	79	51	51	51	218	280	
23	76	52	52	39	196	235	
24	72	64	55	46	151	197	
25	78	53	54	46	151	160	
26	83	55	54	47	177	265	
27	70	55	55	42	148	242	
28	83	57	55	51	220	282	
29	68	52	55	44	172	259	
30	73	54	53	44	200	159	
31	79	57	58	47	223	167	
Periode	Laurier relax night 27 cm 20 pads	Laurier relax night 30 cm 8 pads	Laurier relax night 35 cm 6 pads	Laurier relax night 35 cm 12 pads	You C-1000 lemon	You C-1000 orange	
32	78	45	55	48	196	303	
33	75	36	58	51	163	157	
34	74	55	57	46	203	260	
35	76	55	54	44	205	167	
36	72	53	60	50	168	120	
37	73	57	50	48	128	198	
38	75	53	61	47	191	236	
39	69	53	56	52	167	189	
40	78	52	55	51	172	149	
41	70	46	56	48	140	182	
42	79	43	53	46	214	198	
43	76	47	56	51	199	271	
44	77	49	54	42	172	316	
45	72	50	57	46	91	174	
46	70	44	49	49	198	175	
47	74	59	59	51	158	234	
48	83	60	50	47	129	174	
49	81	40	53	48	161	114	
50	73	54	55	51	132	222	
51	76	61	54	49	201	227	
52	73	60	50	48	253	156	
total	3888	2765	2826	2460	9326	10560	

Tabel A.3 Data permintaan untuk masing-masing produk (lanjutan untuk produk Vegeta lychee - Kratingdaeng SP 150ml)

Periode	Vegeta lychee	Vegeta orange	Vegeta orange-manggo	Vegeta herbal	M150 150ml	Kratingdaeng	Kratingdaeng SP 150ml
1	72	77	59	47	258	402	204
2	71	72	44	50	253	325	192
Periode	Vegeta lychee	Vegeta orange	Vegeta orange-manggo	Vegeta herbal	M150 150ml	Kratingdaeng	Kratingdaeng SP 150ml
3	71	79	55	51	271	322	129
4	75	78	44	40	211	315	196
5	72	72	50	44	246	278	179
6	73	76	49	51	321	377	162
7	71	78	56	42	223	308	171
8	67	76	49	48	265	375	221
9	71	80	53	45	218	267	151
10	72	78	57	45	214	249	167
11	71	79	46	47	239	328	236
12	77	75	50	44	235	355	189
13	67	92	46	44	243	381	153
14	76	78	54	46	327	379	156
15	68	76	41	49	248	340	120
16	73	81	53	46	352	361	164
17	73	71	55	52	238	357	139
18	83	79	52	40	213	367	151
19	76	87	54	43	243	288	174
20	75	77	53	45	175	335	187
21	69	74	49	44	272	294	178
22	71	81	48	43	244	273	149
23	73	79	50	49	198	234	194
24	73	70	51	42	236	331	191
25	74	85	45	43	230	348	171
26	81	81	49	47	209	265	177
27	81	84	52	47	204	255	229
28	71	73	50	46	312	320	207
29	77	77	52	48	277	356	169
30	72	81	43	49	225	351	193
Periode	Vegeta lychee	Vegeta orange	Vegeta orange-manggo	Vegeta herbal	M150 150ml	Kratingdaeng	Kratingdaeng SP 150ml
31	72	80	50	52	295	179	127
32	78	69	43	43	322	279	168
33	71	77	48	48	249	404	176
34	77	73	46	40	286	254	158
35	64	79	50	49	208	381	174
36	71	85	51	49	238	264	150
37	68	73	48	48	193	410	125
38	74	80	50	50	204	238	118
39	71	72	46	54	276	331	155
40	64	82	53	48	249	262	207
41	76	72	51	47	269	332	156
42	71	86	54	49	252	365	189
43	73	79	61	52	285	402	112

44	71	85	57	44	241	309	170
45	77	77	55	45	201	322	202
46	70	87	47	49	197	382	147
47	73	60	57	46	305	294	214
48	73	78	50	51	220	267	197
49	69	71	49	41	283	348	170
50	78	90	53	48	294	330	169
51	69	75	57	48	257	217	190
52	78	85	57	42	286	322	168
total	3784	4061	2642	2420	13010	16628	8941

LAMPIRAN B

!minimasi berdasarkan harga produk dan keterlambatan;
 $\min = z1 + z2$;

!minimasi berdasarkan harga produk;

$z1 =$

2760	*x11	+	2760	*x12	+	2850	*x13	+
2970	*x14	+	2760	*x15	+	2970	*x16	+
2850	*x17	+	2760	*x18	+	2970	*x19	+
2850	*x110	+						
3255	*x21	+	3220	*x22	+	3325	*x23	+
3465	*x24	+	3255	*x25	+	3150	*x26	+
3465	*x27	+	3255	*x28	+	3185	*x29	+
3465	*x210	+						
6603	*x31	+	6390	*x32	+	6745	*x33	+
7029	*x34	+	6603	*x35	+	6745	*x36	+
6461	*x37	+	6745	*x38	+	6532	*x39	+
6461	*x310	+						
8835	*x41	+	9025	*x42	+	9025	*x43	+
9405	*x44	+	8835	*x45	+	9405	*x46	+
8740	*x47	+	8550	*x48	+	8835	*x49	+
8740	*x410	+						
4650	*x51	+	4950	*x52	+	4500	*x53	+
4950	*x54	+	4550	*x55	+	4550	*x56	+
4650	*x57	+	4750	*x58	+	4600	*x59	+
4750	*x510	+						
8910	*x61	+	8100	*x62	+	8550	*x63	+
8910	*x64	+	8190	*x65	+	8280	*x66	+
8370	*x67	+	8190	*x68	+	8280	*x69	+
8910	*x610	+						
13500	*x71	+	14250	*x72	+	13950	*x73	+
14850	*x74	+	14250	*x75	+	13950	*x76	+
14250	*x77	+	13500	*x78	+	13800	*x79	+
13650	*x710	+						
3420	*x81	+	3564	*x82	+	3240	*x83	+
3564	*x84	+	3420	*x85	+	3348	*x86	+
3420	*x87	+	3420	*x88	+	3312	*x89	+
3312	*x810	+						
7425	*x91	+	6825	*x92	+	7125	*x93	+
7425	*x94	+	7125	*x95	+	6900	*x96	+
7425	*x97	+	6975	*x98	+	6900	*x99	+
6750	*x910	+						
10010	*x101	+	10120	*x102	+	10890	*x103	+
10890	*x104	+	10450	*x105	+	10230	*x106	+
10010	*x107	+	9900	*x108	+	10890	*x109	+
10450	*x1010	+						
5060	*x111	+	5115	*x112	+	5005	*x113	+
5445	*x114	+	5225	*x115	+	5115	*x116	+
5060	*x117	+	5225	*x118	+	5005	*x119	+
5445	*x1110	+						
8091	*x121	+	8004	*x122	+	8004	*x123	+
8613	*x124	+	8265	*x125	+	8091	*x126	+
7830	*x127	+	8613	*x128	+	8004	*x129	+
8265	*x1210	+						
14415	*x131	+	14105	*x132	+	13950	*x133	+
13950	*x134	+	14725	*x135	+	14725	*x136	+
14725	*x137	+	15345	*x138	+	13950	*x139	+
14260	*x1310	+						
6324	*x141	+	6460	*x142	+	6120	*x143	+

6460	*x144 +	6460	*x145 +	6732	*x146 +	
6732	*x147 +	6188	*x148 +	6460	*x149 +	
6324	*x1410+					
12276	*x151 +	12540	*x152 +	12540	*x153 +	
13068	*x154 +	11880	*x155 +	12012	*x156 +	
11880	*x157 +	12144	*x158 +	13068	*x159 +	
12144	*x1510+					
7125	*x161 +	6750	*x162 +	7425	*x163 +	
6825	*x164 +	7125	*x165 +	6900	*x166 +	
7125	*x167 +	6750	*x168 +	6750	*x169 +	
6900	*x1610+					
7600	*x171 +	7600	*x172 +	7280	*x173 +	
7360	*x174 +	7920	*x175 +	7600	*x176 +	
7920	*x177 +	7600	*x178 +	7440	*x179 +	
7360	*x1710+					
14130	*x181 +	15543	*x182 +	14444	*x183 +	
14601	*x184 +	14287	*x185 +	14601	*x186 +	
14287	*x187 +	15543	*x188 +	14130	*x189 +	
14444	*x1810+					
4750	*x191 +	4550	*x192 +	4650	*x193 +	
4950	*x194 +	4600	*x195 +	4500	*x196 +	
4600	*x197 +	4550	*x198 +	4750	*x199 +	
4750	*x1910+					
5148	*x201 +	4784	*x202 +	4836	*x203 +	
4680	*x204 +	4836	*x205 +	4940	*x206 +	
4836	*x207 +	4836	*x208 +	5148	*x209 +	
5148	*x2010+					
2730	*x211 +	2790	*x212 +	2790	*x213 +	
2850	*x214 +	2790	*x215 +	2970	*x216 +	
2970	*x217 +	2700	*x218 +	2730	*x219 +	
2730	*x2110+					
6164	*x221 +	6365	*x222 +	6231	*x223 +	
6633	*x224 +	6633	*x225 +	6164	*x226 +	
6097	*x227 +	6633	*x228 +	6097	*x229 +	
6164	*x2210+					
6789	*x231 +	7227	*x232 +	6716	*x233 +	
6643	*x234 +	6570	*x235 +	6789	*x236 +	
6716	*x237 +	6643	*x238 +	7227	*x239 +	
6570	*x2310+					
7222	*x241 +	7143.5	*x242 +	7771.5	*x243 +	
7222	*x244 +	7065	*x245 +	7300.5	*x246 +	7457.5*x247 +
7222	*x248 +	7143.5	*x249 +	7457.5	*x2410+	
7326	*x251 +	6808	*x252 +	6734	*x253 +	
6734	*x254 +	7030	*x255 +	6882	*x256 +	
7326	*x257 +	6660	*x258 +	6808	*x259 +	
7326	*x2510+					
9555	*x261 +	9765	*x262 +	9555	*x263 +	
9660	*x264 +	10395	*x265 +	10395	*x266 +	
9555	*x267 +	9975	*x268 +	9450	*x269 +	
9555	*x2610+					
2275	*x271 +	2375	*x272 +	2300	*x273 +	
2275	*x274 +	2250	*x275 +	2275	*x276 +	
2300	*x277 +	2475	*x278 +	2375	*x279 +	
2300	*x2710+					
2912	*x281 +	3168	*x282 +	3040	*x283 +	
2912	*x284 +	2976	*x285 +	2944	*x286 +	
2880	*x287 +	3040	*x288 +	3168	*x289 +	
3040	*x2810+					4180
*x291 +	4004	*x292 +	4180	*x293 +		
4356	*x294 +	4180	*x295 +	4180	*x296 +	

4180 *x297 + 3960 *x298 + 4048 *x299 +
4180 *x2910);

!minimasi berdasarkan keterlambatan;

```

z2=( 0.615384615 *x11 *138 + 0.307692308 *x12 *138 +
      0.653846154 *x13 *142.5 + 0.576923077 *x14 *148.5 +
      0.653846154 *x15 *138 + 0.615384615 *x16 *148.5 +
      0.576923077 *x17 *142.5 + 0.576923077 *x18 *138 + 0.5
      *x19 *148.5 + 0.615384615 *x110 *142.5 +
      0.615384615 *x21 *162.75 + 0.307692308 *x22 *161 +
      0.653846154 *x23 *166.25 + 0.576923077 *x24 *173.25 +
      0.653846154 *x25 *162.75 + 0.615384615 *x26 *157.5 +
      0.576923077 *x27 *173.25 + 0.576923077 *x28 *162.75 + 0.5
      *x29 *159.25 + 0.615384615 *x210 *173.25 +
      0.615384615 *x31 *330.15 + 0.307692308 *x32 *319.5 +
      0.653846154 *x33 *337.25 + 0.576923077 *x34 *351.45 +
      0.653846154 *x35 *330.15 + 0.615384615 *x36 *337.25 +
      0.576923077 *x37 *323.05 + 0.576923077 *x38 *337.25 + 0.5
      *x39 *326.6 + 0.615384615 *x310 *323.05 +
      0.615384615 *x41 *441.75 + 0.307692308 *x42 *451.25 +
      0.653846154 *x43 *451.25 + 0.576923077 *x44 *470.25 +
      0.653846154 *x45 *441.75 + 0.615384615 *x46 *470.25 +
      0.576923077 *x47 *437 + 0.576923077 *x48 *427.5 + 0.5
      *x49 *441.75 + 0.615384615 *x410 *437 +
      0.615384615 *x51 *232.5 + 0.307692308 *x52 *247.5 +
      0.653846154 *x53 *225 + 0.576923077 *x54 *247.5 +
      0.653846154 *x55 *227.5 + 0.615384615 *x56 *227.5 +
      0.576923077 *x57 *232.5 + 0.576923077 *x58 *237.5 + 0.5
      *x59 *230 + 0.615384615 *x510 *237.5 +
      0.615384615 *x61 *445.5 + 0.307692308 *x62 *405 +
      0.653846154 *x63 *427.5 + 0.576923077 *x64 *445.5 +
      0.653846154 *x65 *409.5 + 0.615384615 *x66 *414 +
      0.576923077 *x67 *418.5 + 0.576923077 *x68 *409.5 + 0.5
      *x69 *414 + 0.615384615 *x610 *445.5 +
      0.615384615 *x71 *675 + 0.307692308 *x72 *712.5 +
      0.653846154 *x73 *697.5 + 0.576923077 *x74 *742.5 +
      0.653846154 *x75 *712.5 + 0.615384615 *x76 *697.5 +
      0.576923077 *x77 *712.5 + 0.576923077 *x78 *675 + 0.5
      *x79 *690 + 0.615384615 *x710 *682.5 +
      0.615384615 *x81 *171 + 0.307692308 *x82 *178.2 +
      0.653846154 *x83 *162 + 0.576923077 *x84 *178.2 +
      0.653846154 *x85 *171 + 0.615384615 *x86 *167.4 +
      0.576923077 *x87 *171 + 0.576923077 *x88 *171 + 0.5
      *x89 *165.6 + 0.615384615 *x810 *165.6 +
      0.615384615 *x91 *371.25 + 0.307692308 *x92 *341.25 +
      0.653846154 *x93 *356.25 + 0.576923077 *x94 *371.25 +
      0.653846154 *x95 *356.25 + 0.615384615 *x96 *345 +
      0.576923077 *x97 *371.25 + 0.576923077 *x98 *348.75 + 0.5
      *x99 *345 + 0.615384615 *x910 *337.5 +
      0.615384615 *x101 *500.5 + 0.307692308 *x102 *506 +
      0.653846154 *x103 *544.5 + 0.576923077 *x104 *544.5 +
      0.653846154 *x105 *522.5 + 0.615384615 *x106 *511.5 +
      0.576923077 *x107 *500.5 + 0.576923077 *x108 *495 + 0.5
      *x109 *544.5 + 0.615384615 *x1010 *522.5 +
      0.615384615 *x111 *253 + 0.307692308 *x112 *255.75 +
      0.653846154 *x113 *250.25 + 0.576923077 *x114 *272.25 +
      0.653846154 *x115 *261.25 + 0.615384615 *x116 *255.75 +
      0.576923077 *x117 *253 + 0.576923077 *x118 *261.25 + 0.5
      *x119 *250.25 + 0.615384615 *x1110 *272.25 +

```

0.615384615	*x121	*404.55 + 0.307692308	*x122	*400.2 +
0.653846154	*x123	*400.2 + 0.576923077	*x124	*430.65 +
0.653846154	*x125	*413.25 + 0.615384615	*x126	*404.55 +
0.576923077	*x127	*391.5 + 0.576923077	*x128	*430.65 + 0.5
*x129	*400.2	+ 0.615384615	*x1210	*413.25 +
0.615384615	*x131	*720.75 + 0.307692308	*x132	*705.25 +
0.653846154	*x133	*697.5 + 0.576923077	*x134	*697.5 +
0.653846154	*x135	*736.25 + 0.615384615	*x136	*736.25 +
0.576923077	*x137	*736.25 + 0.576923077	*x138	*767.25 + 0.5
*x139	*697.5	+ 0.615384615	*x1310	*713 +
0.615384615	*x141	*316.2 + 0.307692308	*x142	*323 +
0.653846154	*x143	*306 + 0.576923077	*x144	*323 +
0.653846154	*x145	*323 + 0.615384615	*x146	*336.6 +
0.576923077	*x147	*336.6 + 0.576923077	*x148	*309.4 + 0.5
*x149	*323 +	0.615384615	*x1410	*316.2 +
0.615384615	*x151	*613.8 + 0.307692308	*x152	*627 +
0.653846154	*x153	*627 + 0.576923077	*x154	*653.4 +
0.653846154	*x155	*594 + 0.615384615	*x156	*600.6 +
0.576923077	*x157	*594 + 0.576923077	*x158	*607.2 + 0.5
*x159	*653.4	+ 0.615384615	*x1510	*607.2 +
0.615384615	*x161	*356.25 + 0.307692308	*x162	*337.5 +
0.653846154	*x163	*371.25 + 0.576923077	*x164	*341.25 +
0.653846154	*x165	*356.25 + 0.615384615	*x166	*345 +
0.576923077	*x167	*356.25 + 0.576923077	*x168	*337.5 + 0.5
*x169	*337.5	+ 0.615384615	*x1610	*345 +
0.615384615	*x171	*380 + 0.307692308	*x172	*380 +
0.653846154	*x173	*364 + 0.576923077	*x174	*368 +
0.653846154	*x175	*396 + 0.615384615	*x176	*380 +
0.576923077	*x177	*396 + 0.576923077	*x178	*380 + 0.5
*x179	*372 +	0.615384615	*x1710	*368 +
0.615384615	*x181	*706.5 + 0.307692308	*x182	*777.15 +
0.653846154	*x183	*722.2 + 0.576923077	*x184	*730.05 +
0.653846154	*x185	*714.35 + 0.615384615	*x186	*730.05 +
0.576923077	*x187	*714.35 + 0.576923077	*x188	*777.15 + 0.5
*x189	*706.5	+ 0.615384615	*x1810	*722.2 +
0.615384615	*x191	*237.5 + 0.307692308	*x192	*227.5 +
0.653846154	*x193	*232.5 + 0.576923077	*x194	*247.5 +
0.653846154	*x195	*230 + 0.615384615	*x196	*225 +
0.576923077	*x197	*230 + 0.576923077	*x198	*227.5 + 0.5
*x199	*237.5	+ 0.615384615	*x1910	*237.5 +
0.615384615	*x201	*257.4 + 0.307692308	*x202	*239.2 +
0.653846154	*x203	*241.8 + 0.576923077	*x204	*234 +
0.653846154	*x205	*241.8 + 0.615384615	*x206	*247 +
0.576923077	*x207	*241.8 + 0.576923077	*x208	*241.8 + 0.5
*x209	*257.4	+ 0.615384615	*x2010	*257.4 +
0.615384615	*x211	*136.5 + 0.307692308	*x212	*139.5 +
0.653846154	*x213	*139.5 + 0.576923077	*x214	*142.5 +
0.653846154	*x215	*139.5 + 0.615384615	*x216	*148.5 +
0.576923077	*x217	*148.5 + 0.576923077	*x218	*135 + 0.5
*x219	*136.5	+ 0.615384615	*x2110	*136.5 +
0.615384615	*x221	*308.2 + 0.307692308	*x222	*318.25 +
0.653846154	*x223	*311.55 + 0.576923077	*x224	*331.65 +
0.653846154	*x225	*331.65 + 0.615384615	*x226	*308.2 +
0.576923077	*x227	*304.85 + 0.576923077	*x228	*331.65 + 0.5
*x229	*304.85	+ 0.615384615	*x2210	*308.2 +
0.615384615	*x231	*339.45 + 0.307692308	*x232	*361.35 +
0.653846154	*x233	*335.8 + 0.576923077	*x234	*332.15 +
0.653846154	*x235	*328.5 + 0.615384615	*x236	*339.45 +
0.576923077	*x237	*335.8 + 0.576923077	*x238	*332.15 + 0.5
*x239	*361.35	+ 0.615384615	*x2310	*328.5 +

```

0.615384615      *x241 *361.1 + 0.307692308 *x242 *357.18 +
0.653846154      *x243 *388.58 + 0.576923077 *x244 *361.1 +
0.653846154      *x245 *353.25 + 0.615384615 *x246 *365.02 +
0.576923077      *x247 *372.88 + 0.576923077 *x248 *361.1 + 0.5
*x249            *357.18 + 0.615384615 *x2410 *372.88 +
0.615384615      *x251 *366.3 + 0.307692308 *x252 *340.4 +
0.653846154      *x253 *336.7 + 0.576923077 *x254 *336.7 +
0.653846154      *x255 *351.5 + 0.615384615 *x256 *344.1 +
0.576923077      *x257 *366.3 + 0.576923077 *x258 *333 + 0.5
*x259            *340.4 + 0.615384615 *x2510 *366.3 +
0.615384615      *x261 *477.75 + 0.307692308 *x262 *488.25 +
0.653846154      *x263 *477.75 + 0.576923077 *x264 *483 +
0.653846154      *x265 *519.75 + 0.615384615 *x266 *519.75 +
0.576923077      *x267 *477.75 + 0.576923077 *x268 *498.75 + 0.5
*x269            *472.5 + 0.615384615 *x2610 *477.75 +
0.615384615      *x271 *113.75 + 0.307692308 *x272 *118.75 +
0.653846154      *x273 *115 + 0.576923077 *x274 *113.75 +
0.653846154      *x275 *112.5 + 0.615384615 *x276 *113.75 +
0.576923077      *x277 *115 + 0.576923077 *x278 *123.75 + 0.5
*x279            *118.75 + 0.615384615 *x2710 *115 +
0.615384615      *x281 *145.6 + 0.307692308 *x282 *158.4 +
0.653846154      *x283 *152 + 0.576923077 *x284 *145.6 +
0.653846154      *x285 *148.8 + 0.615384615 *x286 *147.2 +
0.576923077      *x287 *144 + 0.576923077 *x288 *152 + 0.5
*x289            *158.4 + 0.615384615 *x2810 *152 +
0.615384615      *x291 *209 + 0.307692308 *x292 *200.2 +
0.653846154      *x293 *209 + 0.576923077 *x294 *217.8 +
0.653846154      *x295 *209 + 0.615384615 *x296 *209 +
0.576923077      *x297 *209 + 0.576923077 *x298 *198 + 0.5
*x299            *202.4 + 0.615384615 *x2910 *209 );

```

!constrain jumlah minimum pembelian untuk setiap pemasok;

```

2760      *x11 + 3255      *x21 + 6603      *x31 +
8835      *x41 + 4650      *x51 + 8910      *x61 +
13500     *x71 + 3420      *x81 + 7425      *x91 +
10010     *x101 + 5060     *x111 + 8091      *x121 +
14415     *x131 + 6324     *x141 + 12276     *x151 +
7125      *x161 + 7600     *x171 + 14130     *x181 +
4750      *x191 + 5148     *x201 + 2730      *x211 +
6164      *x221 + 6789     *x231 + 7222      *x241 +
7326      *x251 + 9555     *x261 + 2275      *x271 +
2912      *x281 + 4180     *x291 >= 5000000 *y1 ;

```

```

2760      *x12 + 3220      *x22 + 6390      *x32 +
9025      *x42 + 4950      *x52 + 8100      *x62 +
14250     *x72 + 3564      *x82 + 6825      *x92 +
10120     *x102 + 5115     *x112 + 8004      *x122 +
14105     *x132 + 6460     *x142 + 12540     *x152 +
6750      *x162 + 7600     *x172 + 15543     *x182 +
4550      *x192 + 4784     *x202 + 2790      *x212 +
6365      *x222 + 7227     *x232 + 7143.5    *x242 +
6808      *x252 + 9765     *x262 + 2375      *x272 +
3168      *x282 + 4004     *x292 >= 4000000 *y2 ;

```

```

2850      *x13 + 3325      *x23 + 6745      *x33 +
9025      *x43 + 4500      *x53 + 8550      *x63 +
13950     *x73 + 3240      *x83 + 7125      *x93 +
10890     *x103 + 5005     *x113 + 8004      *x123 +
13950     *x133 + 6120     *x143 + 12540     *x153 +
7425      *x163 + 7280     *x173 + 14444     *x183 +

```

```

4650 *x193 + 4836 *x203 + 2790 *x213 +
6231 *x223 + 6716 *x233 + 7771.5 *x243 +
6734 *x253 + 9555 *x263 + 2300 *x273 +
3040 *x283 + 4180 *x293 >= 3000000 *y3 ;

2970 *x14 + 3465 *x24 + 7029 *x34 +
9405 *x44 + 4950 *x54 + 8910 *x64 +
14850 *x74 + 3564 *x84 + 7425 *x94 +
10890 *x104 + 5445 *x114 + 8613 *x124 +
13950 *x134 + 6460 *x144 + 13068 *x154 +
6825 *x164 + 7360 *x174 + 14601 *x184 +
4950 *x194 + 4680 *x204 + 2850 *x214 +
6633 *x224 + 6643 *x234 + 7222 *x244 +
6734 *x254 + 9660 *x264 + 2275 *x274 +
2912 *x284 + 4356 *x294 >= 1000000 *y4 ;

2760 *x15 + 3255 *x25 + 6603 *x35 +
8835 *x45 + 4550 *x55 + 8190 *x65 +
14250 *x75 + 3420 *x85 + 7125 *x95 +
10450 *x105 + 5225 *x115 + 8265 *x125 +
14725 *x135 + 6460 *x145 + 11880 *x155 +
7125 *x165 + 7920 *x175 + 14287 *x185 +
4600 *x195 + 4836 *x205 + 2790 *x215 +
6633 *x225 + 6570 *x235 + 7065 *x245 +
7030 *x255 + 10395 *x265 + 2250 *x275 +
2976 *x285 + 4180 *x295 >= 1500000 *y5 ;

2970 *x16 + 3150 *x26 + 6745 *x36 +
9405 *x46 + 4550 *x56 + 8280 *x66 +
13950 *x76 + 3348 *x86 + 6900 *x96 +
10230 *x106 + 5115 *x116 + 8091 *x126 +
14725 *x136 + 6732 *x146 + 12012 *x156 +
6900 *x166 + 7600 *x176 + 14601 *x186 +
4500 *x196 + 4940 *x206 + 2970 *x216 +
6164 *x226 + 6789 *x236 + 7300.5 *x246 +
6882 *x256 + 10395 *x266 + 2275 *x276 +
2944 *x286 + 4180 *x296 >= 1500000 *y6 ;

2850 *x17 + 3465 *x27 + 6461 *x37 +
8740 *x47 + 4650 *x57 + 8370 *x67 +
14250 *x77 + 3420 *x87 + 7425 *x97 +
10010 *x107 + 5060 *x117 + 7830 *x127 +
14725 *x137 + 6732 *x147 + 11880 *x157 +
7125 *x167 + 7920 *x177 + 14287 *x187 +
4600 *x197 + 4836 *x207 + 2970 *x217 +
6097 *x227 + 6716 *x237 + 7457.5 *x247 +
7326 *x257 + 9555 *x267 + 2300 *x277 +
2880 *x287 + 4180 *x297 >= 3000000 *y7 ;

2760 *x18 + 3255 *x28 + 6745 *x38 +
8550 *x48 + 4750 *x58 + 8190 *x68 +
13500 *x78 + 3420 *x88 + 6975 *x98 +
9900 *x108 + 5225 *x118 + 8613 *x128 +
15345 *x138 + 6188 *x148 + 12144 *x158 +
6750 *x168 + 7600 *x178 + 15543 *x188 +
4550 *x198 + 4836 *x208 + 2700 *x218 +
6633 *x228 + 6643 *x238 + 7222 *x248 +
6660 *x258 + 9975 *x268 + 2475 *x278 +
3040 *x288 + 3960 *x298 >= 2500000 *y8 ;

```

```

2970    *x19    + 3185    *x29    + 6532    *x39    +
8835    *x49    + 4600    *x59    + 8280    *x69    +
13800    *x79    + 3312    *x89    + 6900    *x99    +
10890    *x109   + 5005    *x119   + 8004    *x129   +
13950    *x139   + 6460    *x149   + 13068    *x159   +
6750    *x169   + 7440    *x179   + 14130    *x189   +
4750    *x199   + 5148    *x209   + 2730    *x219   +
6097    *x229   + 7227    *x239   + 7143.5    *x249   +
6808    *x259   + 9450    *x269   + 2375    *x279   +
3168    *x289   + 4048    *x299   >= 3000000 *y9    ;

2850    *x110   + 3465    *x210   + 6461    *x310   +
8740    *x410   + 4750    *x510   + 8910    *x610   +
13650    *x710   + 3312    *x810   + 6750    *x910   +
10450    *x1010  + 5445    *x1110  + 8265    *x1210+
14260    *x1310  + 6324    *x1410  + 12144    *x1510+
6900    *x1610  + 7360    *x1710  + 14444    *x1810+
4750    *x1910  + 5148    *x2010  + 2730    *x2110+
6164    *x2210  + 6570    *x2310  + 7457.5    *x2410+
7326    *x2510  + 9555    *x2610  + 2300    *x2710+
3040    *x2810  + 4180    *x2910  >= 1750000 *y10   ;

!constrain nilai y sebagai indikasi pemasok yang terpilih;
y1      =@if( (x11    +x21    +x31    +x41    +x51    +x61    +x71
+x81    +x91    +x101  +x111  +x121  +x131  +x141    +x151
+x161    +x171    +x181    +x191    +x201    +x211    +x221    +x231
+x241    +x251    +x261    +x271    +x281    +x291    )#GT#0,1,0);

y2      =@if( (x12    +x22    +x32    +x42    +x52    +x62    +x72
+x82    +x92    +x102  +x112  +x122  +x132  +x142    +x152
+x162    +x172    +x182    +x192    +x202    +x212    +x222    +x232
+x242    +x252    +x262    +x272    +x282    +x292    )#GT#0,1,0);

y3      =@if( (x13    +x23    +x33    +x43    +x53    +x63    +x73
+x83    +x93    +x103  +x113  +x123  +x133  +x143    +x153
+x163    +x173    +x183    +x193    +x203    +x213    +x223    +x233
+x243    +x253    +x263    +x273    +x283    +x293    )#GT#0,1,0);

y4      =@if( (x14    +x24    +x34    +x44    +x54    +x64    +x74
+x84    +x94    +x104  +x114  +x124  +x134  +x144    +x154
+x164    +x174    +x184    +x194    +x204    +x214    +x224    +x234
+x244    +x254    +x264    +x274    +x284    +x294    )#GT#0,1,0);

y5      =@if( (x15    +x25    +x35    +x45    +x55    +x65    +x75
+x85    +x95    +x105  +x115  +x125  +x135  +x145    +x155
+x165    +x175    +x185    +x195    +x205    +x215    +x225    +x235
+x245    +x255    +x265    +x275    +x285    +x295    )#GT#0,1,0);

y6      =@if( (x16    +x26    +x36    +x46    +x56    +x66    +x76
+x86    +x96    +x106  +x116  +x126  +x136  +x146    +x156
+x166    +x176    +x186    +x196    +x206    +x216    +x226    +x236
+x246    +x256    +x266    +x276    +x286    +x296    )#GT#0,1,0);

y7      =@if( (x17    +x27    +x37    +x47    +x57    +x67    +x77
+x87    +x97    +x107  +x117  +x127  +x137  +x147    +x157
+x167    +x177    +x187    +x197    +x207    +x217    +x227    +x237
+x247    +x257    +x267    +x277    +x287    +x297    )#GT#0,1,0);

```

```

y8      =@if( (x18  +x28  +x38  +x48  +x58  +x68  +x78
+x88  +x98  +x108 +x118 +x128 +x138 +x148  +x158
+x168 +x178 +x188 +x198 +x208 +x218 +x228  +x238
+x248 +x258 +x268 +x278 +x288 +x298 )#GT#0,1,0);

y9      =@if( (x19  +x29  +x39  +x49  +x59  +x69  +x79
+x89  +x99  +x109 +x119 +x129 +x139 +x149  +x159
+x169 +x179 +x189 +x199 +x209 +x219 +x229  +x239
+x249 +x259 +x269 +x279 +x289 +x299 )#GT#0,1,0);

y10     =@if( (x110 +x210 +x310 +x410 +x510 +x610  +x710
+x810 +x910  +x1010 +x1110 +x1210 +x1310 +x1410  +x1510
+x1610 +x1710 +x1810 +x1910 +x2010 +x2110 +x2210  +x2310
+x2410 +x2510 +x2610 +x2710 +x2810 +x2910)#GT#0,1,0);

```

!constrain jumlah permintaan untuk setiap produk;

```

x11  +    x12  +    x13  +    x14  +    x15  +
x16  +    x17  +    x18  +    x19  +    x110 >=
11802 ;

x21  +    x22  +    x23  +    x24  +    x25  +
x26  +    x27  +    x28  +    x29  +    x210 >=
12066 ;

x31  +    x32  +    x33  +    x34  +    x35  +
x36  +    x37  +    x38  +    x39  +    x310 >=
10646 ;

x41  +    x42  +    x43  +    x44  +    x45  +
x46  +    x47  +    x48  +    x49  +    x410 >=
8539  ;

x51  +    x52  +    x53  +    x54  +    x55  +
x56  +    x57  +    x58  +    x59  +    x510 >=
17935 ;

x61  +    x62  +    x63  +    x64  +    x65  +
x66  +    x67  +    x68  +    x69  +    x610 >=
14531 ;

x71  +    x72  +    x73  +    x74  +    x75  +
x76  +    x77  +    x78  +    x79  +    x710 >=
14207 ;

x81  +    x82  +    x83  +    x84  +    x85  +
x86  +    x87  +    x88  +    x89  +    x810 >=
16908 ;

x91  +    x92  +    x93  +    x94  +    x95  +
x96  +    x97  +    x98  +    x99  +    x910 >=
14185 ;

x101 +    x102 +    x103 +    x104 +    x105 +
x106 +    x107 +    x108 +    x109 +    x1010 >=
13831 ;

x111 +    x112 +    x113 +    x114 +    x115 +
x116 +    x117 +    x118 +    x119 +    x1110 >=
25874 ;

```



```

x271 + x272 + x273 + x274 + x275 +
x276 + x277 + x278 + x279 + x2710 >=
16913 ;

x281 + x282 + x283 + x284 + x285 +
x286 + x287 + x288 + x289 + x2810 >=
21617 ;

x291 + x292 + x293 + x294 + x295 +
x296 + x297 + x298 + x299 + x2910 >=
11624 ;

```

!constrain setiap nilai x merupakan bilangan bulat;

```

@gin (x11 ); @gin (x16 );
@gin (x21 ); @gin (x26 );
@gin (x31 ); @gin (x36 );
@gin (x41 ); @gin (x46 );
@gin (x51 ); @gin (x56 );
@gin (x61 ); @gin (x66 );
@gin (x71 ); @gin (x76 );
@gin (x81 ); @gin (x86 );
@gin (x91 ); @gin (x96 );
@gin (x101 ); @gin (x106 );
@gin (x111 ); @gin (x116 );
@gin (x121 ); @gin (x126 );
@gin (x131 ); @gin (x136 );
@gin (x141 ); @gin (x146 );
@gin (x151 ); @gin (x156 );
@gin (x161 ); @gin (x166 );
@gin (x171 ); @gin (x176 );
@gin (x181 ); @gin (x186 );
@gin (x191 ); @gin (x196 );
@gin (x201 ); @gin (x206 );
@gin (x211 ); @gin (x216 );
@gin (x221 ); @gin (x226 );
@gin (x231 ); @gin (x236 );
@gin (x241 ); @gin (x246 );
@gin (x251 ); @gin (x256 );
@gin (x261 ); @gin (x266 );
@gin (x271 ); @gin (x276 );
@gin (x281 ); @gin (x286 );
@gin (x291 ); @gin (x296 );
@gin (x12 ); @gin (x17 );
@gin (x22 ); @gin (x27 );
@gin (x32 ); @gin (x37 );
@gin (x42 ); @gin (x47 );
@gin (x52 ); @gin (x57 );
@gin (x62 ); @gin (x67 );
@gin (x72 ); @gin (x77 );
@gin (x82 ); @gin (x87 );
@gin (x92 ); @gin (x97 );
@gin (x102 ); @gin (x107 );
@gin (x112 ); @gin (x117 );
@gin (x122 ); @gin (x127 );
@gin (x132 ); @gin (x137 );
@gin (x142 ); @gin (x147 );
@gin (x152 ); @gin (x157 );
@gin (x162 ); @gin (x167 );
@gin (x172 ); @gin (x177 );

```

```

@gin (x182 );
@gin (x192 );
@gin (x202 );
@gin (x212 );
@gin (x222 );
@gin (x232 );
@gin (x242 );
@gin (x252 );
@gin (x262 );
@gin (x272 );
@gin (x282 );
@gin (x292 );
@gin (x13 );
@gin (x23 );
@gin (x33 );
@gin (x43 );
@gin (x53 );
@gin (x63 );
@gin (x73 );
@gin (x83 );
@gin (x93 );
@gin (x103 );
@gin (x113 );
@gin (x123 );
@gin (x133 );
@gin (x143 );
@gin (x153 );
@gin (x163 );
@gin (x173 );
@gin (x183 );
@gin (x193 );
@gin (x203 );
@gin (x213 );
@gin (x223 );
@gin (x233 );
@gin (x243 );
@gin (x253 );
@gin (x263 );
@gin (x273 );
@gin (x283 );
@gin (x293 );
@gin (x14 );
@gin (x24 );
@gin (x34 );
@gin (x44 );
@gin (x54 );
@gin (x64 );
@gin (x74 );
@gin (x84 );
@gin (x94 );
@gin (x104 );
@gin (x114 );
@gin (x124 );
@gin (x134 );
@gin (x144 );
@gin (x154 );
@gin (x164 );
@gin (x174 );
@gin (x184 );
@gin (x194 );

@gin (x187 );
@gin (x197 );
@gin (x207 );
@gin (x217 );
@gin (x227 );
@gin (x237 );
@gin (x247 );
@gin (x257 );
@gin (x267 );
@gin (x277 );
@gin (x287 );
@gin (x297 );
@gin (x18 );
@gin (x28 );
@gin (x38 );
@gin (x48 );
@gin (x58 );
@gin (x68 );
@gin (x78 );
@gin (x88 );
@gin (x98 );
@gin (x108 );
@gin (x118 );
@gin (x128 );
@gin (x138 );
@gin (x148 );
@gin (x158 );
@gin (x168 );
@gin (x178 );
@gin (x188 );
@gin (x198 );
@gin (x208 );
@gin (x218 );
@gin (x228 );
@gin (x238 );
@gin (x248 );
@gin (x258 );
@gin (x268 );
@gin (x278 );
@gin (x288 );
@gin (x298 );
@gin (x19 );
@gin (x29 );
@gin (x39 );
@gin (x49 );
@gin (x59 );
@gin (x69 );
@gin (x79 );
@gin (x89 );
@gin (x99 );
@gin (x109 );
@gin (x119 );
@gin (x129 );
@gin (x139 );
@gin (x149 );
@gin (x159 );
@gin (x169 );
@gin (x179 );
@gin (x189 );
@gin (x199 );

```

```

@gin (x204 );
@gin (x214 );
@gin (x224 );
@gin (x234 );
@gin (x244 );
@gin (x254 );
@gin (x264 );
@gin (x274 );
@gin (x284 );
@gin (x294 );
@gin (x15 );
@gin (x25 );
@gin (x35 );
@gin (x45 );
@gin (x55 );
@gin (x65 );
@gin (x75 );
@gin (x85 );
@gin (x95 );
@gin (x105 );
@gin (x115 );
@gin (x125 );
@gin (x135 );
@gin (x145 );
@gin (x155 );
@gin (x165 );
@gin (x175 );
@gin (x185 );
@gin (x195 );
@gin (x205 );
@gin (x215 );
@gin (x225 );
@gin (x235 );
@gin (x245 );
@gin (x255 );
@gin (x265 );
@gin (x275 );
@gin (x285 );
@gin (x295 );

@gin (x209 );
@gin (x219 );
@gin (x229 );
@gin (x239 );
@gin (x249 );
@gin (x259 );
@gin (x269 );
@gin (x279 );
@gin (x289 );
@gin (x299 );
@gin (x110 );
@gin (x210 );
@gin (x310 );
@gin (x410 );
@gin (x510 );
@gin (x610 );
@gin (x710 );
@gin (x810 );
@gin (x910 );
@gin (x1010);
@gin (x1110);
@gin (x1210);
@gin (x1310);
@gin (x1410);
@gin (x1510);
@gin (x1610);
@gin (x1710);
@gin (x1810);
@gin (x1910);
@gin (x2010);
@gin (x2110);
@gin (x2210);
@gin (x2310);
@gin (x2410);
@gin (x2510);
@gin (x2610);
@gin (x2710);
@gin (x2810);
@gin (x2910);

```

LAMPIRAN C

Local optimal solution found at iteration:
Objective value:

217
0.2259024E+10

Variable	Value	Reduced	Cost
Z1	2.20E+09	0	
Z2	5.61E+07	0	
X11	0	42.46154	
X12	11802	0	
X13	0	140.7115	
X14	0	253.2115	
X15	0	47.76923	
X16	0	258.9231	
X17	0	129.75	
X18	0	37.15385	
X19	0	241.7885	
X110	0	135.2308	
X21	0	108.2308	
X22	0	22.61538	
X23	0	186.7788	
X24	0	318.0288	
X25	0	114.4904	
X26	12066	0	
X27	0	318.0288	
X28	0	101.9712	
X29	0	17.70192	
X210	0	324.6923	
X31	0	317.8615	
X32	10646	0	
X33	0	477.2019	
X34	0	743.4519	
X35	0	330.5596	
X36	0	464.2308	
X37	0	159.0673	
X38	0	451.2596	
X39	0	206.9923	
X310	0	171.4923	
X41	0	310.2115	
X42	0	367.2115	
X43	0	523.4135	
X44	0	879.6635	
X45	0	327.2019	
X46	0	897.75	
X47	0	195.4808	
X48	8539	0	
X49	0	259.2404	
X410	0	212.2885	
X51	0	145.9615	
X52	0	379.0385	
X53	17935	0	
X54	0	445.6731	
X55	0	51.63462	

X56	0	42.88462
X57	0	137.0192
X58	0	239.9038
X59	0	67.88462
X510	0	249.0385
X61	0	959.5385
X62	14531	0
X63	0	604.9038
X64	0	942.4038
X65	0	233.1346
X66	0	310.1538
X67	0	386.8269
X68	0	201.6346
X69	0	262.3846
X610	0	959.5385
X71	371	0
X72	0	553.8462
X73	0	490.6731
X74	0	1362.981
X75	0	800.4808
X76	0	463.8462
X77	0	745.6731
X78	13836	-25.9615
X79	0	229.6154
X710	0	154.6154
X81	0	179.3077
X82	0	272.9077
X83	16908	0
X84	0	320.8846
X85	0	185.8846
X86	0	105.0923
X87	0	172.7308
X88	0	172.7308
X89	0	48.87692
X810	0	67.98462
X91	0	723.4615
X92	14185	0
X93	0	427.9327
X94	0	709.1827
X95	0	427.9327
X96	0	182.3077
X97	0	709.1827
X98	0	246.2019
X99	0	142.5
X910	0	27.69231
X101	0	132.4231
X102	0	90.11538
X103	0	1060.442
X104	0	1018.558
X105	0	606.0577
X106	0	359.1923
X107	0	113.1731
X108	13831	0

X109	0	976.6731
X1010	0	585.9615
X111	0	85.56731
X112	0	63.56731
X113	0	38.5
X114	0	471.9423
X115	0	265.6923
X116	0	142.2596
X117	0	75.83654
X118	0	245.5962
X119	25874	0
X1110	0	482.4135
X121	0	284.0885
X122	0	71.27308
X123	0	209.8038
X124	0	805.5865
X125	0	479.3365
X126	0	284.0885
X127	23542	0
X128	0	805.5865
X129	0	148.2346
X1210	0	463.4423
X131	0	559.7885
X132	0	23.25
X133	0	107.3077
X134	0	53.65385
X135	0	907.6442
X136	0	879.3269
X137	0	851.0096
X138	0	1488.894
X139	21361	0
X1310	0	400.0192
X141	0	198.5077
X142	0	239.3077
X143	5281	0
X144	0	326.2692
X145	0	351.1154
X146	0	619.0615
X147	0	606.1154
X148	0	46.42308
X149	0	301.4231
X1410	0	198.5077
X151	0	431.0308
X152	0	510.2308
X153	0	727.2692
X154	0	1222.269
X155	0	45.69231
X156	0	158.9077
X157	5055	0
X158	0	271.6154
X159	0	1172.008
X1510	0	294.9692
X161	0	490.3846

X162	3595	0
X163	0	813.8942
X164	0	168.0288
X165	0	504.0865
X166	0	258.4615
X167	0	476.6827
X168	0	90.86538
X169	0	64.90385
X1610	0	258.4615
X171	0	315.8462
X172	0	198.9231
X173	3674	0
X174	0	54.30769
X175	0	660.9231
X176	0	315.8462
X177	0	630.4615
X178	0	301.2308
X179	0	108
X1710	0	68.46154
X181	0	81.51923
X182	0	1298.873
X183	0	432.9577
X184	0	538.9327
X185	0	270.825
X186	0	567.0115
X187	0	215.875
X188	0	1508.106
X189	3198	0
X1810	0	405.1808
X191	0	276.1538
X192	12124	0
X193	0	182.0192
X194	0	472.7885
X195	0	130.3846
X196	0	18.46154
X197	0	112.6923
X198	0	61.25
X199	0	248.75
X1910	0	276.1538
X201	0	491.4
X202	0	42.6
X203	0	179.1
X204	13728	0
X205	0	179.1
X206	0	277
X207	0	160.5
X208	0	160.5
X209	0	461.7
X2010	0	491.4
X211	0	36.11538
X212	0	55.03846
X213	0	103.3269
X214	0	154.3269

X215	0	103.3269
X216	0	283.5
X217	0	277.7885
X218	32892	0
X219	0	20.36538
X2110	0	36.11538
X221	0	104.2365
X222	0	213.4981
X223	0	185.2808
X224	0	574.9115
X225	0	600.4231
X226	0	104.2365
X227	0	23.45
X228	0	574.9115
X229	5657	0
X2210	0	104.2365
X231	0	225.7385
X232	0	566.0308
X233	0	163.4077
X234	0	62.47115
X235	0	12.63462
X236	0	225.7385
X237	0	137.5769
X238	0	62.47115
X239	0	635.5212
X2310	4920	0
X241	0	190.8138
X242	5280	0
X243	0	772.17
X244	0	176.9254
X245	0	42.56962
X246	0	271.7262
X247	0	419.2215
X248	0	176.9254
X249	0	68.68846
X2410	0	433.5631
X251	0	699.3
X252	0	60.62308
X253	0	102.0346
X254	0	76.13462
X255	0	407.7115
X256	0	241.6385
X257	0	685.2115
X258	3435	0
X259	0	126.0846
X2510	0	699.3
X261	0	162.75
X262	0	228.9808
X263	0	181.125
X264	0	252.4038
X265	0	1048.587
X266	0	1028.596
X267	0	144.375

X268	0	576.4904
X269	3146	0
X2610	0	162.75
X271	0	21.44231
X272	0	87.98077
X273	0	51.63462
X274	0	17.06731
X275	16913	0
X276	0	21.44231
X277	0	42.78846
X278	0	222.8365
X279	0	110.8173
X2710	0	47.21154
X281	0	38.52308
X282	0	253.6615
X283	0	176.3077
X284	0	32.92308
X285	0	110.2154
X286	0	71.50769
X287	21617	0
X288	0	164.6154
X289	0	284.1231
X2810	0	170.4615
X291	0	243.0154
X292	11624	0
X293	0	251.0538
X294	0	416.0538
X295	0	251.0538
X296	0	243.0154
X297	0	234.9769
X298	0	8.630769
X299	0	83.6
X2910	0	243.0154
Y1	1	0
Y2	1	0
Y3	1	0
Y4	1	0
Y5	1	0
Y6	1	0
Y7	1	0
Y8	1	0
Y9	1	0
Y10	1	0

Row	Slack	or	Surplus
1	2.26E+09	-1	
2	0	-1	
3	-5.12E-09	-1	
4	8500	0	
5	4.75E+08	0	
6	1.92E+08	0	
7	6.32E+07	0	
8	3.66E+07	0	

9	3.65E+07	0
10	3.04E+08	0
11	5.06E+08	0
12	5.34E+08	0
13	3.06E+07	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	0	-2802.46
25	0	-3246.92
26	0	-6488.31
27	0	-8796.64
28	0	-4647.12
29	0	-8224.62
30	0	-13915.4
31	0	-3345.92
32	0	-6930
33	0	-10185.6
34	0	-5130.13
35	0	-8055.87
36	0	-14298.8
37	0	-6320.08
38	0	-12222.7
39	0	-6853.85
40	0	-7518
41	0	-14483.3
42	0	-4620
43	0	-4815
44	0	-2777.89
45	0	-6249.43
46	0	-6772.15
47	0	-7253.4
48	0	-6852.12
49	0	-9686.25
50	0	-2323.56
51	0	-2963.08
52	0	-4065.6

Tabel C.1 Pengelompokan output berdasarkan kesamaan pemasok (dalam satuan unit)

No	Produk	1	2	3	4	5	6	7	8	9	10
		Samudera	Rajawali Sakti	Megah Jaya	Sehat Sentosa	Kemuning	Jaya Abadi	Makmur Sejahtera	Subur Abadi	Berkat	Sentosa Raya
1	Laurier softcare regular 8 pads	0	11802	0	0	0	0	0	0	0	0
2	Laurier softcare regular 10 pads	0	0	0	0	0	12066	0	0	0	0
3	Laurier softcare regular 20 pads	0	10646	0	0	0	0	0	0	0	0
4	Laurier softcare regular 30 pads	0	0	0	0	0	0	0	8539	0	0
5	Laurier softcare regular wing 10 pads	0	0	17935	0	0	0	0	0	0	0
6	Laurier softcare regular wing 20 pads	0	14531	0	0	0	0	0	0	0	0
7	Laurier softcare regular wing 30 pads	371	0	0	0	0	0	0	13836	0	0
8	Laurier softcare maxi 10 pads	0	0	16908	0	0	0	0	0	0	0
9	Laurier softcare maxi 20 pads	0	14185	0	0	0	0	0	0	0	0
10	Laurier softcare maxi 30 pads	0	0	0	0	0	0	0	13831	0	0

11	Laurier softcare maxi wing 10 pads	0	0	0	0	0	0	0	0	258 74	0
12	Laurier softcare maxi wing 20 pads	0	0	0	0	0	0	23542	0	0	0
No	Produk	1	2	3	4	5	6	7	8	9	10
		Samu dera	Raja wali Sakti	Meg ah Jaya	Seha t Sent osa	Kemu ning	Jay a Aba di	Mak mur Sejaht era	Sub ur Aba di	Ber kat	Sent osa Raya
13	Laurier softcare maxi wing 30 pads	0	0	0	0	0	0	0	0	213 61	0
14	Laurier relax night 27 cm 10 pads	0	0	528 1	0	0	0	0	0	0	0
15	Laurier relax night 27 cm 20 pads	0	0	0	0	0	0	5055	0	0	0
16	Laurier relax night 30 cm 8 pads	0	3595	0	0	0	0	0	0	0	0
17	Laurier relax night 35 cm 6 pads	0	0	367 4	0	0	0	0	0	0	0
18	Laurier relax night 35 cm 12 pads	0	0	0	0	0	0	0	0	319 8	0
19	You C- 1000 lemon	0	1212 4	0	0	0	0	0	0	0	0
20	You C-	0	0	0	1372	0	0	0	0	0	0

0	1000 orange				8						
2	Larutan penyegar cap kaki										
1	3 botol 200ml	0	0	0	0	0	0	0	328 92	0	0
2	Adem sari 48gr	0	0	0	0	0	0	0	0	565 7	0
2	Vegeta lychee	0	0	0	0	0	0	0	0	0	4920
2	Vegeta orange	0	5280	0	0	0	0	0	0	0	0
2	Vegeta orange- manggo	0	0	0	0	0	0	0	343 5	0	0
2	Vegeta herbal	0	0	0	0	0	0	0	0	314 6	0
2	M150 150ml	0	0	0	0	16913	0	0	0	0	0
2	Kratingd aeng	0	0	0	0	0	0	21617	0	0	0
2	Kratingd aeng SP		1162								
9	150ml	0	4	0	0	0	0	0	0	0	0

LAMPIRAN D

Tabel D.1 Tabel pemesanan pada Rajawali Sakti

No	Produk	Periode (minggu)																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Laurier softcare regular 8 pads	984				984					984				984			
2	Laurier softcare regular 20 pads	888				888					888				888			
3	Laurier softcare regular wing 20 pads	1211				1211					1211				1211			
4	Laurier softcare maxi 20 pads	1183				1183					1183				1183			
5	Laurier relax night 30 cm 8 pads	300				300					300				300			
6	You C-1000 lemon	1011				1011					1011				1011			
7	Vegeta orange	440				440					440				440			
8	Kratingdaeng SP 150ml	969				969					969				969			

Tabel D.1 Tabel pemesanan pada Rajawali Sakti (lanjutan untuk periode 24-45)

No	Produk	Periode (minggu)																
		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	
1	Laurier softcare regular 8 pads					984				984					984			
2	Laurier softcare regular 20 pads					888				888					888			
3	Laurier softcare regular wing 20 pads					1211				1211					1211			
4	Laurier softcare maxi 20 pads					1183				1183					1183			
5	Laurier relax night 30 cm 8 pads					300				300					300			
6	You C-1000 lemon					1011				1011					1011			
7	Vegeta orange					440				440					440			
8	Kratingdaeng SP 150ml					969				969					969			

Tabel D.1 Tabel pemesanan pada Rajawali Sakti (lanjutan untuk periode 46-52)

No	Produk	Periode (minggu)							
		46	47	48	49	50	51	52	
1	Laurier softcare regular 8 pads	984					984		
2	Laurier softcare regular 20 pads	888					888		
3	Laurier softcare regular wing 20 pads	1211					1211		
4	Laurier softcare maxi 20 pads	1183					1183		
5	Laurier relax night 30 cm 8 pads	300					300		
6	You C-1000 lemon	1011					1011		
7	Vegeta orange	440					440		
8	Kratingdaeng SP 150ml	969					969		

Pemesanan pada Rajawali Sakti dilakukan secara serentak untuk semua produk. Dengan demikian jumlah modal yang harus disediakan untuk melakukan pemesanan pada Rajawali Sakti adalah: $Rp2.760,00 \times 984 + Rp6.390,00 \times 888 + Rp8.100,00 \times 1211 + Rp6.825,00 \times 1183 + Rp6.750,00 \times 300 + Rp4.550,00 \times 1011 + Rp7.143,50 \times 440 + Rp4.004,00 \times 969 = Rp39,921,301.00 > Rp4,000,000.00$ sehingga tidak perlu dilakukan penambahan jumlah pesanan.

[illegible]

Tabel D.4 Tabel pemesanan pada Kemuning

No	Produk	Periode (minggu)																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22			
1	M150 150ml	1828					1828						1828						1828							

Tabel D.4 Tabel pemesanan pada Kemuning (lanjutan untuk periode 27-52)

No	Produk	Periode (minggu)																											
		27	28	29	30	31	2	3	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52		
1	M15015Om1				1828						1828						1828									1828			

Tabel D.5 Tabel pemesanan pada Jaya Abadi

No	Produk	Periode (minggu)																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	1	
1	Laurier softcare regular 10 pads	1305					1305						1305						1305		

Tabel D.5 Tabel pemesanan pada Jaya Abadi (lanjutan untuk periode 23-44)

No	Produk	Periode (minggu)																					
		23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	
1	Laurier softcare regular 10 pads		1305						1305					1305							1305		

Tabel D.5 Tabel pemesanan pada Jaya Abadi (lanjutan untuk periode 45-52)

No	Produk	Periode (minggu)								
		45	46	47	48	49	50	51	52	
1	Laurier software regular 10 pads				1305					

Sehat Sentosa, Kemuning, dan Jaya Abadi merupakan para pemasok *single* item sehingga jumlah pesanan untuk masing-masing pemasok tersebut harus lebih atau sama dengan jumlah minimum pembelian yang ditetapkan. Berikut adalah perhitungan jumlah modal yang harus disediakan oleh UD. Sahabat setiap kali akan melakukan pemesanan pada Sehat Sentosa, Kemuning, maupun Jaya Abadi:

Sehat Sentosa: $Rp4,680.00 \times 933 = Rp4,366,440.00 > Rp1,000,000.00$

Kemuning: $Rp2,250.00 \times 1828 = Rp4,113,000.00 > Rp1,500,000.00$

Jaya Abadi: $Rp3,150.00 \times 1305 = Rp4,110,750.00 > Rp1,500,000.00$

Jumlah pemesanan pada ketiga pemasok di atas telah memenuhi jumlah minimum pembelian sehingga tidak perlu dilakukan penambahan jumlah pesanan.

Tabel D.6 Tabel pemesanan pada Makmur Sejahtera

No	Produk	Periode (minggu)																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Laurier softcare maxi wing 20 pads	1570			1570			1570			1570			1570				1570
2	Laurier relax night 27 cm 20 pads	337			337			337			337			337				337
3	Kratingdaeng	1442			1442			1442			1442			1442				1442

Tabel D.6 Tabel pemesanan pada Makmur Sejahtera (lanjutan untuk periode 23-44)

No	Produk	Periode (minggu)																	
		23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
1	Laurier softcare maxi wing 20 pads		1570				1570				1570				1570				1570
2	Laurier relax night 27 cm 20 pads		337				337				337				337				337
3	Kratingdaeng		1442				1442				1442				1442				1442

Tabel D.6 Tabel pemesanan pada Makmur Sejahtera (lanjutan untuk periode 45-52)

No	Produk	Periode (minggu)							
		45	46	47	48	49	50	51	52
1	Laurier softcare maxi wing 20 pads				1570				1570
2	Laurier relax night 27 cm 20 pads				337				337
3	Kratingdaeng				1442				1442

Pemesanan pada Makmur Sejahtera dilakukan secara serentak untuk setiap produk sehingga jumlah modal yang digunakan untuk melakukan pemesanan adalah:

$$Rp7,830.00 \times 1570 + Rp11,880.00 \times 337 + Rp2,880.00 \times 1442 = Rp20,449,620.00 > Rp3,000,000.00$$

Tabel D.7 Tabel pemesanan pada Berkat

No	Produk	Periode (minggu)																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Laurier softcare maxi wing 10 pads	1438		1438			1438			1438			1438			1438		
2	Laurier softcare maxi wing 30 pads	1187		1187			1187			1187			1187			1187		
3	Laurier relax night 35 cm 12 pads	178		178			178			178			178			178		
4	Adem sari 48gr	629					629					629						
5	Vegeta herbal	350					350					350						

Tabel D.7 Tabel pemesanan pada Berkat (lanjutan untuk periode 22-42)

N o	Prod uk	Periode (minggu)																				
		2 2	2 3	24	2 5	2 6	27	2 8	2 9	30	3 1	3 2	33	3 4	3 5	36	3 7	3 8	39	4 0	4 1	42
1	Laur ier softc are maxi wing 10 pads			14 38			14 38			14 38			14 38			14 38			14 38			14 38
2	Laur ier softc are maxi wing 30 pads			11 87			11 87			11 87			11 87			11 87			11 87			11 87
3	Laur ier relax night 35 cm 12 pads			17 8			17 8			17 8			17 8			17 8			17 8			17 8
4	Ade m sari 48gr		6 2 9						6 2 9						6 2 9						6 2 9	
5	Veg eta herb al		3 5 0						3 5 0						3 5 0						3 5 0	

Tabel D.7 Tabel pemesanan pada Berkat (lanjutan untuk periode 43-52)

No	Produk	Periode (minggu)									
		43	44	45	46	47	48	49	50	51	52
1	Laurier softcare maxi wing 10 pads			1438			1438			1438	
2	Laurier softcare maxi wing 30 pads			1187			1187			1187	
3	Laurier relax night 35 cm 12 pads			178			178			178	
4	Adem sari 48gr					629					
5	Vegeta herbal					350					

Tabel D.7.1 Tabel hasil perhitungan modal yang digunakan untuk pemesanan pada Berkat

No	Produk	Periode (minggu)							
		1	2	3	4	5	6	7	
1	Laurier softcare maxi wing 10 pads	Rp7,197,190.00	Rp0.00	Rp7,197,190.00	Rp0.00	Rp0.00	Rp7,197,190.00	Rp0.00	
2	Laurier softcare maxi wing 30 pads	Rp16,558,650.00	Rp0.00	Rp16,558,650.00	Rp0.00	Rp0.00	Rp16,558,650.00	Rp0.00	
3	Laurier relax night 35 cm 12 pads	Rp2,515,140.00	Rp0.00	Rp2,515,140.00	Rp0.00	Rp0.00	Rp2,515,140.00	Rp0.00	
4	Adem sari 48gr	Rp3,835,013.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp3,835,013.00	Rp0.00	
5	Vegeta herbal	Rp3,307,500.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp3,307,500.00	Rp0.00	
Total		Rp33,413,493.00	Rp0.00	Rp26,270,980.00	Rp0.00	Rp0.00	Rp33,413,493.00	Rp0.00	

Tabel D.7.1 Tabel hasil perhitungan modal yang digunakan untuk pemesanan pada Berkat

(lanjutan untuk periode 11-19)

No	Produk	Periode (minggu)						
		11	12	13	14	15	16	
1	Laurier softcare maxi wing 10 pads	Rp0.00	Rp7,197,190.00	Rp0.00	Rp0.00	Rp7,197,190.00	Rp0.00	
2	Laurier softcare maxi wing 30 pads	Rp0.00	Rp16,558,650.00	Rp0.00	Rp0.00	Rp16,558,650.00	Rp0.00	
3	Laurier relax night 35 cm 12 pads	Rp0.00	Rp2,515,140.00	Rp0.00	Rp0.00	Rp2,515,140.00	Rp0.00	
4	Adem sari 48gr	Rp3,835,013.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp3,835,013.00
5	Vegeta herbal	Rp3,307,500.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp3,307,500.00
Total		Rp7,142,513.00	Rp26,270,980.00	Rp0.00	Rp0.00	Rp26,270,980.00	Rp0.00	Rp7,142,513.00

Tabel D.7.1 Tabel hasil perhitungan modal yang digunakan untuk pemesanan pada Berkat

(lanjutan untuk periode 20-28)

No	Produk	Periode (minggu)								
		20	21	22	23	24	25	26	27	28
1	Laurier softcare maxi wing 10 pads	Rp0.00	Rp7,197,190.00	Rp0.00	Rp0.00	Rp7,197,190.00	Rp0.00	Rp0.00	Rp7,197,190.00	Rp0.00
2	Laurier softcare maxi wing 30 pads	Rp0.00	Rp16,558,650.00	Rp0.00	Rp0.00	Rp16,558,650.00	Rp0.00	Rp0.00	Rp16,558,650.00	Rp0.00
3	Laurier relax night 35 cm 12 pads	Rp0.00	Rp2,515,140.00	Rp0.00	Rp0.00	Rp2,515,140.00	Rp0.00	Rp0.00	Rp2,515,140.00	Rp0.00
4	Adem sari 48gr	Rp0.00	Rp0.00	Rp0.00	Rp3,835,013.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00
5	Vegeta herbal	Rp0.00	Rp0.00	Rp0.00	Rp3,307,500.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00
Total		Rp0.00	Rp26,270,980.00	Rp0.00	Rp7,142,513.00	Rp26,270,980.00	Rp0.00	Rp0.00	Rp26,270,980.00	Rp0.00

Tabel D.7.1 Tabel hasil perhitungan modal yang digunakan untuk pemesanan pada Berkat

(lanjutan untuk periode 29-37)

No	Produk	Periode (minggu)						
		29	30	31	32	33	34	
1	Laurier softcare maxi wing 10 pads	Rp0.00	Rp7,197,190.00	Rp0.00	Rp0.00	Rp7,197,190.00	Rp0.00	
2	Laurier softcare maxi wing 30 pads	Rp0.00	Rp16,558,650.00	Rp0.00	Rp0.00	Rp16,558,650.00	Rp0.00	
3	Laurier relax night 35 cm 12 pads	Rp0.00	Rp2,515,140.00	Rp0.00	Rp0.00	Rp2,515,140.00	Rp0.00	
4	Adem sari 48gr	Rp3,835,013.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp3,835,013.00
5	Vegeta herbal	Rp3,307,500.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp3,307,500.00
Total		Rp7,142,513.00	Rp26,270,980.00	Rp0.00	Rp0.00	Rp26,270,980.00	Rp0.00	Rp7,142,513.00

Tabel D.7.1 Tabel hasil perhitungan modal yang digunakan untuk pemesanan pada Berkat (lanjutan untuk periode 38-46)

No	Produk	Periode (minggu)								
		38	39	40	41	42	43	44	45	46
1	Laurier softcare maxi wing 10 pads	Rp0.00	Rp7,197,190.00	Rp0.00	Rp0.00	Rp7,197,190.00	Rp0.00	Rp0.00	Rp7,197,190.00	Rp0.00
2	Laurier softcare maxi wing 30 pads	Rp0.00	Rp16,558,650.00	Rp0.00	Rp0.00	Rp16,558,650.00	Rp0.00	Rp0.00	Rp16,558,650.00	Rp0.00
3	Laurier relax night 35 cm 12 pads	Rp0.00	Rp2,515,140.00	Rp0.00	Rp0.00	Rp2,515,140.00	Rp0.00	Rp0.00	Rp2,515,140.00	Rp0.00
4	Adem sari 48gr	Rp0.00	Rp0.00	Rp0.00	Rp3,835,013.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00
5	Vegeta herbal	Rp0.00	Rp0.00	Rp0.00	Rp3,307,500.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00
Total		Rp0.00	Rp26,270,980.00	Rp0.00	Rp7,142,513.00	Rp26,270,980.00	Rp0.00	Rp0.00	Rp26,270,980.00	Rp0.00

Tabel D.7.1 Tabel hasil perhitungan modal yang digunakan untuk pemesanan pada Berkat (lanjutan untuk periode 47-52)

No	Produk	Periode (minggu)					
		47	48	49	50	51	52
1	Laurier softcare maxi wing 10 pads	Rp0.00	Rp7,197,190.00	Rp0.00	Rp0.00	Rp7,197,190.00	Rp0.00
2	Laurier softcare maxi wing 30 pads	Rp0.00	Rp16,558,650.00	Rp0.00	Rp0.00	Rp16,558,650.00	Rp0.00
3	Laurier relax night 35 cm 12 pads	Rp0.00	Rp2,515,140.00	Rp0.00	Rp0.00	Rp2,515,140.00	Rp0.00
4	Adem sari 48gr	Rp3,835,013.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00
5	Vegeta herbal	Rp3,307,500.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00	Rp0.00
Total		Rp7,142,513.00	Rp26,270,980.00	Rp0.00	Rp0.00	Rp26,270,980.00	Rp0.00

Kemungkinan jumlah modal yang harus disiapkan oleh UD. Sahabat ketika melakukan pemesanan pada Berkat adalah: Rp33,413,493.00, Rp26,270,980.00, dan Rp7,142,513.00.

Semua nilai tersebut > jumlah minimum pemesanan yang ditetapkan Berkat sebesar Rp3,000,000.00.

Tabel D.8 Tabel pemesanan pada Sentosa Raya

No	Produk	Periode (minggu)																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Vegeta lychee	661							661							661							661			

Tabel D.8 Tabel pemesanan pada Sentosa Raya (lanjutan untuk periode 27-52)

N o	Pro duk	Periode (minggu)																											
		2 7	2 8	2 9	3 0	3 1	3 2	3 3	3 4	3 5	3 6	3 7	3 8	3 9	4 0	4 1	4 2	4 3	4 4	4 5	4 6	4 7	4 8	4 9	5 0	5 1	5 2		
1	Ve get a lyc hee			6 6 1								6 6 1								6 6 1									

Jumlah modal yang harus disediakan untuk melakukan pemesanan pada Sentosa Raya adalah $Rp6,570.00 \times 661 = Rp4,342,770.00$. Dengan kata lain pemesanan pada Sentosa Raya ini telah memenuhi jumlah minimum pemesanan yang telah ditetapkan sebesar Rp1,750,000.00.

LAMPIRAN E

Tabel E.1.1 Perhitungan *jointly order* Rajawali Sakti

No	Produk	P_i (Rp)	R_i (unit)	c_i (Rp)	$\bar{m}_i$	$\bar{\bar{m}}_i$	$\bar{n}_i$	n_i	$H_i \cdot R_i$	$\frac{c_i}{r}$
1	Laurier softcare regular 8 pads	2760	11802	13333,33	5,24	10,49	0,95	1	2931616,80	1333
2	Laurier softcare regular 20 pads	6390	10646	13333,33	7,58	15,15	0,66	1	6122514,60	1333
3	Laurier softcare regular wing 20 pads	8100	14531	13333,33	9,97	19,93	0,50	1	10593099,00	1333
4	Laurier softcare maxi 20 pads	6825	14185	13333,33	9,04	18,08	0,55	1	8713136,25	1333
5	Laurier relax night 30 cm 8 pads	6750	3595	13333,33	4,52	9,05	1,10	1	2183962,50	1333
6	You C-1000 lemon	4550	12124	13333,33	6,82	13,64	0,73	1	4964778,00	1333
7	Vegeta orange	7143,5	5280	13333,33	5,64	11,28	0,88	1	3394591,20	1333
8	Kratingdaeng SP 150ml	4004	11624	13333,33	6,27	12,53	0,80	1	4188824,64	1333

Tabel E.1.2 Perhitungan ROP Rajawali Sakti

	Laurier softcare regular 8 pads	Laurier softcare regular 20 pads	Laurier softcare regular wing 20 pads	Laurier softcare maxi 20 pads	Laurier relax night 30 cm 8 pads	You C-1000 lemon	Vegeta orange	Kratingdae SP 150ml
Frekuensi pemesanan/tahun (kali)	12.12	12.12	12.12	12.12	12.12	12.12	12.12	12.
Pembulatan frekuensi pemesanan/tahun (kali)	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.0
Jumlah pemesanan (unit)	983.50	887.17	1210.92	1182.08	299.58	1010.33	440.00	968.0
Pembulatan jumlah pemesanan (unit)	984.00	888.00	1211.00	1183.00	300.00	1011.00	440.00	969.0
ROP (unit)	97.00	87.50	119.43	116.59	29.55	99.65	43.40	95.

Tabel E.2.1 Perhitungan *jointly order* Megah Jaya

No	Produk	P_i (Rp)	R_i (unit)	c_i (Rp)	$\bar{m}_i$	$\overline{\bar{m}}_i$	$\bar{n}_i$	n_i	$H_i \cdot R_i$	$\frac{c_i}{n_i}$	m	
1	Laurier softcare regular wing 10 pads	4500	17935	10000.00	9.53	19.06	0.50	1	7263675	10000	11.18	
2	Laurier softcare maxi 10 pads	3240	16908	10000.00	7.85	15.70	0.61	1	4930373	10000		
3	Laurier relax night 27 cm 10 pads	6120	5281	10000.00	6.03	12.06	0.79	1	2908775	10000		
4	Laurier relax night 35 cm 6 pads	7280	3674	10000.00	5.49	10.97	0.87	1	2407205	10000		
Min order			Rp3,000,000.00									
C			Rp30,000.00									

Tabel E.2.2 Perhitungan ROP Megah Jaya

	Laurier softcare regular wing 10 pads	Laurier softcare maxi 10 pads	Laurier relax night 27 cm 10 pads	Laurier relax night 35 cm 6 pads
Frekuensi pemesanan/tahun (kali)	11.18	11.18	11.18	11.18
Pembulatan frekuensi pemesanan/tahun (kali)	11.00	11.00	11.00	11.00
Jumlah pemesanan (unit)	1630.45	1537.09	480.09	334.00
Pembulatan jumlah pemesanan (unit)	1631.00	1538.00	481.00	334.00
ROP (unit)	147.41	138.97	43.41	30.20

Tabel E.3.1 Perhitungan EOQ Sehat Sentosa

No	Produk	P_i (Rp)	R_i (unit)	EOQ (unit)
1	You C-1000 orange	4680	13728	932.27
Min order			Rp1,000,000.00	
C			Rp13,333.33	

Tabel E.3.2 Perhitungan ROP Sehat Sentosa

	You C-1000 orange
Frekuensi pemesanan/tahun (kali)	932.27
Pembulatan frekuensi pemesanan/tahun (kali)	933.00
Jumlah pemesanan (unit)	14.71
Pembulatan jumlah pemesanan (unit)	14.00
ROP (unit)	112.83

Tabel E.4.1 Perhitungan EOQ Kemuning

No	Produk	P_i (Rp)	R_i (unit)	EOQ (unit)
1	M150 150ml	2250	16913	1827.80
Min order			Rp1,500,000.00	
C			Rp20,000.00	

Tabel E.4.2 Perhitungan ROP Kemuning

	M150 150ml
Frekuensi pemesanan/tahun (kali)	1827.80
Pembulatan frekuensi pemesanan/tahun (kali)	1828.00
Jumlah pemesanan (unit)	9.25
Pembulatan jumlah pemesanan (unit)	9.00
ROP (unit)	139.01

Tabel E.5.1 Perhitungan EOQ Jaya Abadi

No	Produk	P_i (Rp)	R_i (unit)	EOQ (unit)
1	Laurier softcare regular 10 pads	3150	12066	1304.77
Min order			Rp1,500,000.00	
C			Rp20,000.00	

Tabel E.5.2 Perhitungan ROP Jaya Abadi

	Laurier softcare regular 10 pads
Frekuensi pemesanan/tahun (kali)	1304.77
Pembulatan frekuensi pemesanan/tahun (kali)	1305.00
Jumlah pemesanan (unit)	9.25
Pembulatan jumlah pemesanan (unit)	9.00
ROP (unit)	132.23

Tabel E.6.1 Perhitungan *jointly order* Makmur Sejahtera

N o	Produk	P_i (Rp)	R_i (unit)	c_i (Rp)	$\bar{m}_i$	$\overline{\bar{m}}_i$	$\bar{n}_i$	n_i	$H_i \cdot R_i$	$\frac{c_i}{n_i}$	m	m_i (kali)
1	Laurier softcare maxi wing 20 pads	7830	23542	10000.00	14.40	28.80	0.50	1	16590047	10000	15.16	15.17
2	Laurier relax night 27 cm 20 pads	11880	5055	10000.00	8.22	16.44	0.88	1	5404806	10000		15.17
3	Kratingdaeng	2880	21617	10000.00	8.37	16.74	0.86	1	5603126	10000		15.17
Min order			Rp3,000,000.00									
C			Rp30,000.00									

Tabel E.6.2 Perhitungan ROP Makmur Sejahtera

	Laurier softcare maxi wing 20 pads	Laurier relax night 27 cm 20 pads	Kratingdaeng
Frekuensi pemesanan/tahun (kali)	15.17	15.17	15.17
Pembulatan frekuensi pemesanan/tahun (kali)	15.00	15.00	15.00
Jumlah pemesanan (unit)	1569.47	337.00	1441.13
Pembulatan jumlah pemesanan (unit)	1570.00	337.00	1442.00
ROP (unit)	257.99	55.40	236.90

Tabel E.7.1 Perhitungan *jointly order* Berkat

N o	Produk	P_i (Rp)	R_i (unit)	c_i (Rp)	$\bar{m}_i$	$\overline{\bar{m}}_i$	$\bar{n}_i$	n_i	$H_i \cdot R_i$	$\frac{c_i}{n_i}$	m	m_i (kali)
1	Laurier softcare maxi wing 10 pads	5005	25874	10000.00	12.07	24.14	0.76	1	11654943	10000	18.58	18.58
2	Laurier softcare maxi wing 30 pads	13950	21361	10000.00	18.31	36.62	0.50	1	26818736	10000		18.58
3	Laurier relax night	14130	3198	10000.00	7.13	14.26	1.28	1	4066897	10000		18.58

	35 cm 12 pads											
4	Adem sari 48gr	6097	5657	10000.00	6.23	12.46	1.47	2	3104166	5000		9.29
5	Vegeta herbal	9450	3146	10000.00	5.78	11.57	1.58	2	2675673	5000		9.29
Min order		Rp3,000,000.00										
C		Rp30,000.00										

Tabel E.7.2 Perhitungan ROP Berkat

	Laurier softcare maxi wing 10 pads	Laurier softcare maxi wing 30 pads	Laurier relax niğ 35 cm 12 pads	
Frekuensi pemesanan/tahun (kali)	18.58	18.58	18.	
Pembulatan frekuensi pemesanan/tahun (kali)	18.00	18.00	18.	
Jumlah pemesanan (unit)	1437.44	1186.72	177.	
Pembulatan jumlah pemesanan (unit)	1438.00	1187.00	178.	
ROP (unit)	212.66	175.57	26.	

Tabel E.8.1 Perhitungan EOQ Sentosa Raya

No	Produk	P_i (Rp)	R_i (unit)	EOQ (unit)
1	Vegeta lychee	6570	4920	660.93
Min order		Rp1,750,000.00		
C		Rp26,250.00		

Tabel E.8.2 Perhitungan ROP Sentosa Raya

	Vegeta lychee
Frekuensi pemesanan/tahun (kali)	660.93
Pembulatan frekuensi pemesanan/tahun (kali)	661.00
Jumlah pemesanan (unit)	7.44
Pembulatan jumlah pemesanan (unit)	7.00
ROP (unit)	40.44

LAMPIRAN F

Tabel F.1 Tabel pemilihan pemasok dengan metode awal

Pemasok	Produk
Samudera	Laurier softcare regular wing 30 pads
	Laurier relax night 35 cm 12 pads
Rajawali Sakti	Laurier softcare regular 20 pads
	Laurier softcare regular wing 20 pads
	Laurier relax night 30 cm 8 pads
Megah Jaya	Laurier softcare regular wing 10 pads
	Laurier softcare maxi 10 pads
	Laurier relax night 27 cm 10 pads
	Laurier relax night 35 cm 6 pads
Sehat Sentosa	Laurier softcare maxi wing 30 pads
	You C-1000 orange
Kemuning	Laurier softcare regular 8 pads
	Laurier relax night 27 cm 20 pads
	Vegeta orange
	M150 150ml
Jaya Abadi	Laurier softcare regular 10 pads
	You C-1000 lemon
Makmur Sejahtera	Laurier softcare maxi wing 20 pads
	Kratingdaeng
Subur Abadi	Laurier softcare regular 30 pads
	Laurier softcare maxi 30 pads
	Larutan penyegar cap kaki 3 botol 200ml
Pemasok	Produk
Subur Abadi	Vegeta orange-manggo
	Kratingdaeng SP 150ml
Berkat	Laurier softcare maxi wing 10 pads
	Adem sari 48gr
	Vegeta herbal
Sentosa Raya	Laurier softcare maxi 20 pads
	Vegeta lychee

Saat ini UD. Sahabat melakukan pemesanan setiap 2 minggu. Pemilihan pemasok hanya didasarkan pada harga produk termurah yang ditawarkan. Jumlah pemesanan untuk setiap produk diperoleh dengan menambahkan permintaan tahunan dengan safety stock sebesar 30% dan kemudian membaginya dengan 26 (jumlah pemesanan dalam 1 tahun). Sebagai contoh adalah jumlah pesanan Laurier softcare regular 8 pads dapat dihitung sebagai berikut: $\frac{9078 + 30\% \cdot 9078}{26} = 453.92 \approx 454$.

Tabel F.2 Tabel pemesanan pada masing-masing pemasok dengan metode saat ini

N	Produk	Periode (minggu)
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Tabel F.2 Tabel pemesanan pada masing-masing pemasok dengan metode saat ini (lanjutan untuk periode 21-39)

[illegible]

Tabel F.2 Tabel pemesanan pada masing-masing pemasok dengan metode saat ini (lanjutan untuk periode 40-52)

[illegible]

	pads													
7	Laurier softcare regular wing 30 pads	547		547		547		547		547		547		
8	Laurier softcare maxi 10 pads	651		651		651		651		651		651		
9	Laurier softcare maxi 20 pads	546		546		546		546		546		546		
10	Laurier softcare maxi 30 pads	532		532		532		532		532		532		
11	Laurier softcare maxi wing 10 pads	996		996		996		996		996		996		
12	Laurier softcare maxi wing 20 pads	906		906		906		906		906		906		
13	Laurier softcare maxi wing 30 pads	822		822		822		822		822		822		
14	Laurier relax night 27 cm 10 pads	204		204		204		204		204		204		
15	Laurier relax night 27 cm 20 pads	195		195		195		195		195		195		
16	Laurier relax night 30 cm 8 pads	139		139		139		139		139		139		
17	Laurier relax night 35 cm 6 pads	142		142		142		142		142		142		
18	Laurier relax night 35 cm 12 pads	123		123		123		123		123		123		
19	You C-1000 lemon	467		467		467		467		467		467		
20	You C-1000 orange	528		528		528		528		528		528		
21	Larutan penyegar cap kaki 3 botol 200ml	126 6		126 6		126 6		126 6		126 6		126 6		
22	Adem sari 48gr	218		218		218		218		218		218		
23	Vegeta lychee	190		190		190		190		190		190		
24	Vegeta orange	204		204		204		204		204		204		
25	Vegeta orange-manggo	133		133		133		133		133		133		
26	Vegeta herbal	121		121		121		121		121		121		
No	Produk	Periode (minggu)												
		40	41	42	43	44	45	46	47	48	49	50	51	52
27	M150 150ml		651		651		651		651		651		651	
28	Kratingdaeng		832		832		832		832		832		832	
29	Kratingdaeng SP 150ml		448		448		448		448		448		448	

Tabel F.3 Tabel perhitungan biaya pesan per pesan selama 52 periode untuk metode saat ini

No	Pemasok	C	Frekuensi	Biaya pesan per tahun
1	Samudera	Rp50,000.00	26	Rp1,300,000.00
2	Rajawali Sakti	Rp40,000.00	26	Rp1,040,000.00
3	Megah Jaya	Rp30,000.00	26	Rp780,000.00
4	Sehat Sentosa	Rp10,000.00	26	Rp260,000.00
5	Kemuning	Rp15,000.00	26	Rp390,000.00
6	Jaya Abadi	Rp15,000.00	26	Rp390,000.00
7	Makmur Sejahtera	Rp30,000.00	26	Rp780,000.00
8	Subur Abadi	Rp25,000.00	26	Rp650,000.00
9	Berkat	Rp30,000.00	26	Rp780,000.00
10	Sentosa Raya	Rp17,500.00	26	Rp455,000.00
Total				Rp6,825,000.00

Tabel F.4 Tabel perhitungan biaya pesan per item selama 52 periode untuk metode saat ini

No	Produk	c_i	Frekuensi pesan per tahun	Biaya pesan per tahun
1	Laurier softcare regular 8 pads	Rp5,000.00	52	Rp130,000.00
2	Laurier softcare regular 10 pads	Rp5,000.00	52	Rp130,000.00

3	Laurier softcare regular 20 pads	Rp13,333.33	52	Rp346,666.67
4	Laurier softcare regular 30 pads	Rp8,333.33	52	Rp216,666.67
No	Produk	C_i	Frekuensi pesan per tahun	Biaya pesan per tahun
5	Laurier softcare regular wing 10 pads	Rp10,000.00	52	Rp260,000.00
6	Laurier softcare regular wing 20 pads	Rp13,333.33	52	Rp346,666.67
7	Laurier softcare regular wing 30 pads	Rp16,666.67	52	Rp433,333.33
8	Laurier softcare maxi 10 pads	Rp10,000.00	52	Rp260,000.00
9	Laurier softcare maxi 20 pads	Rp8,750.00	52	Rp227,500.00
10	Laurier softcare maxi 30 pads	Rp8,333.33	52	Rp216,666.67
11	Laurier softcare maxi wing 10 pads	Rp10,000.00	52	Rp260,000.00
12	Laurier softcare maxi wing 20 pads	Rp10,000.00	52	Rp260,000.00
13	Laurier softcare maxi wing 30 pads	Rp3,333.33	52	Rp86,666.67
14	Laurier relax night 27 cm 10 pads	Rp10,000.00	52	Rp260,000.00
15	Laurier relax night 27 cm 20 pads	Rp5,000.00	52	Rp130,000.00
16	Laurier relax night 30 cm 8 pads	Rp13,333.33	52	Rp346,666.67
17	Laurier relax night 35 cm 6 pads	Rp10,000.00	52	Rp260,000.00
18	Laurier relax night 35 cm 12 pads	Rp16,666.67	52	Rp433,333.33
19	You C-1000 lemon	Rp5,000.00	52	Rp130,000.00
20	You C-1000 orange	Rp3,333.33	52	Rp86,666.67
21	Larutan penyegar cap kaki 3 botol 200ml	Rp8,333.33	52	Rp216,666.67
22	Adem sari 48gr	Rp10,000.00	52	Rp260,000.00
23	Vegeta lychee	Rp8,750.00	52	Rp227,500.00
24	Vegeta orange	Rp5,000.00	52	Rp130,000.00
25	Vegeta orange-manggo	Rp8,333.33	52	Rp216,666.67
26	Vegeta herbal	Rp10,000.00	52	Rp260,000.00
27	M150 150ml	Rp5,000.00	52	Rp130,000.00
28	Kratingdaeng	Rp10,000.00	52	Rp260,000.00
29	Kratingdaeng SP 150ml	Rp8,333.33	52	Rp216,666.67
Total				Rp6,738,333.33

Tabel F.5 Tabel perhitungan biaya simpan tahunan untuk metode saat ini

No	Produk	R	H	n	Biaya simpan
1	Laurier softcare regular 8 pads	11802	Rp248,40	26	Rp56.377,25
2	Laurier softcare regular 10 pads	12066	Rp283,50	26	Rp65.782,90
3	Laurier softcare regular 20 pads	10646	Rp575,10	26	Rp117.740,67
4	Laurier softcare regular 30 pads	8539	Rp769,50	26	Rp126.360,78
5	Laurier softcare regular wing 10 pads	17935	Rp405,00	26	Rp139.686,06
6	Laurier softcare regular wing 20 pads	14531	Rp729,00	26	Rp203.713,44
7	Laurier softcare regular wing 30 pads	14207	Rp1.215,00	26	Rp331.952,02
8	Laurier softcare maxi 10 pads	16908	Rp291,60	26	Rp94.814,86
9	Laurier softcare maxi 20 pads	14185	Rp607,50	26	Rp165.718,99
10	Laurier softcare maxi 30 pads	13831	Rp891,00	26	Rp236.988,87
11	Laurier softcare maxi wing 10 pads	25874	Rp450,45	26	Rp224.133,53
12	Laurier softcare maxi wing 20 pads	23542	Rp704,70	26	Rp319.039,37
13	Laurier softcare maxi wing 30 pads	21361	Rp1.255,50	26	Rp515.744,91
14	Laurier relax night 27 cm 10 pads	5281	Rp550,80	26	Rp55.937,98
15	Laurier relax night 27 cm 20 pads	5055	Rp1.069,20	26	Rp103.938,58
16	Laurier relax night 30 cm 8 pads	3595	Rp607,50	26	Rp41.999,28
17	Laurier relax night 35 cm 6 pads	3674	Rp655,20	26	Rp46.292,40

18	Laurier relax night 35 cm 12 pads	3198	Rp1.271,70	26	Rp78.209,55
19	You C-1000 lemon	12124	Rp405,00	26	Rp94.427,31
20	You C-1000 orange	13728	Rp421,20	26	Rp111.196,80
21	Larutan penyegar cap kaki 3 botol 200ml	32892	Rp243,00	26	Rp153.706,85
22	Adem sari 48gr	5657	Rp548,73	26	Rp59.695,49
23	Vegeta lychee	4920	Rp591,30	26	Rp55.946,08
24	Vegeta orange	5280	Rp635,85	26	Rp64.563,23
25	Vegeta orange-manggo	3435	Rp599,40	26	Rp39.594,98
26	Vegeta herbal	3146	Rp850,50	26	Rp51.455,25
27	M150 150ml	16913	Rp202,50	26	Rp65.863,13
No	Produk	R	H	n	Biaya simpan
28	Kratingdaeng	21617	Rp259,20	26	Rp107.752,43
29	Kratingdaeng SP 150ml	11624	Rp356,40	26	Rp79.669,11
Total					Rp3.808.302,07

Tabel F.6 Tabel perhitungan biaya total metode saat ini

Total biaya pesan per pesan	Rp6,825,000.00
Total biaya pesan per item	Rp6,738,333.33
Total biaya simpan	Rp3,808,302.07
Total biaya tahunan	Rp17,371,635.41