

LAMPIRAN

LAMPIRAN 1:

Jika N adalah variabel acak diskret dibatasi atas sebuah himpunan bilangan non-negatif, dan untuk p_N merupakan fungsi densitas probabilitas, dinotasikan $Z(p_n) \equiv P(z)$ merupakan *transformasi-z* dari p_n , yang diperoleh dengan:

$$Z(p_N) = P(z) = \sum_{N=0}^{\infty} p_N z^N$$

dimana z ditentukan apabila konvergen.

Transformasi-z seperti pada fungsi pembangkit momen dapat digunakan untuk menentukan momen dari variabel acak N . Yang lebih penting lagi adalah untuk menentukan fungsi densitas probabilitas dai N .

LAMPIRAN 2:

Untuk variabel acak X yang mengandung hanya nilai bilangan non-negatif ($k = 0, 1, 2, \dots$), maka fungsi densitas probabilitas:

$$P\{X=k\} = \frac{\lambda^k e^{-\lambda}}{k!}, \quad k = 0, 1, 2, \dots$$

dimana $\lambda > 0$, disebut *Distribusi Poisson*.

Tabel 2

A c	7.10	7.20	7.30	7.40	7.50	8.00	8.50	9.00	9.50	10.00
0	001	001	001	001	001	000	000	000	000	000
1	007	006	006	005	005	003	002	001	001	000
2	027	025	024	022	020	014	009	006	004	003
3	077	072	067	063	059	042	030	021	015	010
4	164	156	147	140	132	101	074	055	040	029
5	288	276	264	253	241	191	150	116	089	067
6	435	420	406	392	378	313	256	207	165	130
7	584	569	554	539	525	453	386	324	269	220
8	716	703	689	676	662	593	523	456	392	333
9	820	810	799	788	776	717	653	587	522	458
10	894	887	879	871	862	816	763	706	645	583
11	942	937	932	926	921	888	849	803	752	697
12	970	967	964	961	957	936	919	876	836	792
13	988	984	982	980	978	966	949	926	898	864
14	994	993	992	991	990	983	973	959	940	917
15	999	997	996	996	995	992	986	978	967	951
16	999	999	999	998	998	996	993	989	982	973
17	1,000	1,000	999	999	999	998	997	995	991	986
18			1,000	1,000	999	999	999	998	996	993
19			1,000	1,000	1,000	1,000	999	999	998	997
20							1,000	1,000	999	998
21									1,000	999
22										1,000

A c	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	6.00
0	006	006	005	005	004	004	003	003	003	002
1	037	034	031	029	027	024	022	021	019	017
2	116	109	102	095	088	082	077	072	067	062
3	251	238	225	213	202	191	180	170	160	151
4	423	406	390	373	358	342	327	313	299	285
5	598	581	563	546	529	512	495	478	462	446
6	747	732	717	702	686	670	654	638	622	606
7	856	845	833	822	809	797	784	771	758	744
8	925	918	911	903	894	886	877	867	857	847
9	964	960	956	951	946	941	935	929	923	916
10	984	982	980	977	975	972	969	965	961	957
11	994	993	992	990	989	988	986	984	982	980
12	998	997	997	996	996	995	994	993	992	991
13	999	999	999	999	998	998	998	997	997	996
14	1,000	1,000	1,000	1,000	999	999	999	999	999	999
15					1,000	1,000	1,000	1,000	1,000	1,000

A c	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	7.00
0	002	002	002	002	002	001	001	001	001	001
1	016	015	013	012	011	010	009	009	008	007
2	058	054	050	046	043	040	037	034	032	030
3	143	134	126	119	112	105	099	093	087	082
4	272	259	247	235	224	213	202	192	182	173
5	430	414	399	384	369	355	341	327	314	301
6	590	574	558	542	527	511	495	480	465	450
7	750	716	702	687	673	658	643	628	614	599
8	837	826	815	803	792	780	767	755	742	729
9	909	902	894	886	877	867	860	850	840	830
10	953	949	944	939	933	927	921	915	908	901
11	978	975	972	969	966	963	959	955	951	947
12	990	989	987	985	984	982	980	978	976	973
13	996	995	995	994	993	992	991	990	989	987
14	998	998	998	997	997	997	996	996	995	994
15	999	999	999	999	999	999	998	998	998	998
16	1,000	1,000	1,000	1,000	1,000	999	999	999	999	999
17					1,000	1,000	1,000	1,000	1,000	1,000

Tabel 3

A	16	17	18	19	20	21	22	23	24	25
1	000	000	000	000	000	000	000	000	000	000
2	000	000	000	000	000	000	000	000	000	000
3	000	000	000	000	000	000	000	000	000	000
4	000	000	000	000	000	000	000	000	000	000
5	001	001	000	000	000	000	000	000	000	000
6	004	002	001	001	000	000	000	000	000	000
7	010	005	003	002	001	000	000	000	000	000
8	022	012	007	004	002	001	001	002	000	000
9	043	026	015	009	005	003	002	002	000	000
10	077	049	030	018	011	006	004	003	001	001
11	127	085	055	035	021	013	008	004	003	001
12	193	135	092	061	039	025	015	009	005	003
13	275	201	143	098	066	043	028	017	011	006
14	368	281	208	150	105	072	048	031	020	012
15	467	371	287	215	157	111	077	052	034	022
16	566	468	375	292	221	163	117	082	056	038
17	659	564	469	378	297	227	169	123	087	060
18	742	655	562	469	381	302	232	175	128	092
19	812	736	651	561	470	384	306	238	180	134
20	868	805	731	647	559	471	387	310	243	185
21	911	861	799	725	644	556	472	389	314	247
22	942	905	825	793	721	640	556	472	392	318
23	963	937	899	849	787	716	637	555	473	394
24	978	959	932	893	843	782	712	635	554	475
25	987	975	955	927	888	838	777	708	632	553
26	993	985	972	951	922	883	832	772	704	629
27	996	991	983	969	948	917	877	827	768	708
28	998	995	980	980	966	944	913	873	823	763
29	999	999	987	988	978	963	940	908	868	818
30	999	999	997	993	987	976	959	926	904	863
31	1,000	999	998	996	992	985	973	956	932	900
32	1,000	1,000	999	998	995	991	983	971	953	929
33	1,000	1,000	1,000	999	997	994	989	981	969	950
34	1,000	1,000	1,000	999	999	997	994	988	979	966
35	1,000	1,000	1,000	1,000	999	998	996	993	978	978
36	1,000	1,000	1,000	1,000	1,000	999	998	996	992	985
37	1,000	1,000	1,000	1,000	1,000	999	999	997	995	991
38	1,000	1,000	1,000	1,000	1,000	999	999	999	997	994
39	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	999	997
40	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	999	999
41	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	999
42	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	999
43	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	999

A	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0
0	000	000	000	000	000	000	000	000	000	000
1	000	000	000	000	000	000	000	000	000	000
2	002	001	001	001	000	000	000	000	000	000
3	007	005	005	002	001	000	000	000	000	000
4	021	015	011	008	005	004	003	002	001	001
5	050	038	028	020	015	011	008	006	004	003
6	102	079	060	046	035	026	019	014	010	008
7	179	142	114	099	070	055	041	032	024	016
8	279	232	181	155	125	095	070	062	049	037
9	397	341	289	242	201	166	135	109	088	070
10	521	460	402	347	297	252	211	176	145	118
11	639	579	520	462	406	353	304	260	220	185
12	742	689	633	576	519	463	409	358	311	268
13	825	781	733	682	628	573	518	464	413	363
14	888	854	815	772	725	675	623	570	518	466
15	932	907	878	844	806	764	718	669	619	568
16	960	944	924	899	869	835	798	756	711	664
17	978	968	954	937	916	890	861	827	790	749
18	988	982	974	963	948	930	908	883	853	819
19	994	991	986	979	969	957	942	923	901	875
20	997	995	992	988	983	975	965	952	936	917
21	999	998	996	994	991	986	980	971	960	947
22	999	999	998	997	995	992	989	983	976	967
23	1,000	1,000	999	999	998	996	994	991	986	981
24	1,000	1,000	1,000	999	999	998	997	995	992	989
25	1,000	1,000	1,000	1,000	999	998	997	997	996	994
26	1,000	1,000	1,000	1,000	1,000	999	999	999	998	997
27	1,000	1,000	1,000	1,000	1,000	1,000	999	999	999	999
28	1,000	1,000	1,000	1,000	1,000	1,000	1,000	999	999	999
29	1,000	1,000	1,000	1,000	1,000	1,000	1,000	999	999	999

LAMPIRAN 3:

Pemrograman linier dari masalah persediaan toko kamera halaman 49 menggunakan Sistem LINDO adalah sebagai berikut:

: LOOK ALL

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MIN      108000 Y00 + 115344 Y01 + 140832 Y02 + 186192 Y03 + 39744 Y10
        + 86832 Y11 + 132192 Y12 + 11232 Y20 + 78192 Y21 + 2592 Y30
SUBJECT TO
    2)    0.368 Y01 + 0.736 Y02 + 0.92 Y03 - 0.632 Y10 - 0.264 Y11
        - 0.08 Y12 - 0.264 Y20 - 0.08 Y21 - 0.08 Y30 =      0
    3)    - 0.368 Y01 - 0.368 Y02 - 0.184 Y03 + 0.632 Y10 + 0.632 Y11
        + 0.816 Y12 - 0.368 Y20 - 0.184 Y21 - 0.184 Y30 =      0
    4)    - 0.368 Y02 - 0.368 Y03 - 0.368 Y11 - 0.368 Y12 + 0.632 Y20
        + 0.632 Y21 - 0.368 Y30 =      0
    5)    - 0.368 Y03 - 0.368 Y12 - 0.368 Y21 + 0.632 Y30 =      0
    6)    Y00 + Y01 + Y02 + Y03 + Y10 + Y11 + Y12 + Y20 + Y21 + Y30
        =      1

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END

END

: TABLE

THE TABLEAU

ROW	(BASIS)	Y00	Y01	Y02	Y03	Y10
1	ART	.11E+06	.12E+06	.14E+06	.19E+06	.40E+05
2	ART	.000	.368	.736	.920	-.632
3	ART	.000	-.368	-.368	-.184	.632
4	ART	.000	.000	-.368	-.368	.000
5	ART	.000	.000	.000	-.368	.000
6	ART	1.000	1.000	1.000	1.000	1.000
ART	6 ART	-1.000	-1.000	-1.000	-1.000	-1.000

ROW	Y11	Y12	Y20	Y21	Y30	
1	.87E+05	.13E+06	.11E+05	.78E+05	.26E+04	.00
2	-.264	-.080	-.264	-.080	-.080	.000
3	.632	.816	-.368	-.184	-.184	.000
4	-.368	-.368	.632	.632	-.368	.000
5	.000	-.368	.000	-.368	.632	.000
6	1.000	1.000	1.000	1.000	1.000	1.000
ART	6	-1.000	-1.000	-1.000	-1.000	-1.000

LP OPTIMUM FOUND AT STEP 4

OBJECTIVE FUNCTION VALUE

1) 65513.320

VARIABLE	VALUE	REDUCED COST
Y00	.000000	42486.680000
Y01	.000000	29958.680000
Y02	.000000	12268.800000
Y03	.147712	.000000
Y10	.000000	8358.680000
Y11	.000000	12268.800000
Y12	.251712	.000000
Y20	.368000	.000000
Y21	.000000	9331.195000
Y30	.232576	.000000

ROW	SLACK OR SURPLUS	DUAL PRICES
2)	.000000	.000000
3)	.000000	54000.000000
4)	.000000	117331.200000
5)	.000000	183600.000000

--MORE--

NO. ITERATIONS= 4

DO RANGE(SENSITIVITY) ANALYSIS?

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: TABL

THE TABLEAU

ROW (BASIS)	Y00	Y01	Y02	Y03	Y10
1 ART	42486.680	29958.680	12268.800	.008	8358.680
2 ART	.000	.000	.000	.000	.000
3 Y03	.148	.516	.816	1.000	-.484
4 Y20	.368	.368	.000	.000	.368
5 Y30	.233	.233	.368	.000	.233
6 Y12	.252	-.116	-.184	.000	.884

ROW	Y11	Y12	Y20	Y21	Y30
1	.12E+05	.78E-02	.00	.93E+04	.39E-02
2	.000	.000	.000	.000	.000
3	-.184	.000	.000	.184	.000
4	.000	.000	1.000	1.000	.000
5	.368	.000	.000	-.368	1.000
6	.816	1.000	.000	.184	.000

LAMPIRAN 4:

Pemrograman linier untuk persediaan kamera halaman 52 menggunakan Sistem LINDO

WARNING: PROBLEM IS POORLY SCALED. THE UNITS OF THE ROWS AND VARIABLES SHOULD BE CHANGED SO THE COEFFICIENTS COVER A MUCH SMALLER RANGE.
: LOOK ALL

MIN 108000 Y00 + 115344 Y01 + 140832 Y02 + 186192 Y03 + 39744 Y10
+ 86832 Y11 + 132192 Y12 + 11232 Y20 + 78192 Y21 + 2592 Y30
SUBJECT TO
2) 0.0023 Y00 + 0.36945 Y01 + 0.73661 Y02 + 0.92018 Y03
- 0.63055 Y10 - 0.26339 Y11 - 0.07982 Y12 - 0.26339 Y20 - 0.07982 Y21
- 0.07982 Y30 = 0.25
3) - 0.36715 Y01 - 0.36715 Y02 - 0.18358 Y03 + 0.63285 Y10
+ 0.63285 Y11 + 0.81642 Y12 - 0.36715 Y20 - 0.18358 Y21 - 0.18358 Y21
= 0.25
4) - 0.36715 Y02 - 0.36715 Y03 - 0.36715 Y11 - 0.36715 Y12
+ 0.63285 Y20 + 0.63285 Y21 - 0.36715 Y30 = 0.25
5) - 0.36715 Y03 - 0.36715 Y12 - 0.36715 Y21 + 0.63285 Y30 = 0

END

+ 0.63285 Y20 + 0.63285 Y21 - 0.36715 Y30 = 0.25
5) - 0.36715 Y03 - 0.36715 Y12 - 0.36715 Y21 + 0.63285 Y30 = 0

END

: TABL

THE TABLEAU

ROW (BASIS)	Y00	Y01	Y02	Y03	Y10
1 ART	.11E+06	.12E+06	.14E+06	.19E+06	.40E+05
2 ART	.002	.369	.737	.920	-.631
3 ART	.000	-.367	-.367	-.184	.633
4 ART	.000	.000	-.367	-.367	.000
5 ART	.000	.000	.000	-.367	.000
ART 5 ART	-.002	-.002	-.002	-.002	-.002

ROW	Y11	Y12	Y20	Y21	Y30
1	.87E+05	.13E+06	.11E+05	.78E+05	.26E+04
2	-.263	-.080	-.263	-.080	-.080
3	.633	.816	-.367	-.184	-.184
4	-.367	-.367	.633	.633	-.367
5	.000	-.367	.000	-.367	.633
ART 5	-.002	-.002	-.002	-.002	-.002

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