

QUESTIONARIO TIPO 1 - ESERCIZI

Controllo delle scorte, MRP, Scheduling

2.5

Completare la programmazione nella tabella a seguire relativa allo schema rappresentativo del processo in linea?



FIN		LT=1						
Periodo		1	2	3	4	5	6	7
Fabbisogno lordo		0	0	0	0	0	70	30
Magazzino disponibile	20							
Fabbisogno netto								
Ordine pianificato								

SL2		LT=1						
Periodo		1	2	3	4	5	6	7
Fabbisogno lordo								
Magazzino disponibile	0							
Fabbisogno netto								
Ordine pianificato								

SL1		LT=1						
Periodo		1	2	3	4	5	6	7
Fabbisogno lordo								
Magazzino disponibile	10							
Fabbisogno netto								
Ordine pianificato								

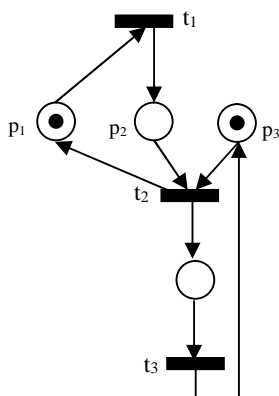
MAT		LT=2						
Periodo		1	2	3	4	5	6	7
Fabbisogno lordo								
Magazzino disponibile	50							
Fabbisogno netto								
Ordine pianificato								

2.5

Modellazione dei processi mediante Reti di Petri

2.0

Si calcolino i P-invarianti e i T-invarianti della rete riportata di seguito. Si fornisca un'analisi della rete relativamente alle sue proprietà.



2.0

5.0

5.0

1	2	3	4	5	6	7	8	9	10
31	31	30	26	27	18	17	16	30	37
9	3	9	4	0	4	9	3	6	2
11	12	13	14	15	16	17	18	19	20
37	26	25	12	11	15	21	22	23	23
8	4	9	7	9	8	2	6	7	1

Si costruisca un'idonea carta di controllo e si effettui un'analisi dei dati elaborati.

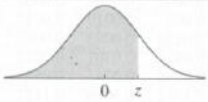
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0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
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Allegati:

- Tabella 1. Fattori per la costruzione di carte di controllo per variabili

Campioni	Carta \bar{x}						Carta S						Carta R							
	Fattori per i limiti			Fattori per il centro			Fattori per i limiti				Fattori per il centro		Fattori per i limiti							
	A	A_2	A_3	c_4	$1/c_4$		B_3	B_4	B_5	B_6	d_2	$1/d_2$	d_3	D_1	D_2	D_3	D_4			
2	2.121	1.881	2.659	0.7979	1.2533	0	3.267	0	2.606	1.128	0.8865	0.853	0	3.687	0	3.269				
3	1.732	1.023	1.954	0.8862	1.1284	0	2.568	0	2.276	1.693	0.5907	0.888	0	4.357	0	2.574				
4	1.5	0.729	1.628	0.9213	1.0854	0	2.266	0	2.088	2.059	0.4857	0.88	0	4.699	0	2.282				
5	1.342	0.577	1.427	0.94	1.0638	0	2.089	0	1.964	2.326	0.4299	0.864	0	4.918	0	2.114				
6	1.225	0.483	1.287	0.9515	1.0509	0.03	1.97	0.029	1.874	2.534	0.3946	0.848	0	5.078	0	2.004				
7	1.134	0.419	1.182	0.9594	1.0424	0.118	1.882	0.113	1.806	2.704	0.3698	0.833	0.205	5.203	0.076	1.924				
8	1.061	0.373	1.099	0.965	1.0362	0.185	1.815	0.179	1.751	2.847	0.3512	0.82	0.387	5.307	0.136	1.864				
9	1	0.337	1.032	0.9693	1.0317	0.239	1.761	0.232	1.707	2.97	0.3367	0.808	0.546	5.394	0.184	1.816				
10	0.949	0.308	0.975	0.9727	1.0281	0.284	1.716	0.276	1.669	3.078	0.3249	0.797	0.687	5.469	0.223	1.777				
11	0.905	0.285	0.927	0.9754	1.0253	0.321	1.679	0.313	1.637	3.173	0.3152	0.787	0.812	5.534	0.256	1.744				
12	0.866	0.266	0.886	0.9776	1.023	0.354	1.646	0.346	1.61	3.258	0.3069	0.778	0.924	5.592	0.284	1.716				
13	0.832	0.249	0.85	0.9794	1.021	0.382	1.618	0.374	1.585	3.336	0.2998	0.77	1.026	5.646	0.308	1.692				
14	0.802	0.235	0.817	0.981	1.0194	0.406	1.594	0.399	1.563	3.407	0.2935	0.762	1.121	5.693	0.329	1.671				
15	0.775	0.223	0.789	0.9823	1.018	0.428	1.572	0.421	1.544	3.472	0.288	0.755	1.207	5.737	0.348	1.652				
16	0.75	0.212	0.763	0.9835	1.0168	0.448	1.552	0.44	1.526	3.532	0.2831	0.749	1.285	5.779	0.364	1.636				
17	0.728	0.203	0.739	0.9845	1.0157	0.466	1.534	0.458	1.511	3.588	0.2787	0.743	1.359	5.817	0.379	1.621				
18	0.707	0.194	0.718	0.9854	1.0148	0.482	1.518	0.475	1.496	3.64	0.2747	0.738	1.426	5.854	0.392	1.608				
19	0.688	0.187	0.698	0.9862	1.014	0.497	1.503	0.49	1.483	3.689	0.2711	0.733	1.49	5.888	0.404	1.596				
20	0.671	0.18	0.68	0.9869	1.0132	0.51	1.49	0.504	1.47	3.735	0.2677	0.729	1.548	5.922	0.414	1.586				
21	0.655	0.173	0.663	0.9876	1.0126	0.523	1.477	0.516	1.459	3.778	0.2647	0.724	1.606	5.95	0.425	1.575				
22	0.64	0.167	0.648	0.988	1.012	0.534	1.466	0.528	1.448	3.82	0.262	0.72	1.628	5.976	0.434	1.566				

$$\Phi(z) = \int_{-\infty}^z \frac{1}{\sqrt{2\pi}} e^{-u^2/2} du$$


z	0.00	0.01	0.02	0.03	0.04	z
0	0.5	0.50399	0.50798	0.51197	0.51595	0
0.1	0.53983	0.54379	0.54776	0.55172	0.55567	0.1
0.2	0.57926	0.58317	0.58706	0.59095	0.59483	0.2
0.3	0.61791	0.62172	0.62551	0.6293	0.63307	0.3
0.4	0.65542	0.6591	0.66276	0.6664	0.67003	0.4
0.5	0.69146	0.69497	0.69847	0.70194	0.7054	0.5
0.6	0.72575	0.72907	0.73237	0.73565	0.73891	0.6
0.7	0.75803	0.76115	0.76424	0.7673	0.77035	0.7
0.8	0.78814	0.79103	0.79389	0.79673	0.79954	0.8
0.9	0.81594	0.81859	0.82121	0.82381	0.82639	0.9
1	0.84134	0.84375	0.84613	0.84849	0.85083	1
1.1	0.86433	0.8665	0.86864	0.87076	0.87285	1.1
1.2	0.88493	0.88686	0.88877	0.89065	0.89251	1.2
1.3	0.9032	0.9049	0.90658	0.90824	0.90988	1.3
1.4	0.91924	0.92073	0.92219	0.92364	0.92506	1.4
1.5	0.93319	0.93448	0.93574	0.93699	0.93822	1.5
1.6	0.9452	0.9463	0.94738	0.94845	0.9495	1.6
1.7	0.95543	0.95637	0.95728	0.95818	0.95907	1.7
1.8	0.96407	0.96485	0.96562	0.96637	0.96711	1.8
1.9	0.97128	0.97193	0.97257	0.9732	0.97381	1.9
2	0.97725	0.97778	0.97831	0.97882	0.97932	2
2.1	0.98214	0.98257	0.983	0.98341	0.98382	2.1
2.2	0.9861	0.98645	0.98679	0.98713	0.98745	2.2
2.3	0.98928	0.98956	0.98983	0.9901	0.99036	2.3
2.4	0.9918	0.99202	0.99224	0.99245	0.99266	2.4
2.5	0.99379	0.99396	0.99413	0.9943	0.99446	2.5
2.6	0.99534	0.99547	0.9956	0.99573	0.99585	2.6
2.7	0.99653	0.99664	0.99674	0.99683	0.99693	2.7
2.8	0.99744	0.99752	0.9976	0.99767	0.99774	2.8
2.9	0.99813	0.99819	0.99825	0.99831	0.99836	2.9
3	0.99865	0.99869	0.99874	0.99878	0.99882	3
3.1	0.99903	0.99906	0.9991	0.99913	0.99916	3.1
3.2	0.99931	0.99934	0.99936	0.99938	0.9994	3.2
3.3	0.99952	0.99953	0.99955	0.99957	0.99958	3.3
3.4	0.99966	0.99968	0.99969	0.9997	0.99971	3.4
3.5	0.99977	0.99978	0.99978	0.99979	0.9998	3.5
3.6	0.99984	0.99985	0.99985	0.99986	0.99986	3.6
3.7	0.99989	0.9999	0.9999	0.9999	0.99991	3.7
3.8	0.99993	0.99993	0.99993	0.99994	0.99994	3.8
3.9	0.99995	0.99995	0.99996	0.99996	0.99996	3.9

(Segue dalla pagina precedente.)

$$\Phi(z) = \int_{-\infty}^z \frac{1}{\sqrt{2\pi}} e^{-u^2/2} du$$

z	0.05	0.06	0.07	0.08	0.09	z
0	0.51994	0.52392	0.5279	0.53188	0.53586	0
0.1	0.55962	0.56356	0.56749	0.57142	0.57535	0.1
0.2	0.59871	0.60257	0.60642	0.61026	0.61409	0.2
0.3	0.63683	0.64058	0.64431	0.64803	0.65173	0.3
0.4	0.67364	0.67724	0.68082	0.68439	0.68793	0.4
0.5	0.70884	0.71226	0.71566	0.71904	0.7224	0.5
0.6	0.74215	0.74537	0.74857	0.75175	0.7549	0.6
0.7	0.77337	0.77637	0.77935	0.7823	0.78524	0.7
0.8	0.80234	0.80511	0.80785	0.81057	0.81327	0.8
0.9	0.82894	0.83147	0.83398	0.83646	0.83891	0.9
1	0.85314	0.85543	0.85769	0.85993	0.86214	1
1.1	0.87493	0.87698	0.879	0.881	0.88298	1.1
1.2	0.89435	0.89617	0.89796	0.89973	0.90147	1.2
1.3	0.91149	0.91309	0.91466	0.91621	0.91774	1.3
1.4	0.92647	0.92785	0.92922	0.93056	0.93189	1.4
1.5	0.93943	0.94062	0.94179	0.94295	0.94408	1.5
1.6	0.95053	0.95154	0.95254	0.95352	0.95449	1.6
1.7	0.95994	0.9608	0.96164	0.96246	0.96327	1.7
1.8	0.96784	0.96856	0.96926	0.96995	0.97062	1.8
1.9	0.97441	0.975	0.97558	0.97615	0.9767	1.9
2	0.97982	0.9803	0.98077	0.98124	0.98169	2
2.1	0.98422	0.98461	0.985	0.98537	0.98574	2.1
2.2	0.98778	0.98809	0.9884	0.9887	0.98899	2.2
2.3	0.99061	0.99086	0.99111	0.99134	0.99158	2.3
2.4	0.99286	0.99305	0.99324	0.99343	0.99361	2.4
2.5	0.99461	0.99477	0.99492	0.99506	0.9952	2.5
2.6	0.99598	0.99609	0.99621	0.99632	0.99643	2.6
2.7	0.99702	0.99711	0.9972	0.99728	0.99736	2.7
2.8	0.99781	0.99788	0.99795	0.99801	0.99807	2.8
2.9	0.99841	0.99846	0.99851	0.99856	0.99861	2.9
3	0.99886	0.99889	0.99893	0.99896	0.999	3
3.1	0.99918	0.99921	0.99924	0.99926	0.99929	3.1
3.2	0.99942	0.99944	0.99946	0.99948	0.9995	3.2
3.3	0.9996	0.99961	0.99962	0.99964	0.99965	3.3
3.4	0.99972	0.99973	0.99974	0.99975	0.99976	3.4
3.5	0.99981	0.99981	0.99982	0.99983	0.99983	3.5
3.6	0.99987	0.99987	0.99988	0.99988	0.99989	3.6
3.7	0.99991	0.99992	0.99992	0.99992	0.99992	3.7
3.8	0.99994	0.99994	0.99995	0.99995	0.99995	3.8
3.9	0.99996	0.99996	0.99996	0.99997	0.99997	3.9