

Arreglos de Multiplexores

Trabajo de Grupo

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UNION INTERNACIONAL DE TELECOMUNICACIONES



Trabajo de Grupo:

ARREGLOS DEL MULTIPLEXOR.

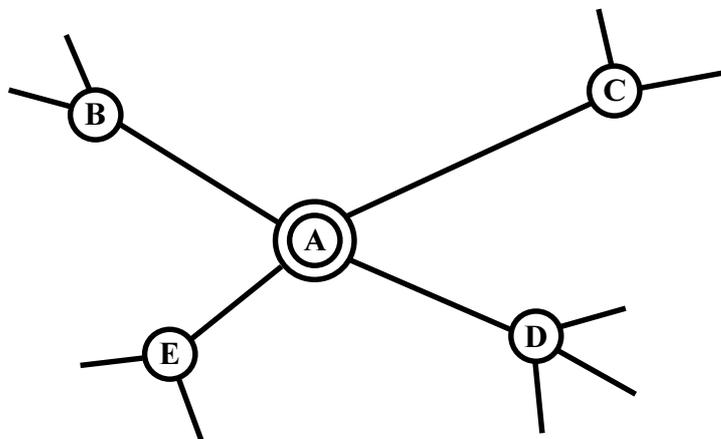
Calcule y dibuje el arreglo apropiado de multiplexores en el nodo A, bajo las condiciones siguientes:

- Se usa modulación por impulsos codificados (MIC; Pulse Code Modulation, PCM) de primer a cuarto orden. MIC de primer orden = 30 canales.
- Todos los sistemas deben ser completamente utilizados.
- Se prefiere MIC de más alto orden a MIC de más bajo orden.
- Ninguno de los sistemas termina en el nodo A.
- Los otros nodos están equipados con los multiplexores necesarios.

Use las Hojas de Trabajo del I - III para la planificación.

Tres casos diferentes deben ser calculados:

Entre	Número total de sistemas MIC de primer orden.		
	caso a)	caso b)	caso c)
B y C	6	7	70
B y D	3	5	25
B y E	7	7	40
C y D	16	17	37
C y E	4	9	13
D y E	4	4	28



Siga este procedimiento:

1. Calcule y llene la Hoja de Trabajo No. I.
2. Investigue si hay algunos sistemas de órdenes diferentes que puedan pasar al nodo "A" sin ser multiplexados. Anote esos sistemas en la columna "Sistemas que Pasan" en la Hoja de Trabajo II, por ejemplo: C/D, B/E, etc. y reduzca los números en la Hoja de Trabajo I, marcando con un círculo el número viejo y escribiendo el nuevo número encima del círculo.
3. Ahora llene la Hoja No. II, la tabla "Multiplexores", empezando con los casos obvios primero: sistemas entrantes del orden más alto y de orden más bajo.

Luego continúe con la distribución entre multiplexores. En caso de duda, entonces anótelos temporalmente en la tabla "Contabilidad" ejemplo B/C, D/E, etc. Por cada sistema tratado, encierre en un círculo los números correspondientes en la Hoja de Trabajo I.

Las anotaciones usadas en la tabla "Multiplexores" debe ser por ejemplo: B, C, etc. para sistemas "conmutados" dentro del mismo nivel de multiplexor, (Por ej. M4) resp. y el número del próximo multiplexor, por ejemplo M301, M402, etc. para sistemas "conmutados" en diferentes niveles del multiplexor. Para sistemas provenientes de otros nodos, use anotaciones en círculo, por ejemplo B, C, etc.

Ocasionalmente algunos casos "contabilizados" se vuelven obvios y entonces se mueven a la tabla "Multiplexores", y al mismo tiempo se encierra en un círculo la anotación en la tabla "Contabilidad".

4. Cuando la Hoja de Trabajo II está completa, es hora de dibujar en la Hoja de Trabajo III el arreglo del multiplexor correspondiente, conectando las entradas (inlets) conectando las entradas entre si (resp.) para marcar donde están los sistemas de entrada, escribiendo B, C, etc. sobre las correspondientes entradas vacías.

MULTIPLEXORES

"Contabilidad"

1920	480	480	120	120	30
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M4	M3	M2	30
			/
			/
			/
			/
M4	M3	M2	120
			/
			/
			/
			/
M4	M3	M2	480
			/
			/
			/
			/

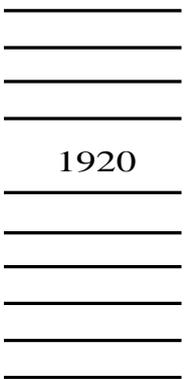
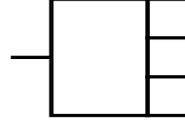
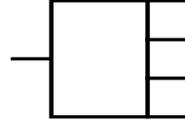
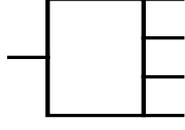
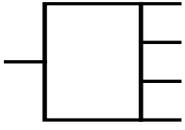
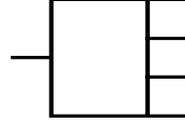
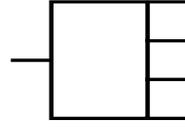
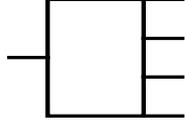
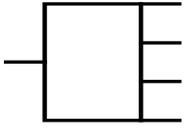
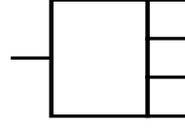
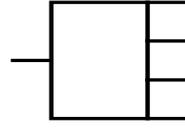
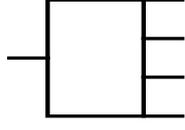
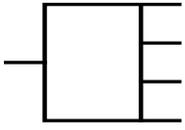
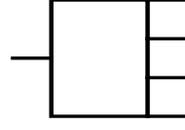
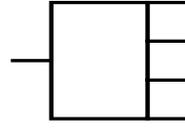
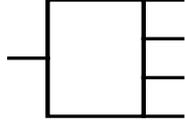
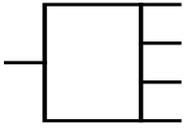
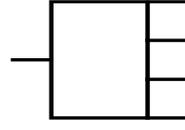
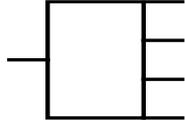
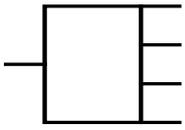
SYSTEMAS QUE PASAN

1920	480	120	30
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/	/	/	/
/	/	/	/
/	/	/	/
/	/	/	/

M4
1920 / 480

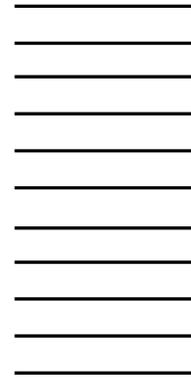
M3
480 / 120

M2
120 / 30

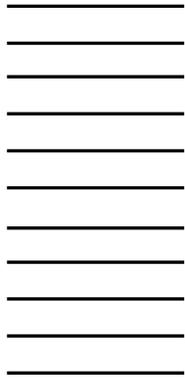


1920

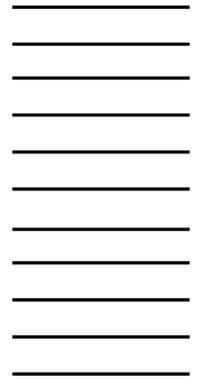
480



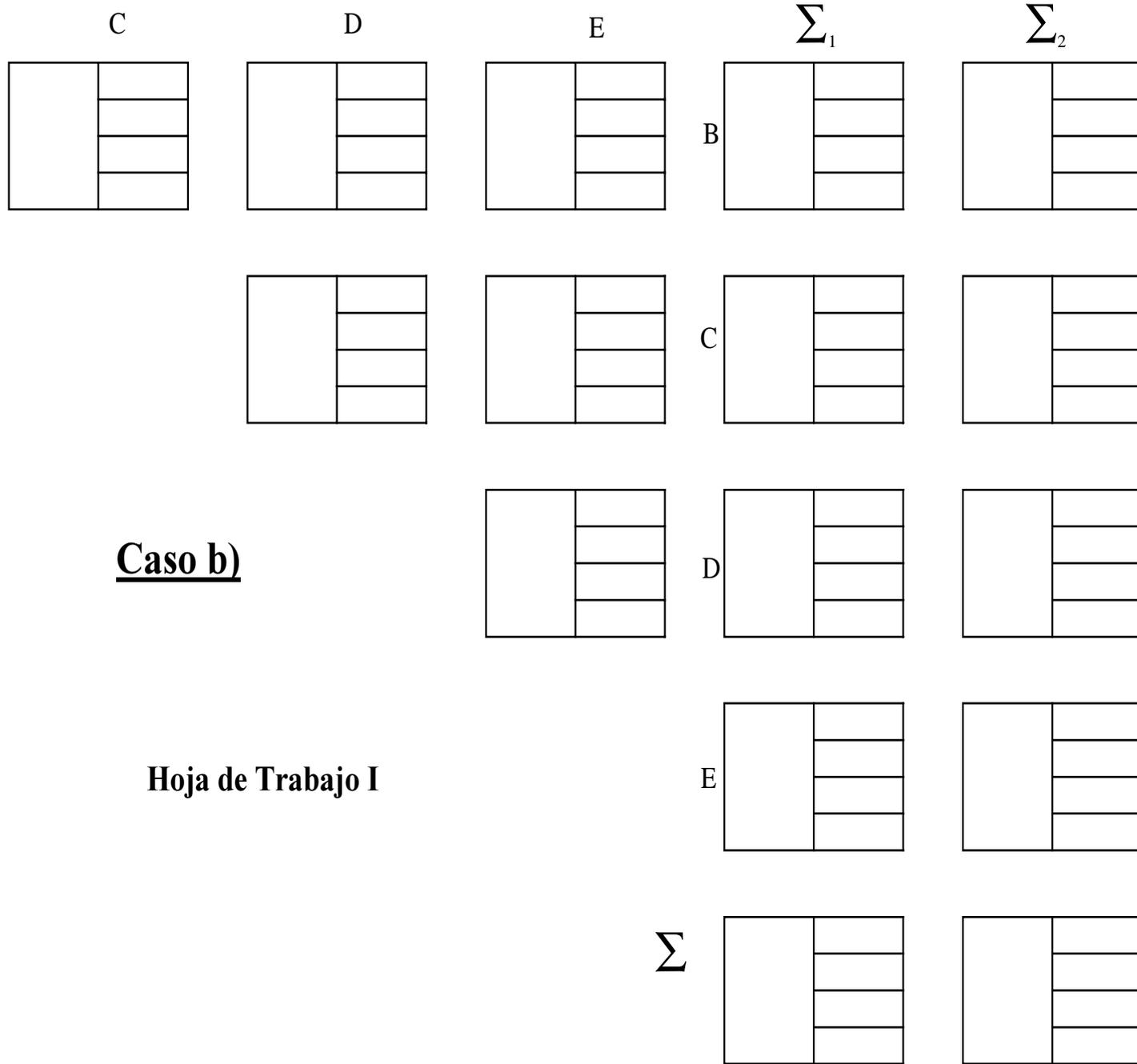
120



30

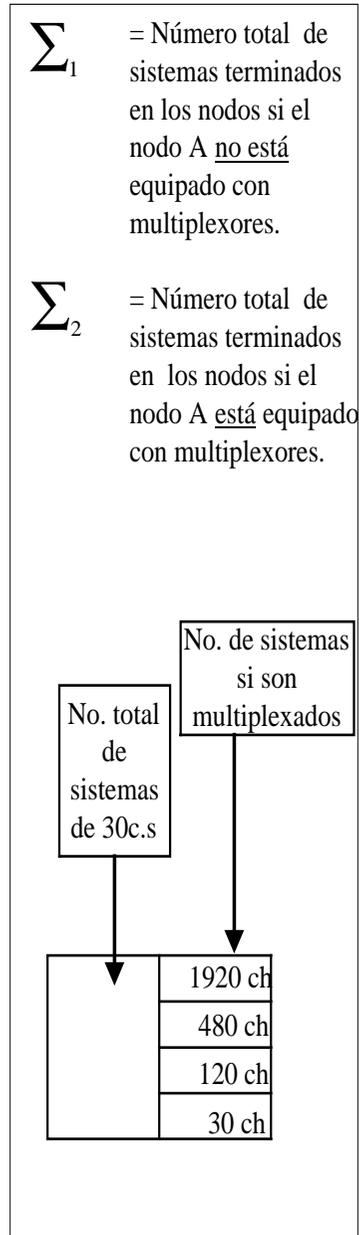


30



Caso b)

Hoja de Trabajo I



MULTIPLEXORES

"Contabilidad"

1920	480	480	120	120	30
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M4

M3

M2

30
/
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/
/

M4

M3

M2

120
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M4

M3

M2

M4

M3

M2

480
/
/
/
/

M4

M3

M2

M4

M3

M2

SYSTEMAS QUE PASAN

1920
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480
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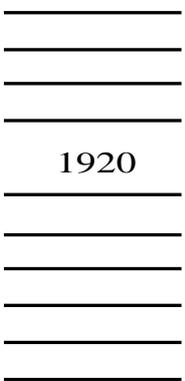
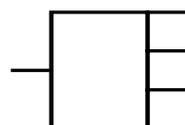
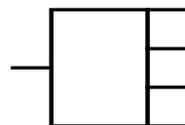
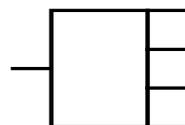
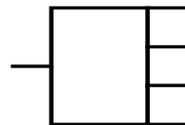
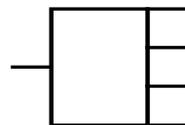
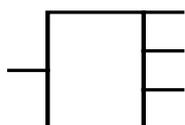
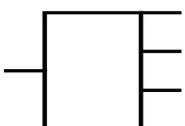
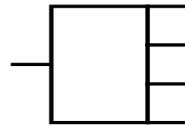
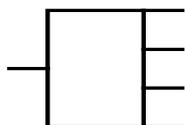
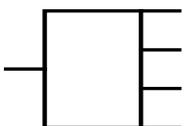
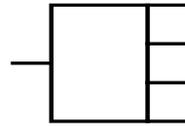
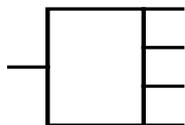
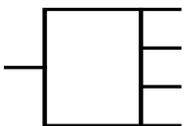
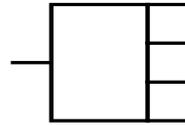
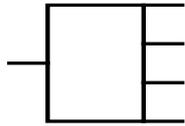
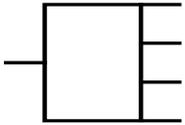
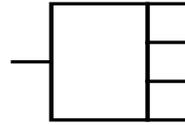
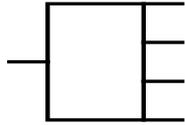
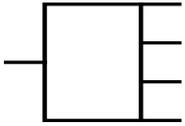
120
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30
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M4
1920 / 480

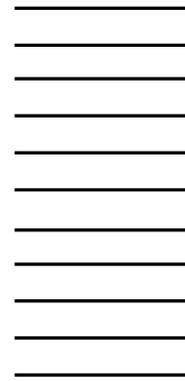
M3
480 / 120

M2
120 / 30

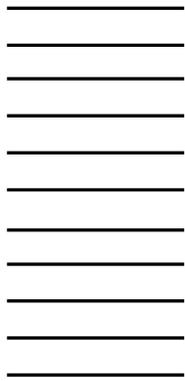


1920

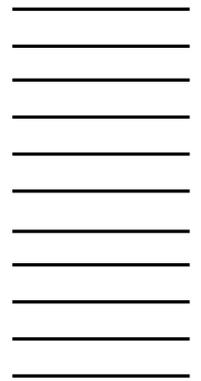
480



120



30



30

MULTIPLEXORES					
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"Contabilidad"

1920	480	480	120	120	30
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M4	M3	M2	30																																
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M4	M3	M2	/																																
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M4	M3	M2	480																																
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M4	M3	M2	/																																
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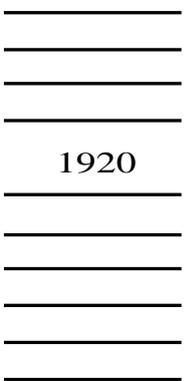
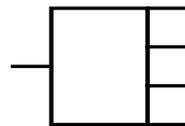
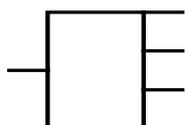
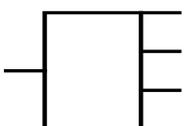
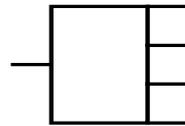
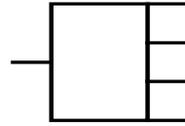
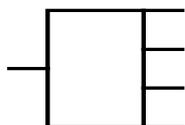
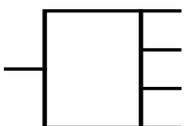
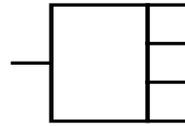
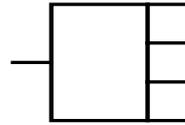
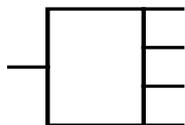
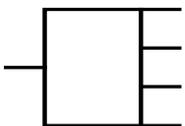
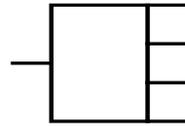
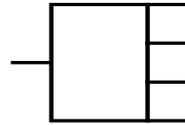
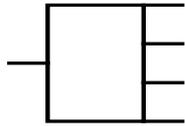
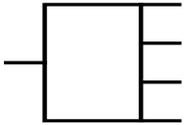
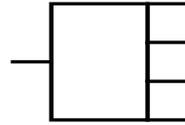
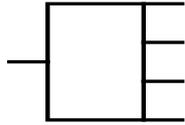
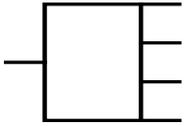
SYSTEMAS QUE PASAN			
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1920	480	120	30
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/	/	/	/

M4
1920 / 480

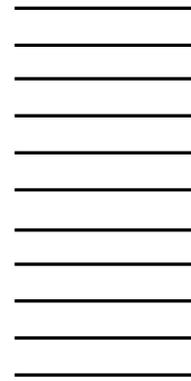
M3
480 / 120

M2
120 / 30

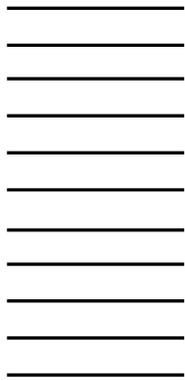


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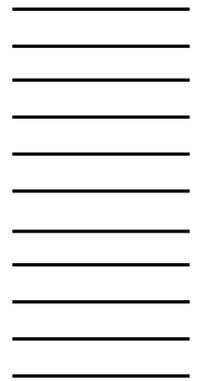
480



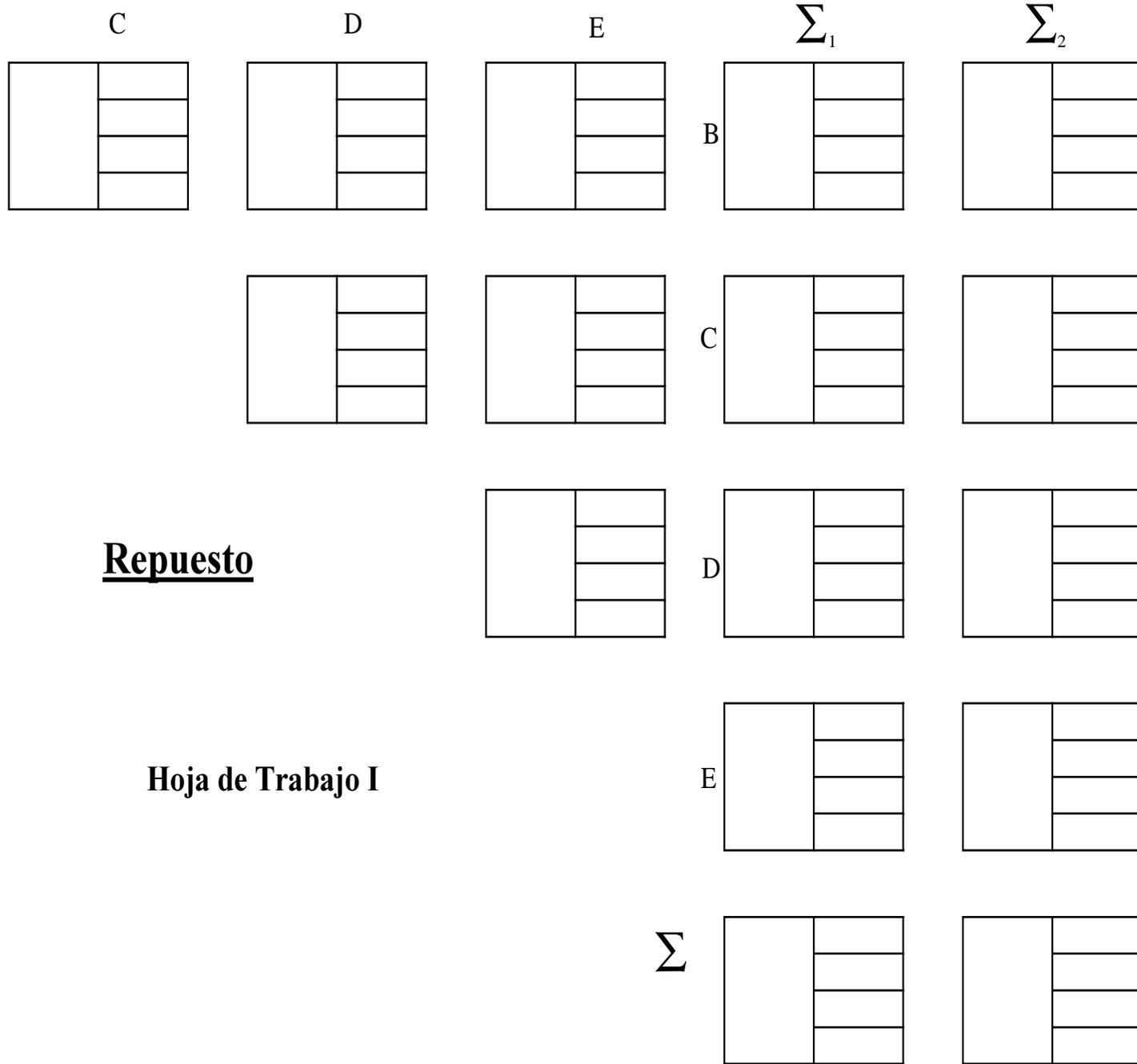
120



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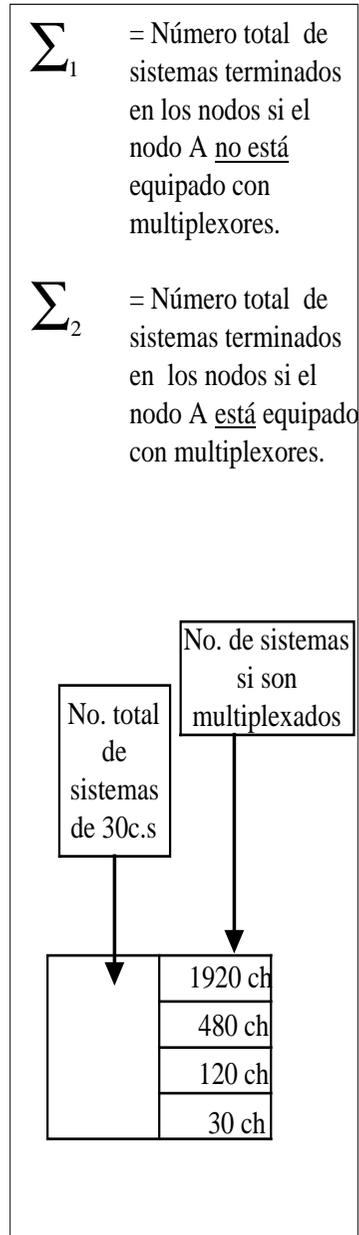


30



Repuesto

Hoja de Trabajo I



MULTIPLEXORES

1920	480	480	120	120	30
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"Contabilidad"

M4	M3	M2	30
			/
			/
			/
			/
M4	M3	M2	120
			/
			/
			/
			/
M4	M3	M2	480
			/
			/
			/
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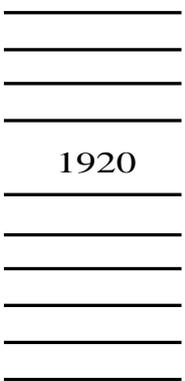
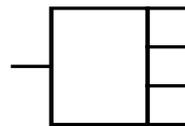
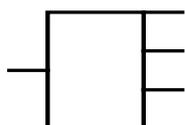
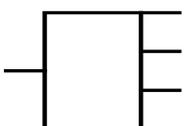
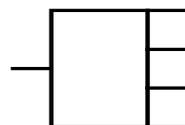
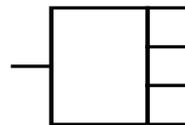
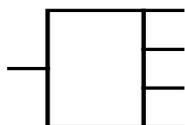
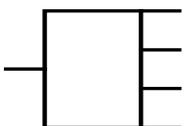
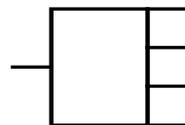
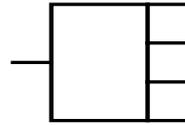
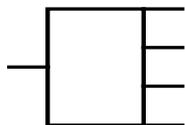
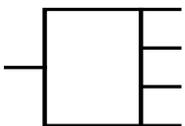
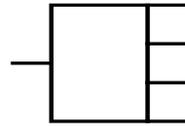
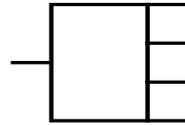
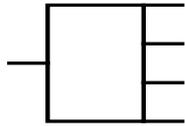
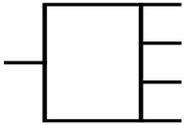
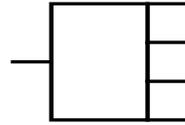
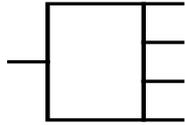
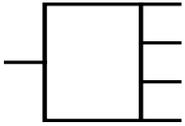
SYSTEMAS QUE PASAN

1920	480	120	30
/	/	/	/
/	/	/	/
/	/	/	/
/	/	/	/
/	/	/	/

M4
1920 / 480

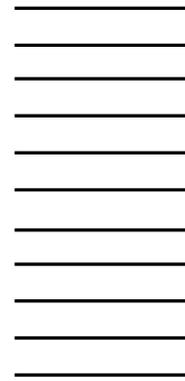
M3
480 / 120

M2
120 / 30

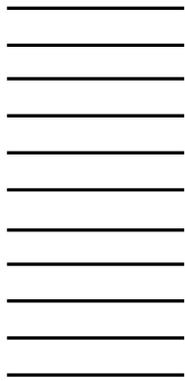


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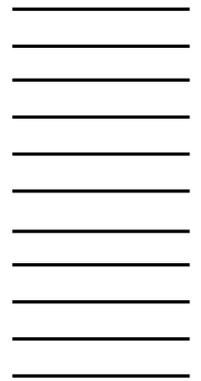
480



120



30



30