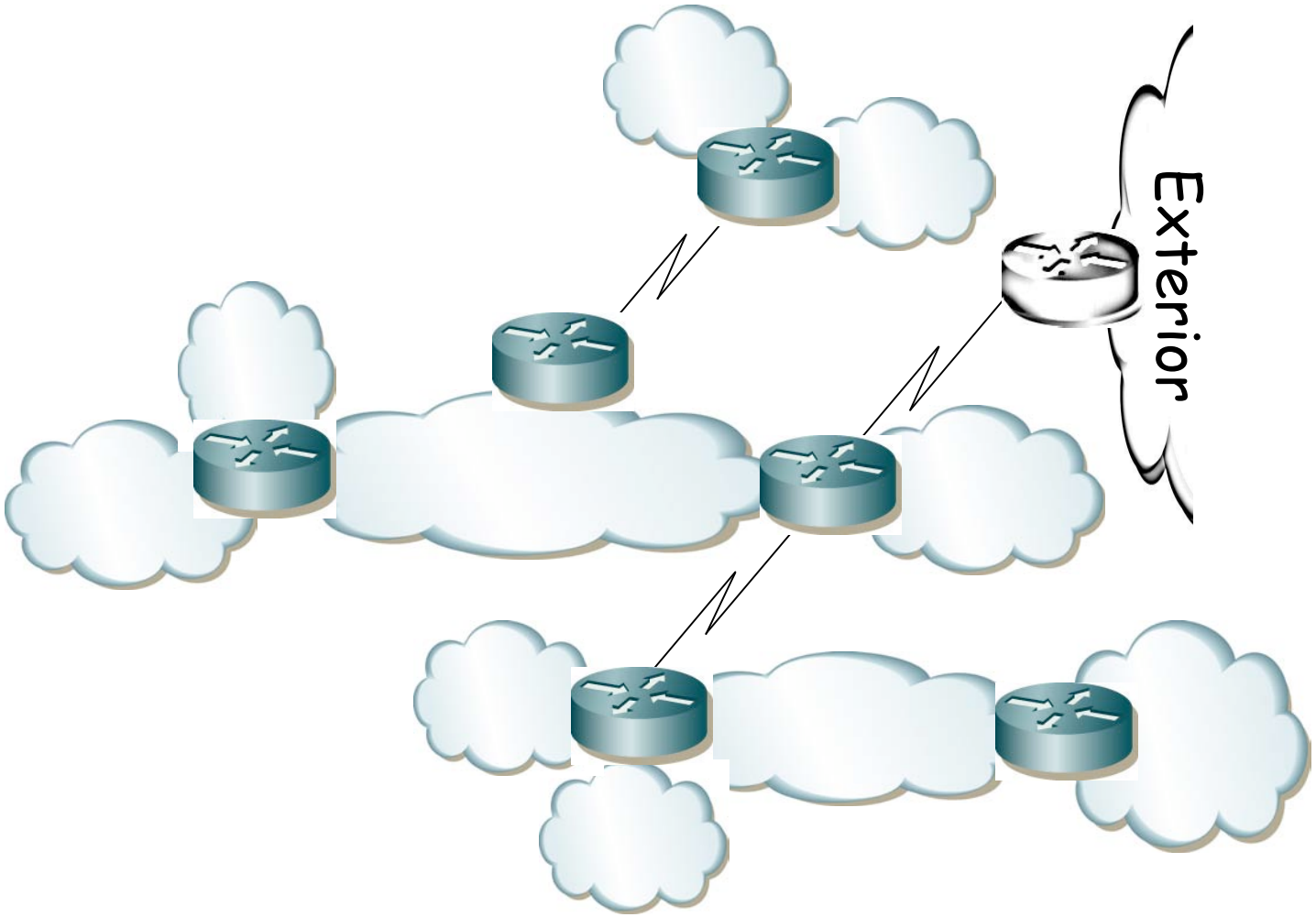
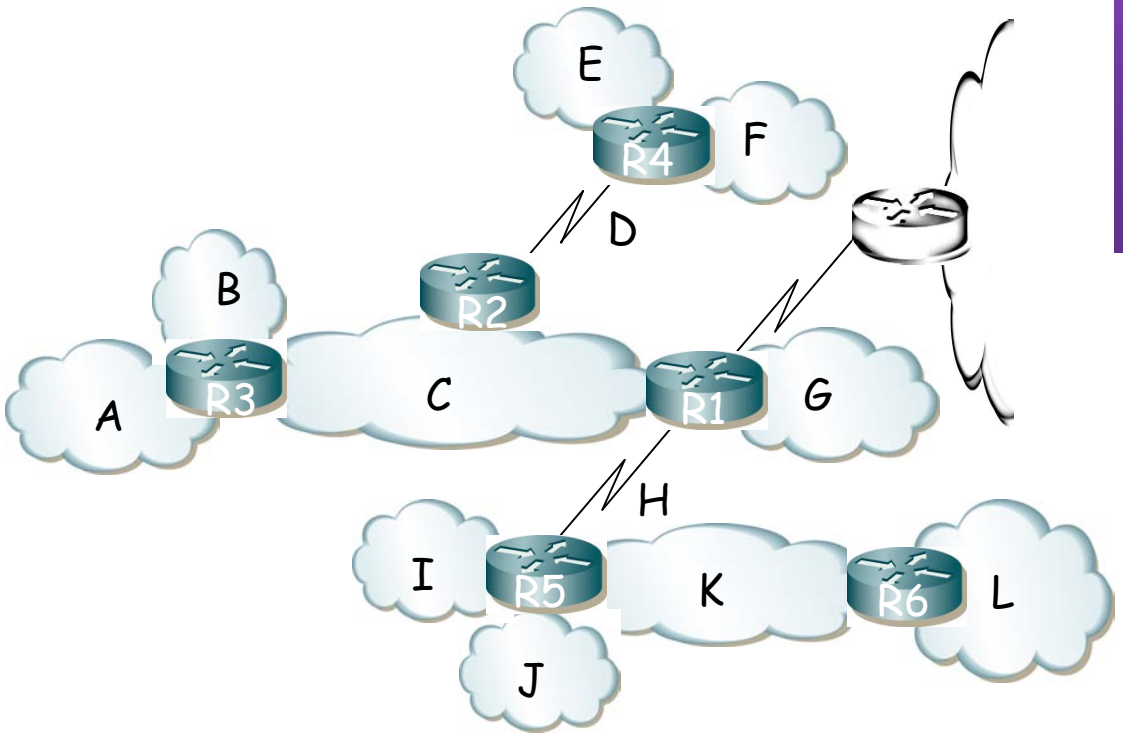
Ejemplo



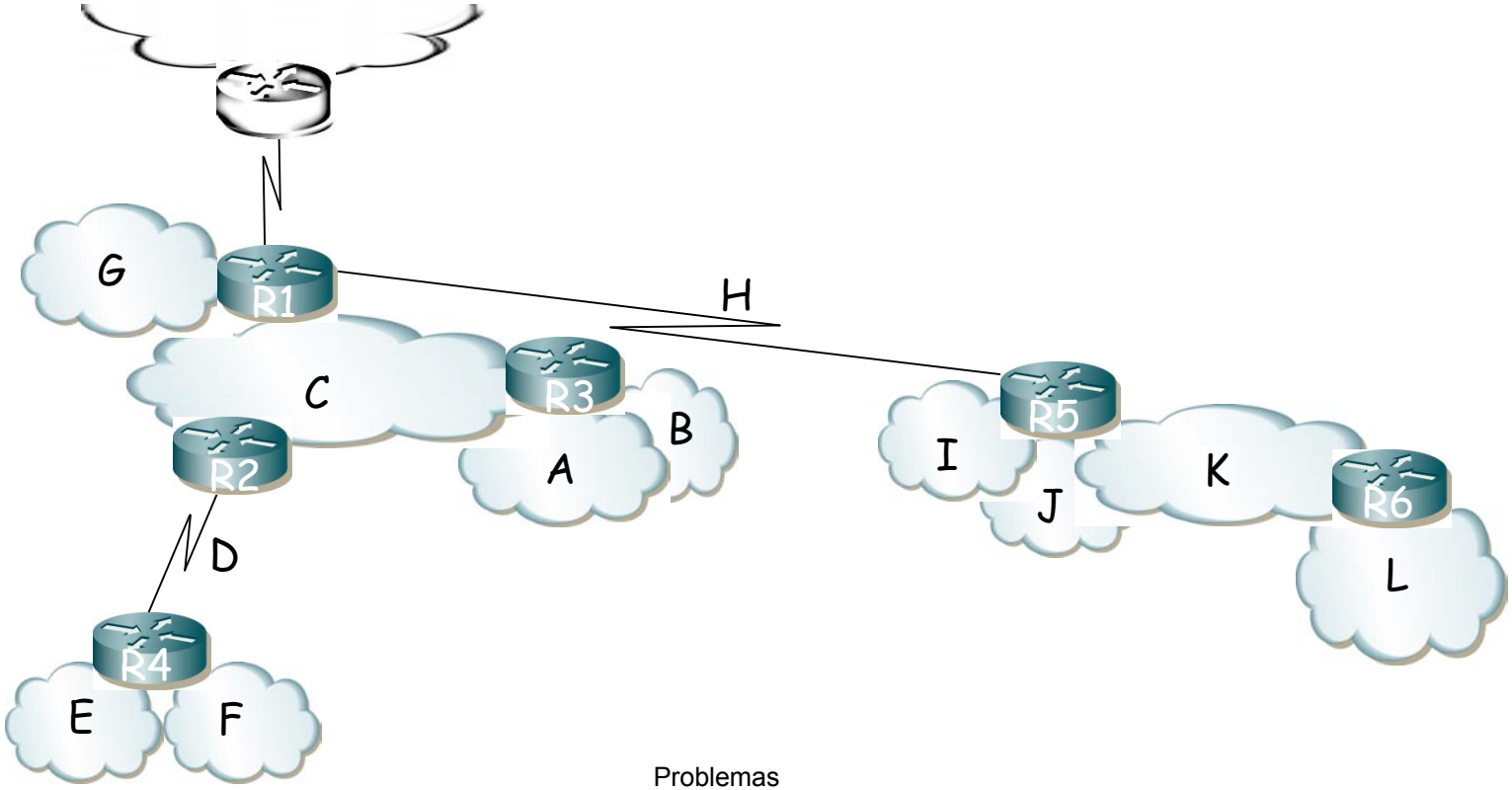
Ejemplo

- 12 Subredes
- Máximo 10 hosts por red
- Red 192.168.3.0/24
- Que se pueda resumir



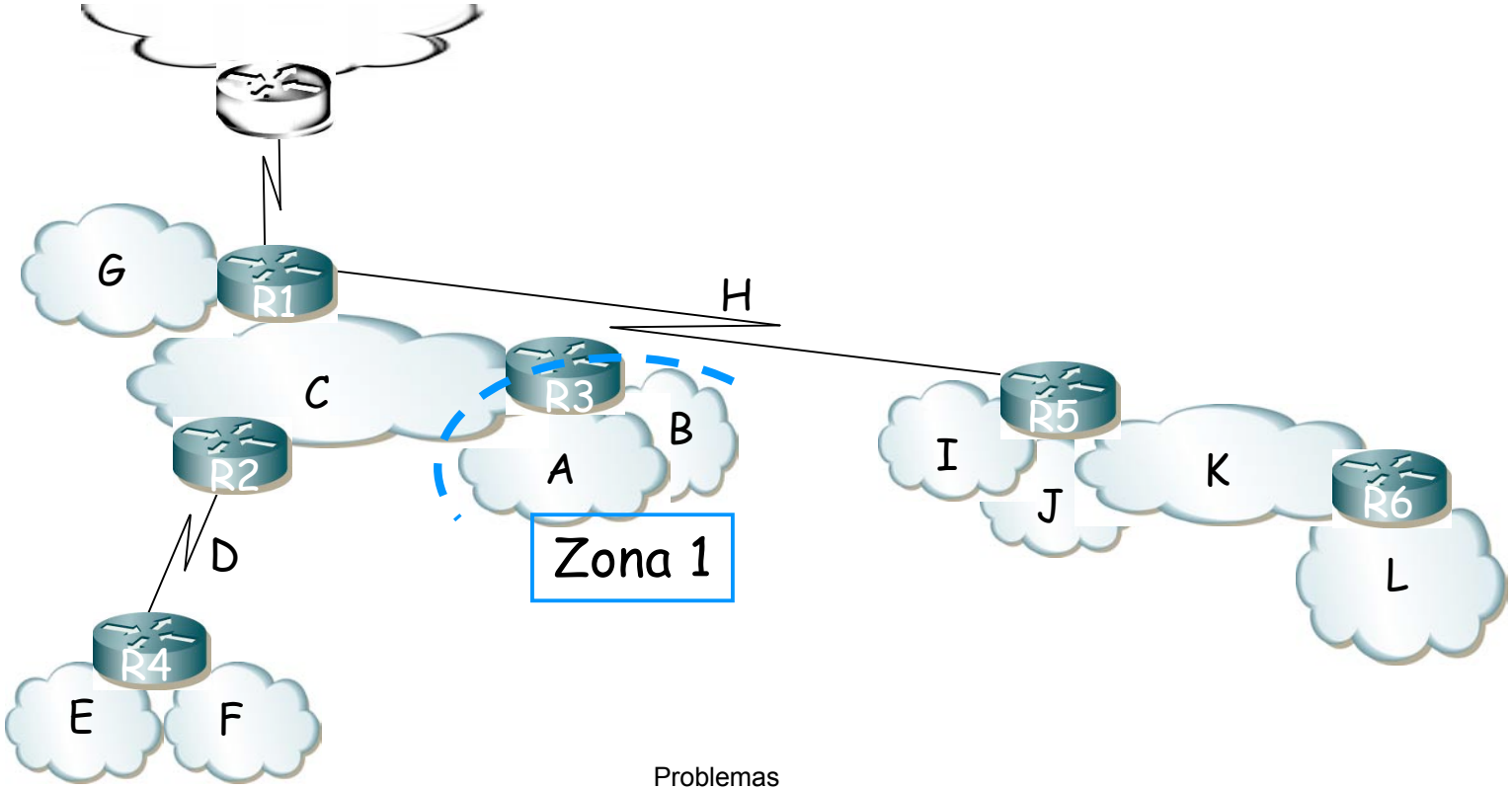
Ejemplo

- Redibujando la topología:



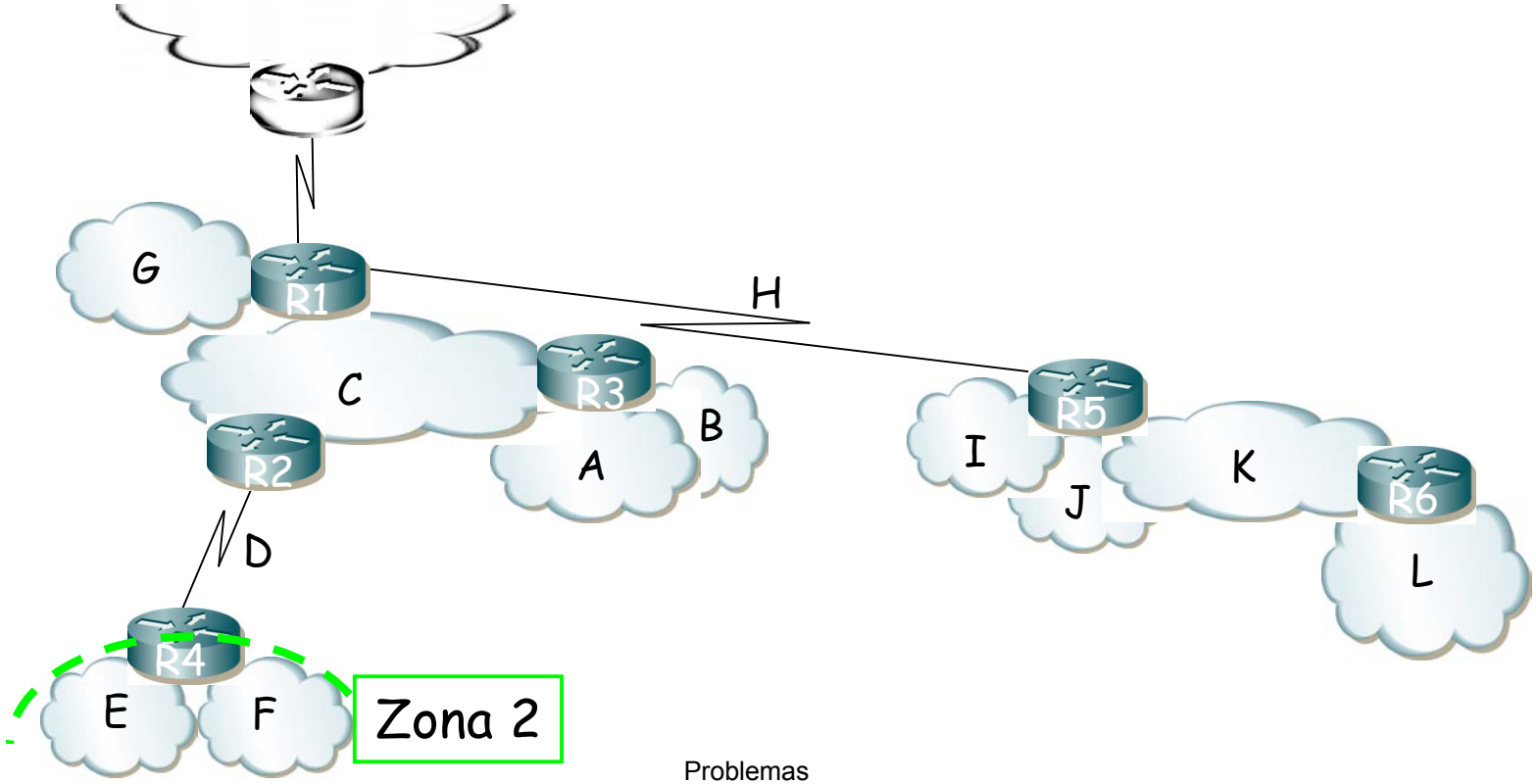
Ejemplo

A	192.168.3	.	[000]	[0]	[0000]	= 192.168.3.0 /28	Zona 1: 192.168.3.0 /27
B	192.168.3	.	[000]	[1]	[0000]	= 192.168.3.16 /28	



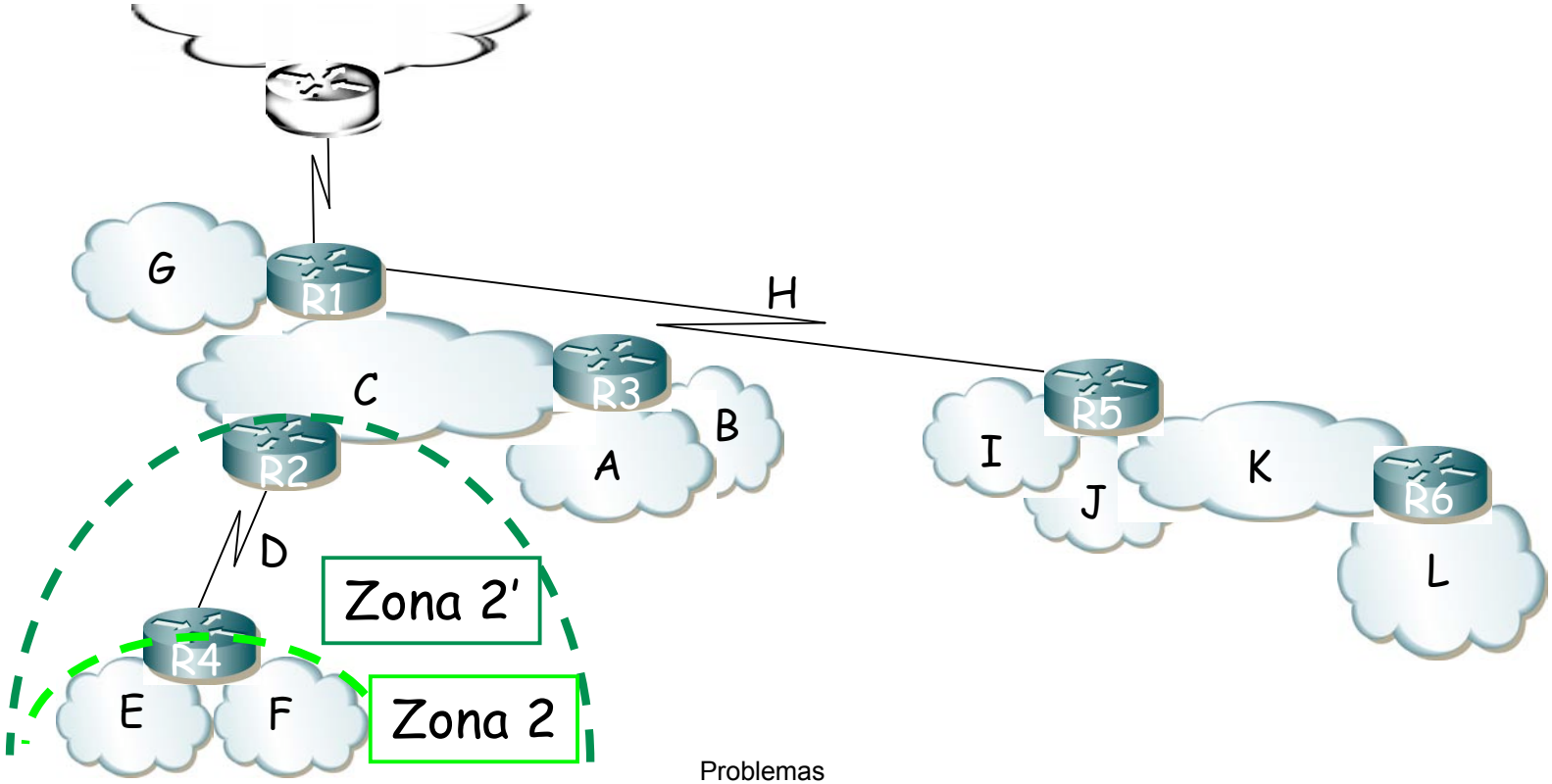
Ejemplo

E	192.168.3	.	[010]	[0]	[0000]	= 192.168.3.64 /28	Zona 2: 192.168.3.64 /27
F	192.168.3	.	[010]	[1]	[0000]	= 192.168.3.80 /28	



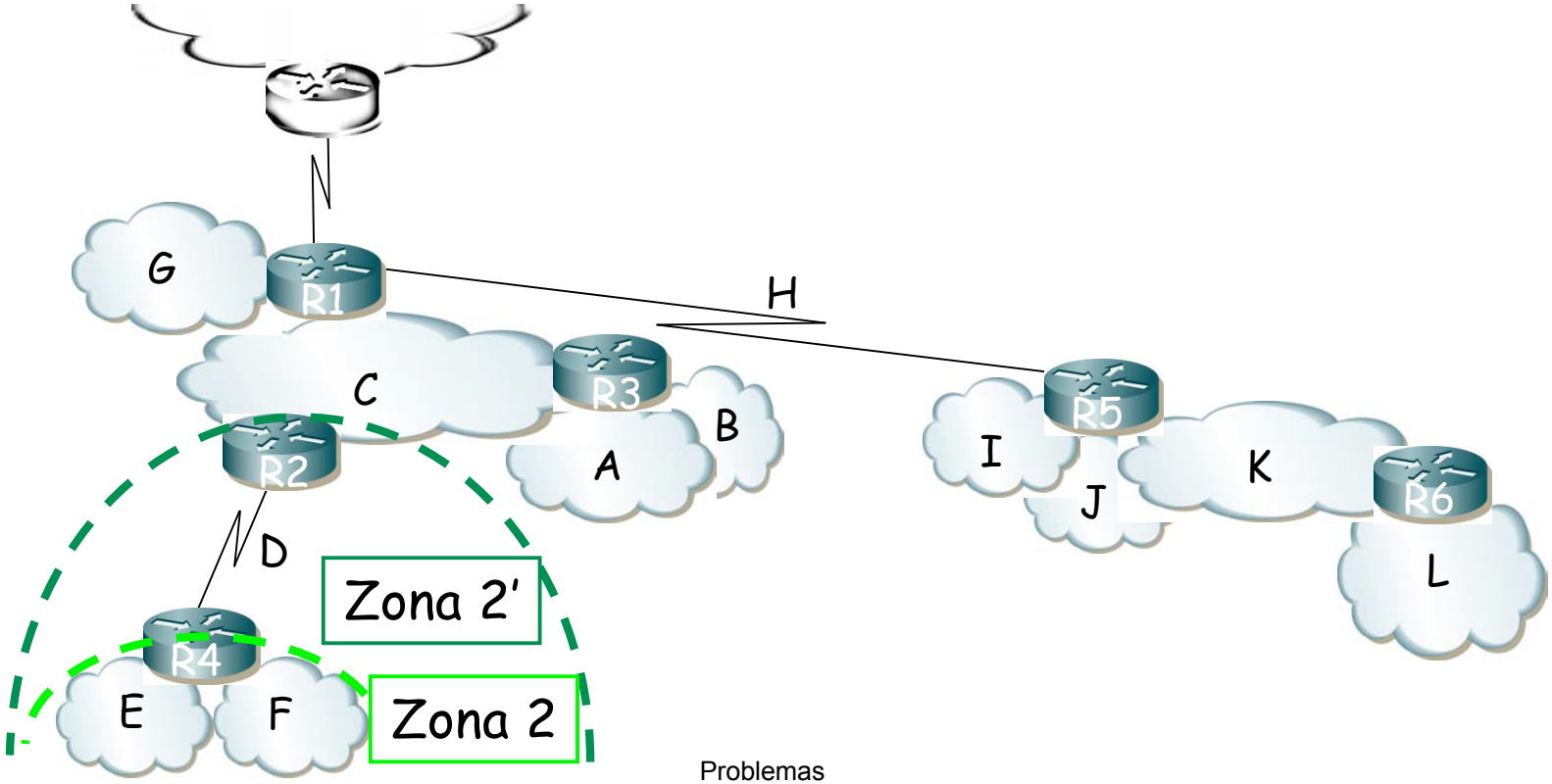
Ejemplo

Zona 2 | 192.168.3 | . | [010] | [00000] | = 192.168.3.64 /27



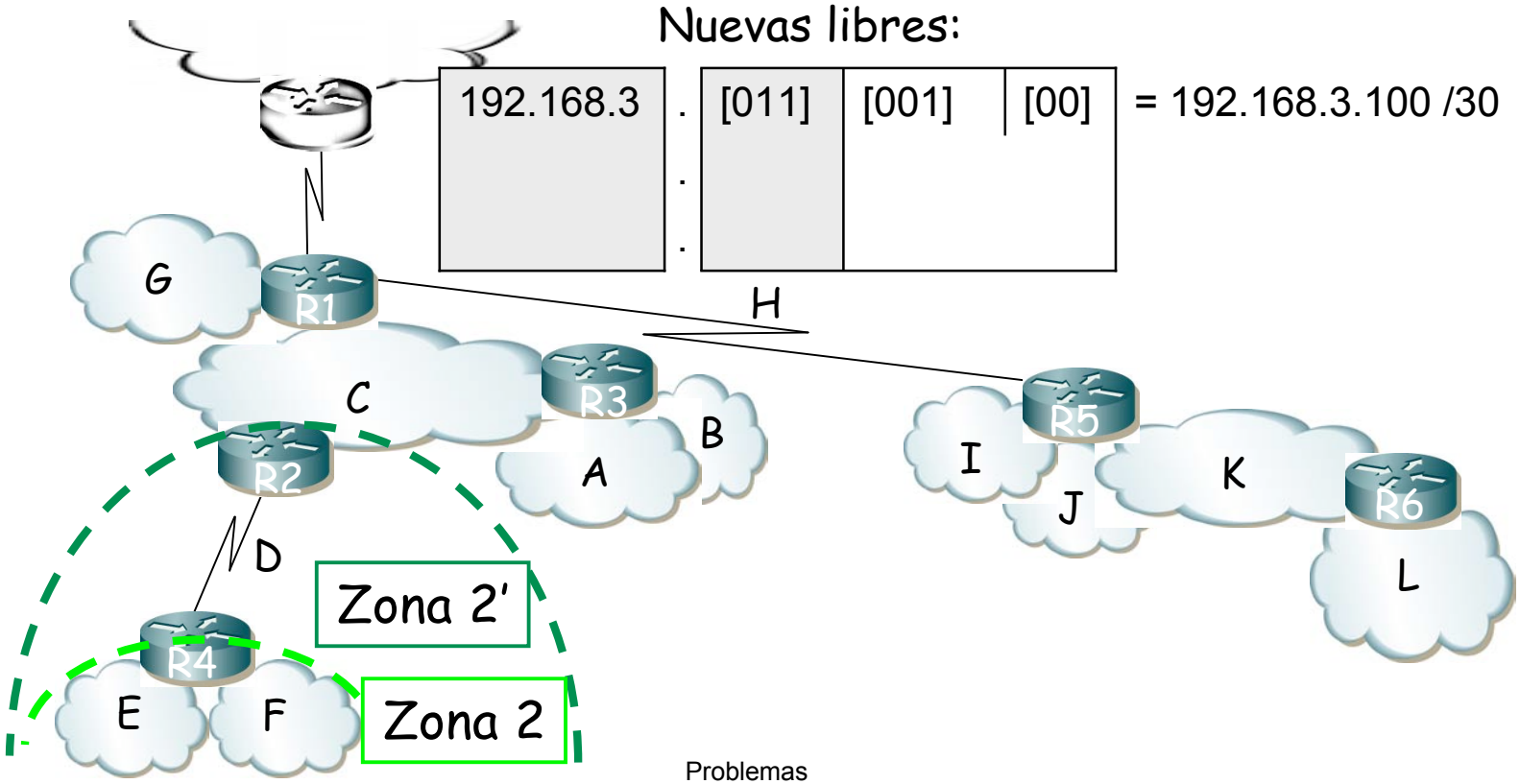
Ejemplo

Zona 2	192.168.3	.	[010]	[00000]	= 192.168.3.64 /27
D	192.168.3	.	[011]	[000] [00]	= 192.168.3.96 /30



Ejemplo

Zona 2	192.168.3	.	[010]	[00000]	= 192.168.3.64 /27
D	192.168.3	.	[011]	[000] [00]	= 192.168.3.96 /30

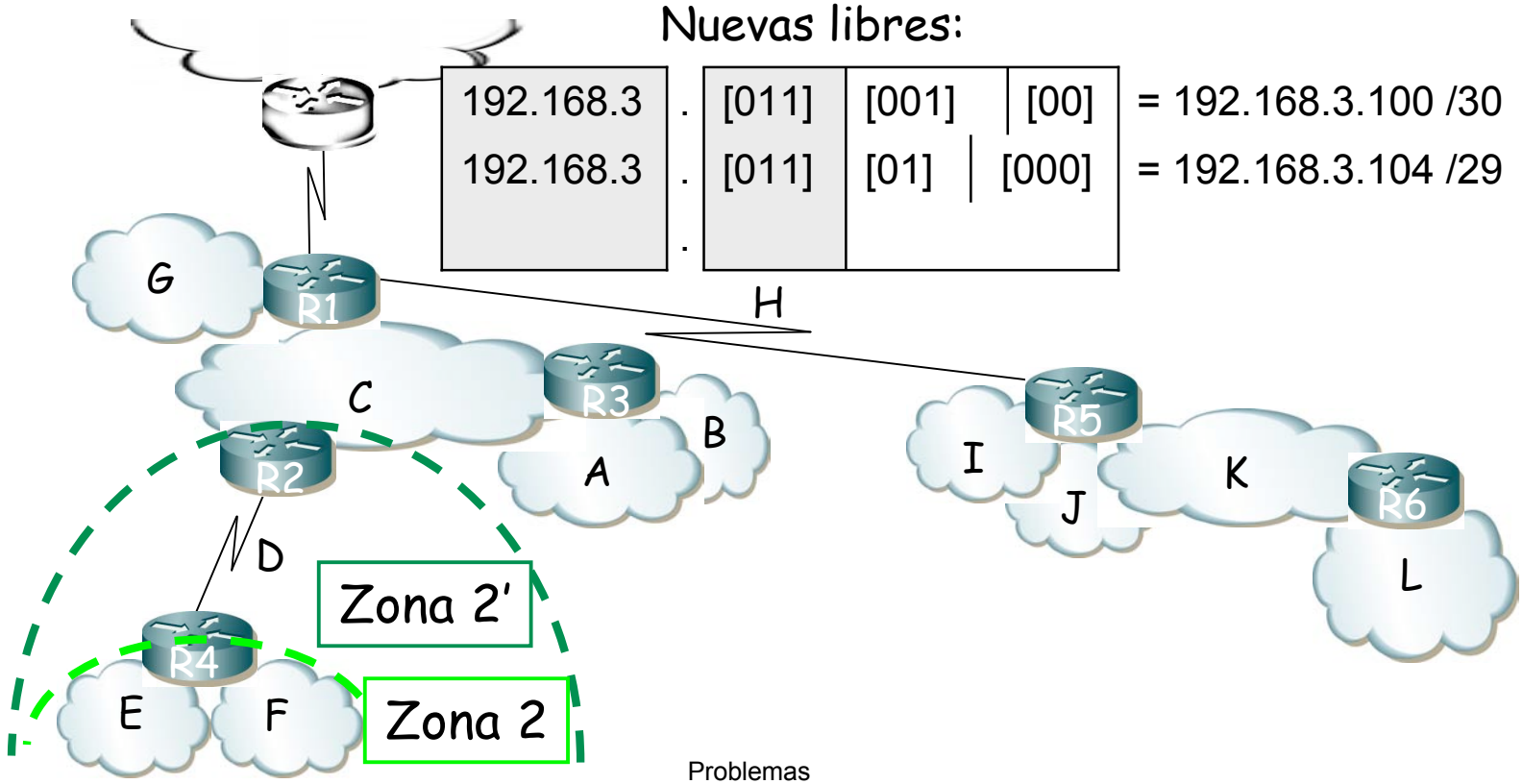


Ejemplo

Zona 2	192.168.3	.	[010]	[00000]	= 192.168.3.64 /27
D	192.168.3	.	[011]	[000] [00]	= 192.168.3.96 /30

Nuevas libres:

192.168.3	.	[011]	[001] [00]	= 192.168.3.100 /30
192.168.3	.	[011]	[01] [000]	= 192.168.3.104 /29
	.			

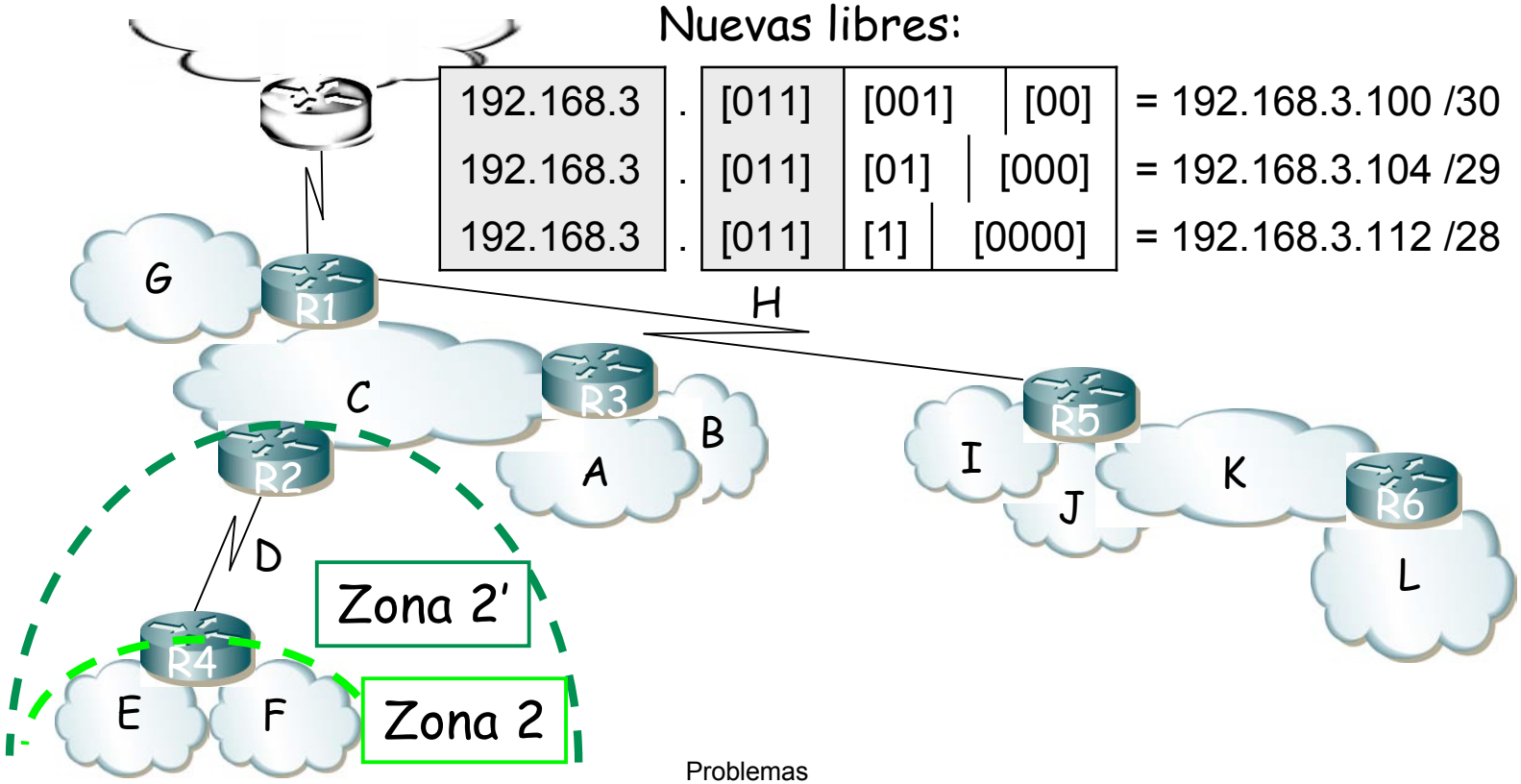


Ejemplo

Zona 2	192.168.3	.	[010]	[00000]	= 192.168.3.64 /27
D	192.168.3	.	[011]	[000] [00]	= 192.168.3.96 /30

Nuevas libres:

192.168.3	.	[011]	[001] [00]	= 192.168.3.100 /30
192.168.3	.	[011]	[01] [000]	= 192.168.3.104 /29
192.168.3	.	[011]	[1] [0000]	= 192.168.3.112 /28



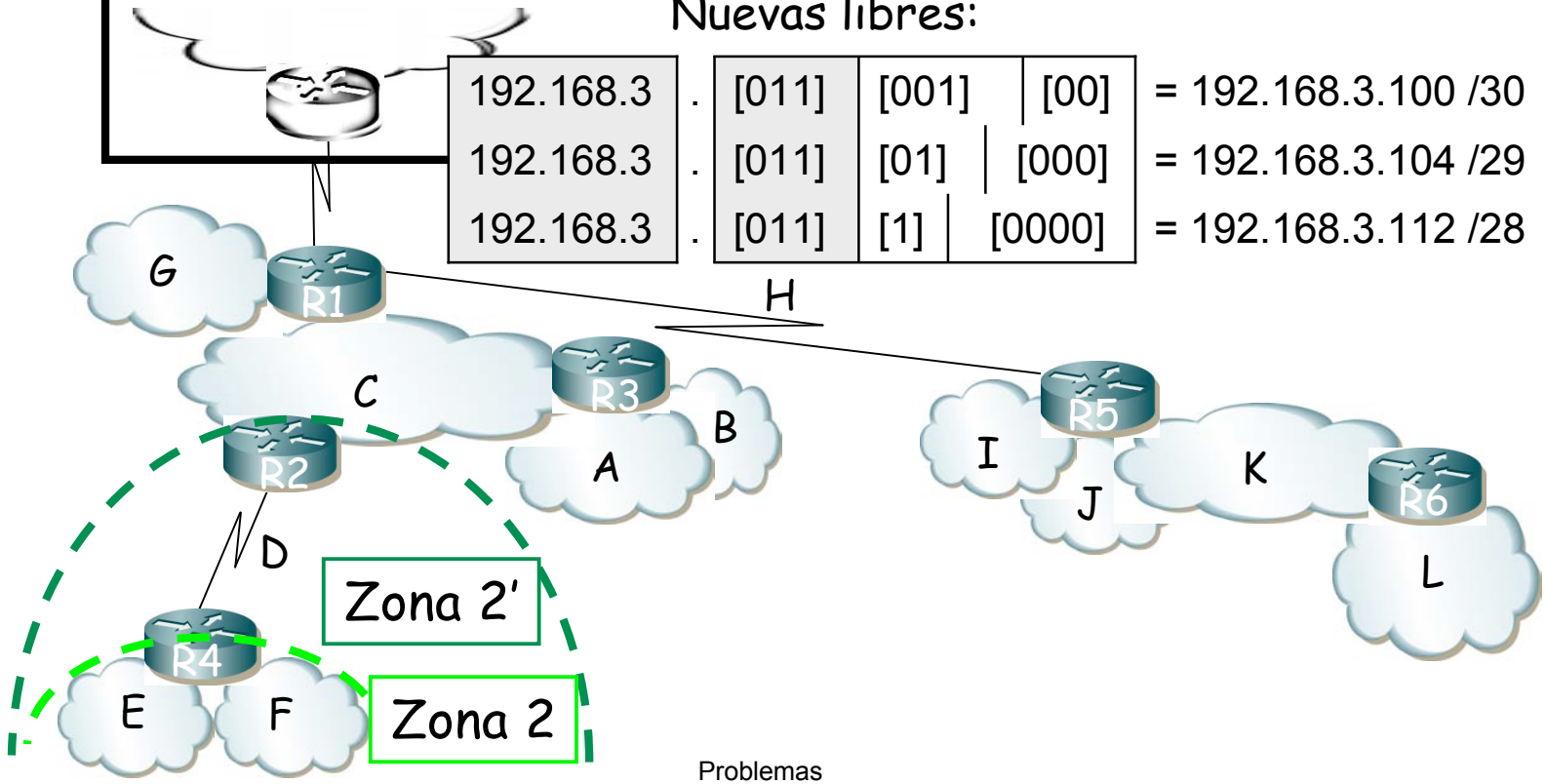
Ejemplo

Zona 2	192.168.3	.	[010]	[00000]	= 192.168.3.64 /27
D	192.168.3	.	[011]	[000] [00]	= 192.168.3.96 /30

Zona 2'	192.168.3	.	[01]	[0000] [00]	= 192.168.3.64 /26

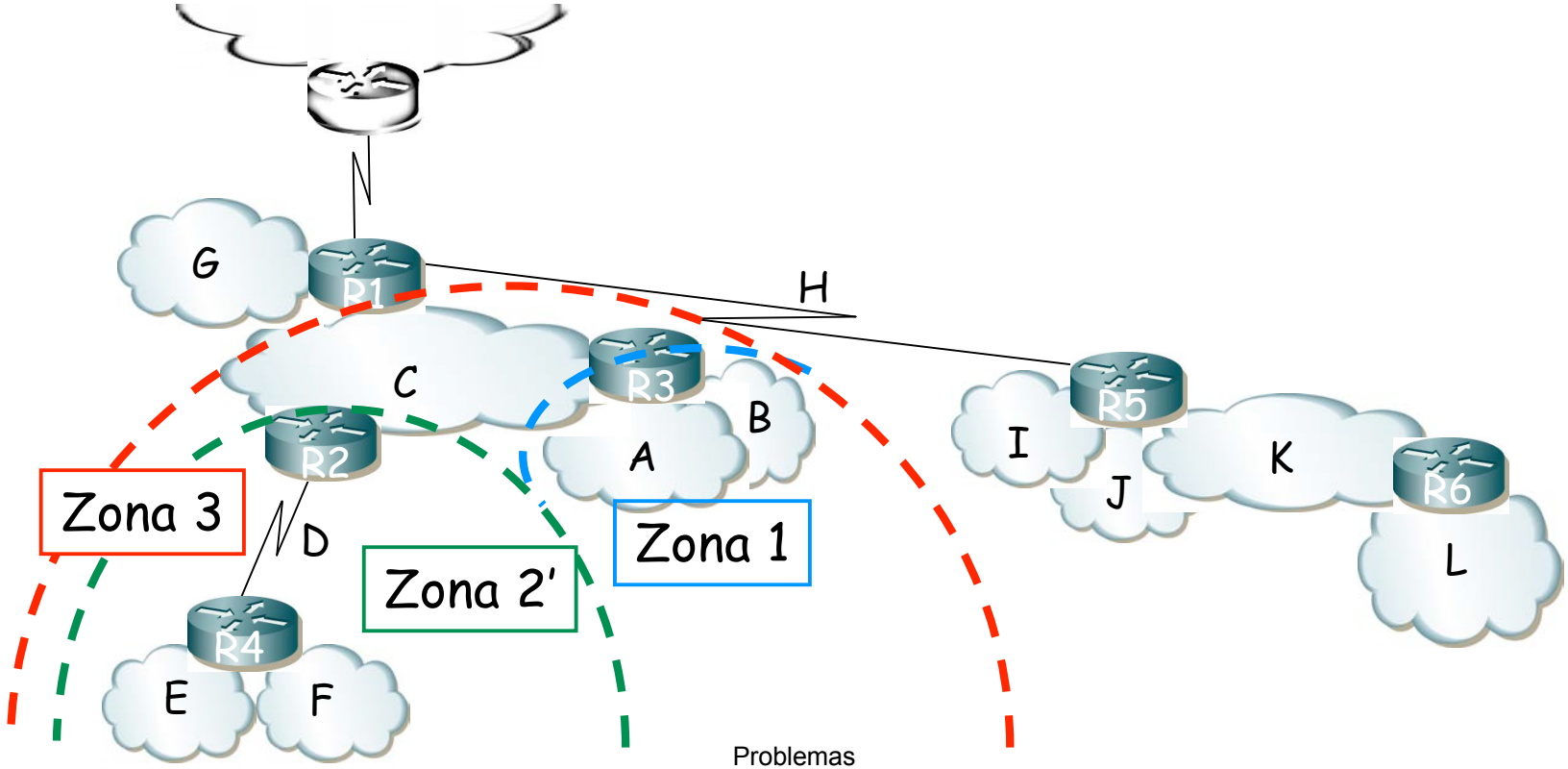
Nuevas libres:

192.168.3	.	[011]	[001] [00]	= 192.168.3.100 /30
192.168.3	.	[011]	[01] [000]	= 192.168.3.104 /29
192.168.3	.	[011]	[1] [0000]	= 192.168.3.112 /28



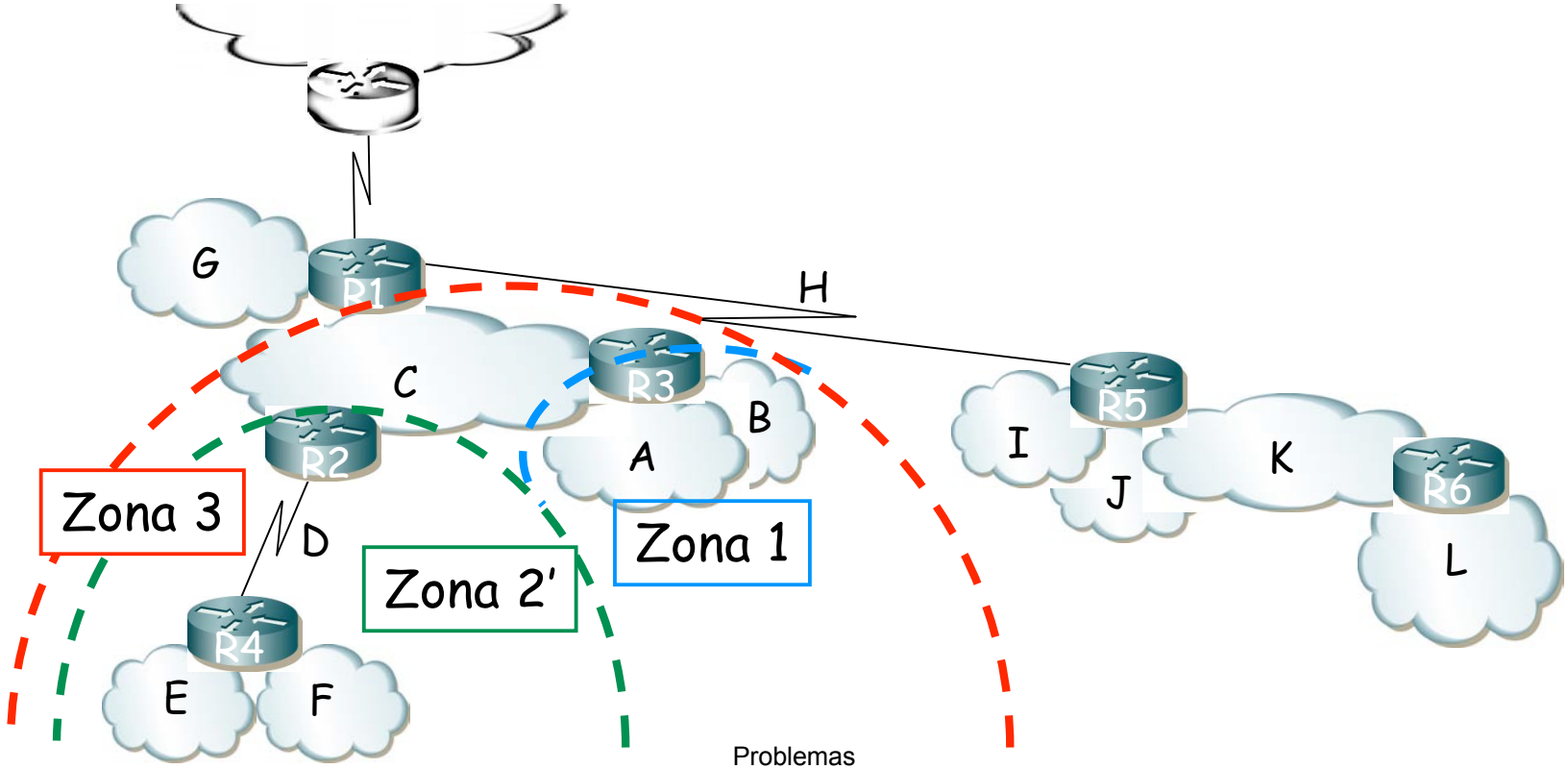
Ejemplo

Zona 1	192.168.3	[000]	[00000]	= 192.168.3.0 /27
Zona 2'	192.168.3	[01]	[000000]	= 192.168.3.64 /26



Ejemplo

Zona 1	192.168.3	.	[000]	[00000]	= 192.168.3.0 /27
Zona 2'	192.168.3	.	[01]	[000000]	= 192.168.3.64 /26
C	192.168.3	.	[001]	[0] [0000]	= 192.168.3.32 /28



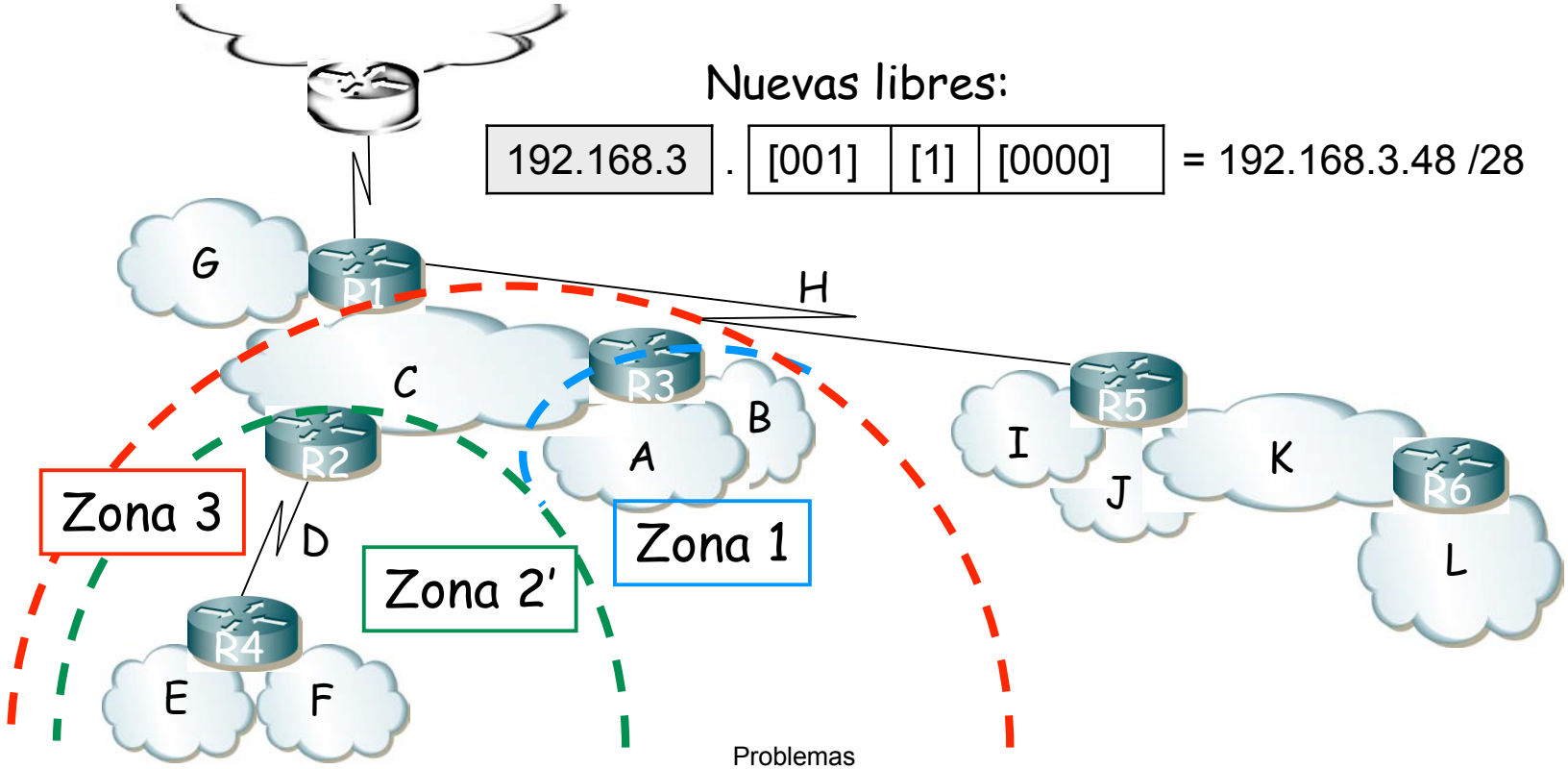
Ejemplo

Zona 1	192.168.3	.	[000]	[00000]	= 192.168.3.0 /27
Zona 2'	192.168.3	.	[01]	[000000]	= 192.168.3.64 /26
C	192.168.3	.	[001]	[0] [0000]	= 192.168.3.32 /28

Nuevas libres:

192.168.3	.	[001]	[1]	[0000]

= 192.168.3.48 /28

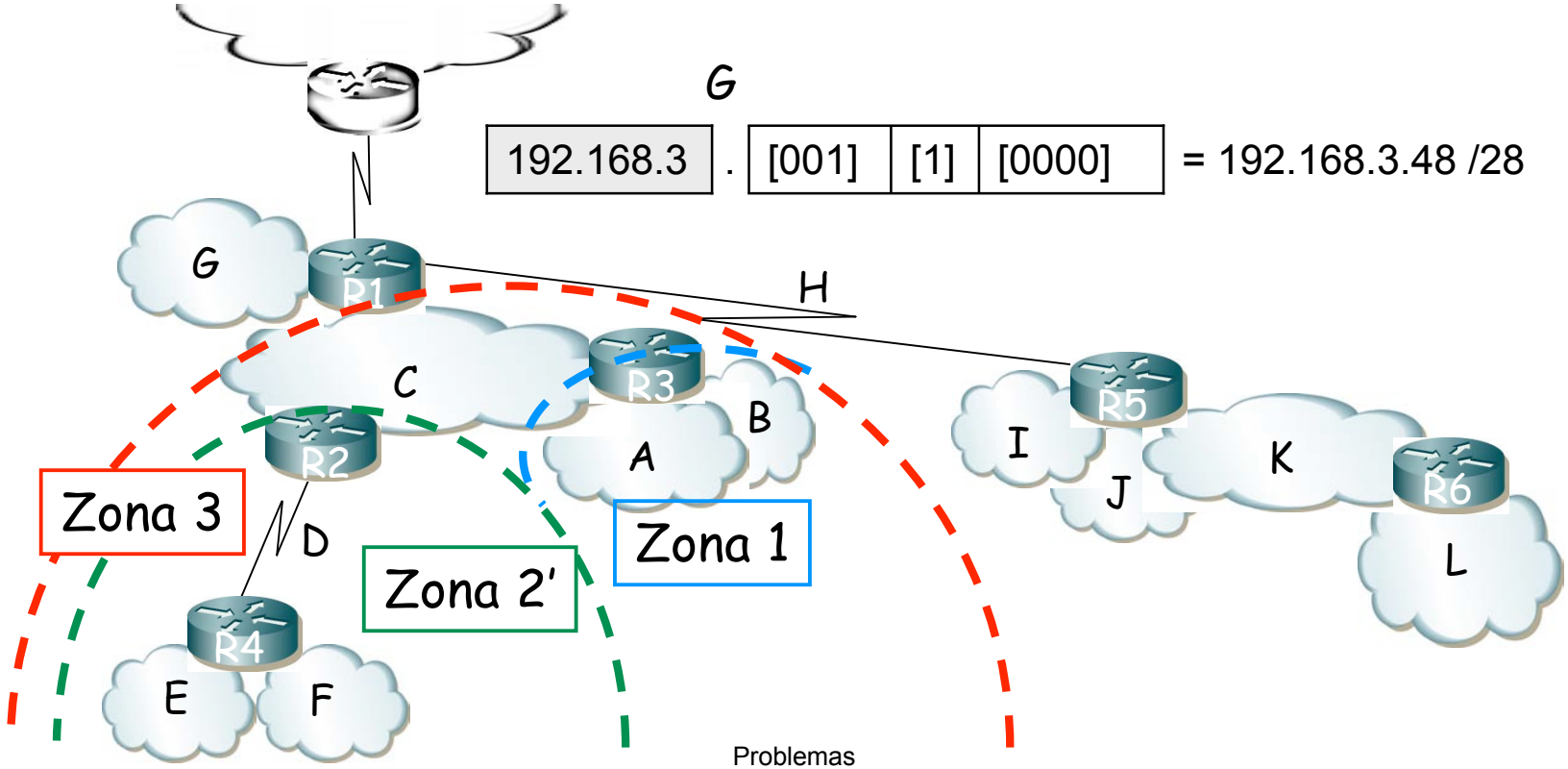


Ejemplo

Zona 1	192.168.3	.	[000]	[00000]	= 192.168.3.0 /27
Zona 2'	192.168.3	.	[01]	[000000]	= 192.168.3.64 /26
C	192.168.3	.	[001]	[0] [0000]	= 192.168.3.32 /28

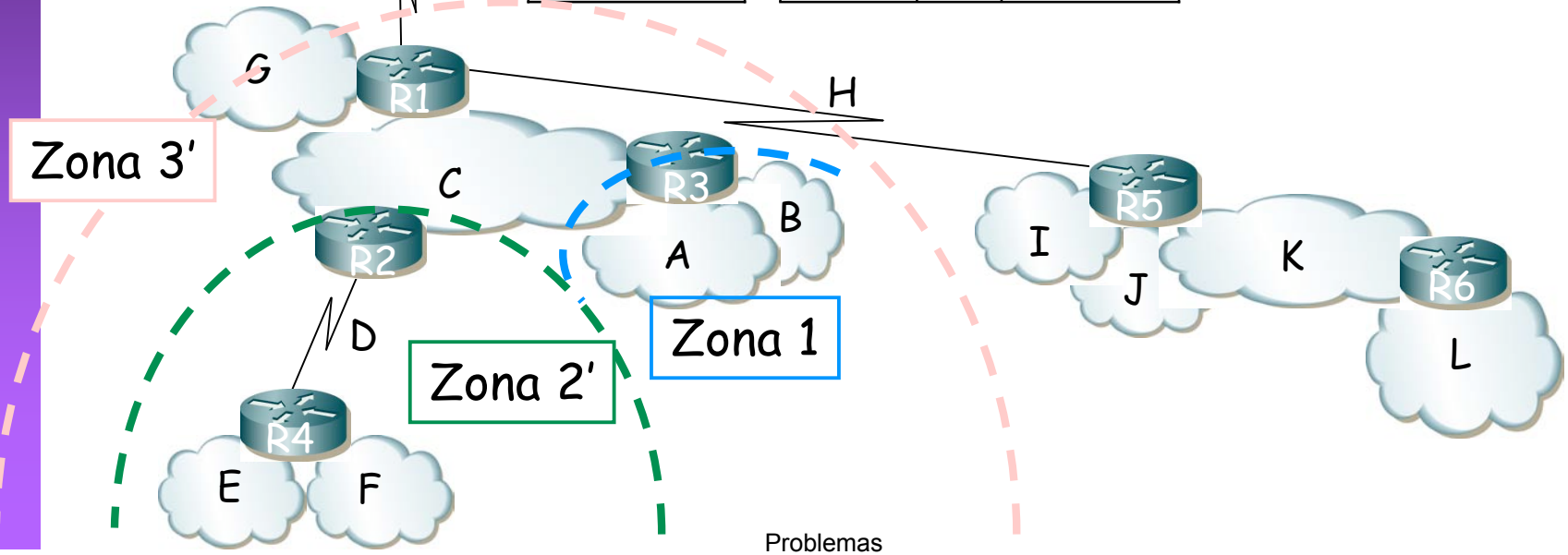
G

192.168.3 . [001] [1] [0000] = 192.168.3.48 /28



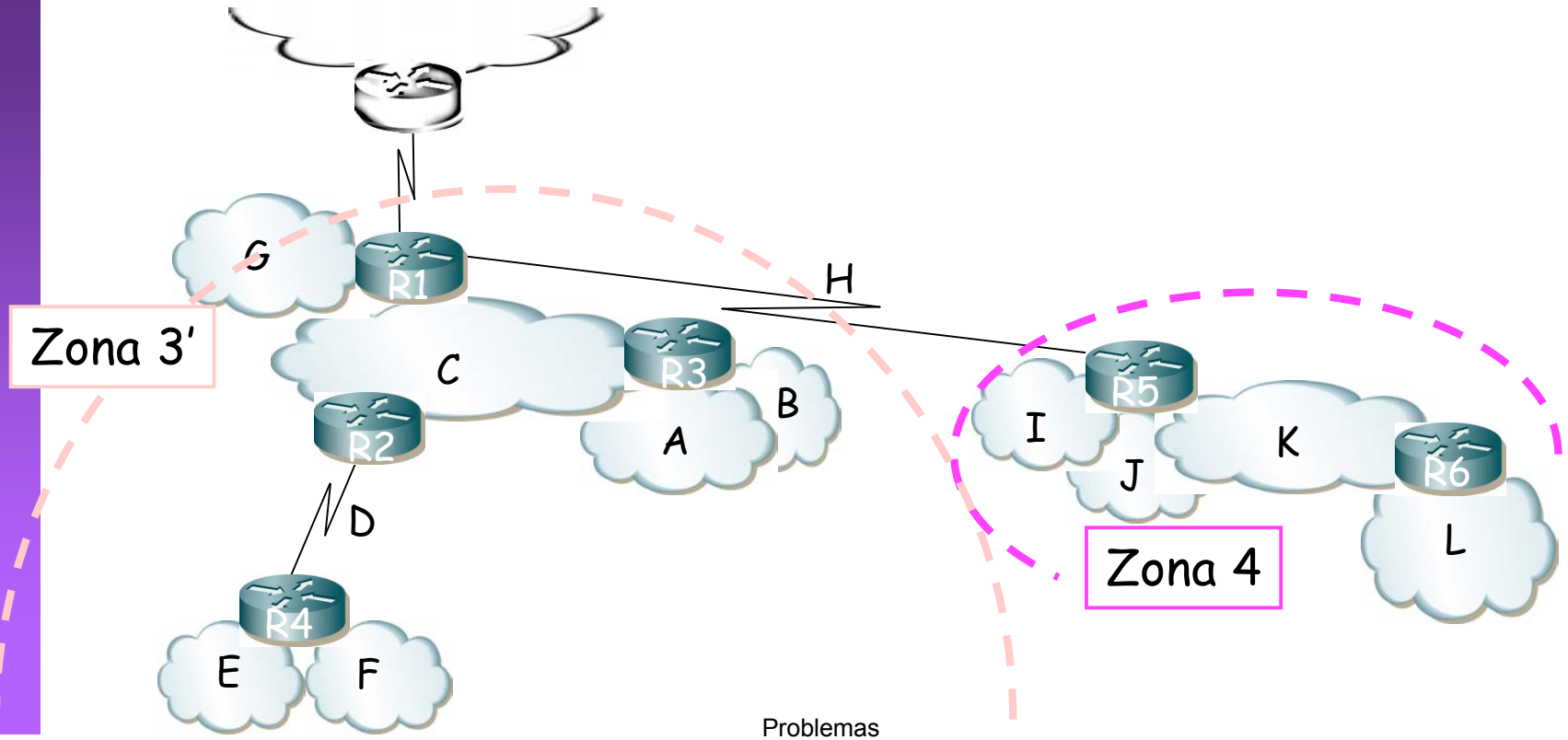
Ejemplo

Zona 1	192.168.3	.	[000]	[00000]	= 192.168.3.0 /27
Zona 2'	192.168.3	.	[01]	[000000]	= 192.168.3.64 /26
C	192.168.3	.	[001]	[0] [0000]	= 192.168.3.32 /28
Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
G	192.168.3	.	[001]	[1] [0000]	= 192.168.3.48 /28



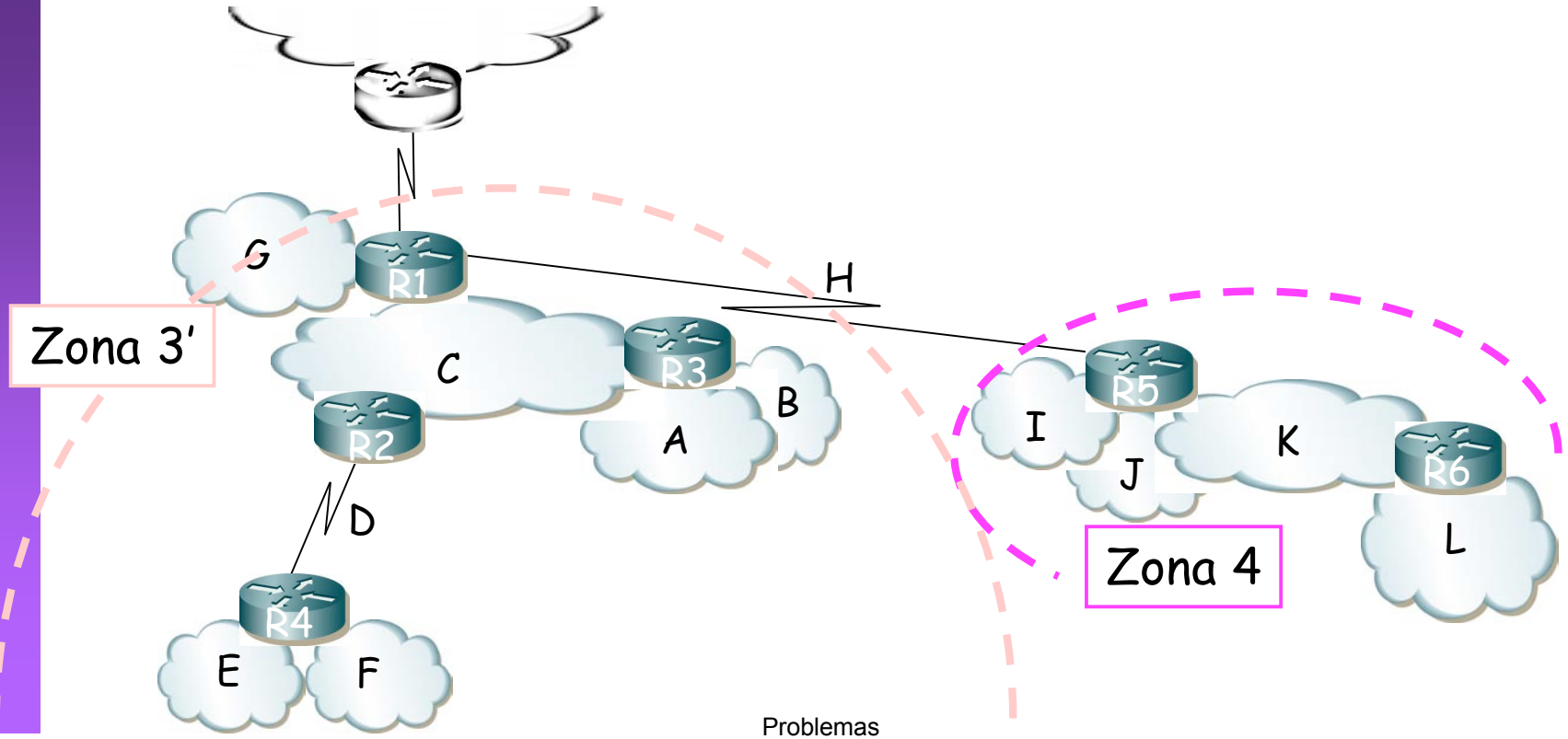
Ejemplo

Zona 3' | 192.168.3 | . | [0] | [0000000] | = 192.168.3.0 /25



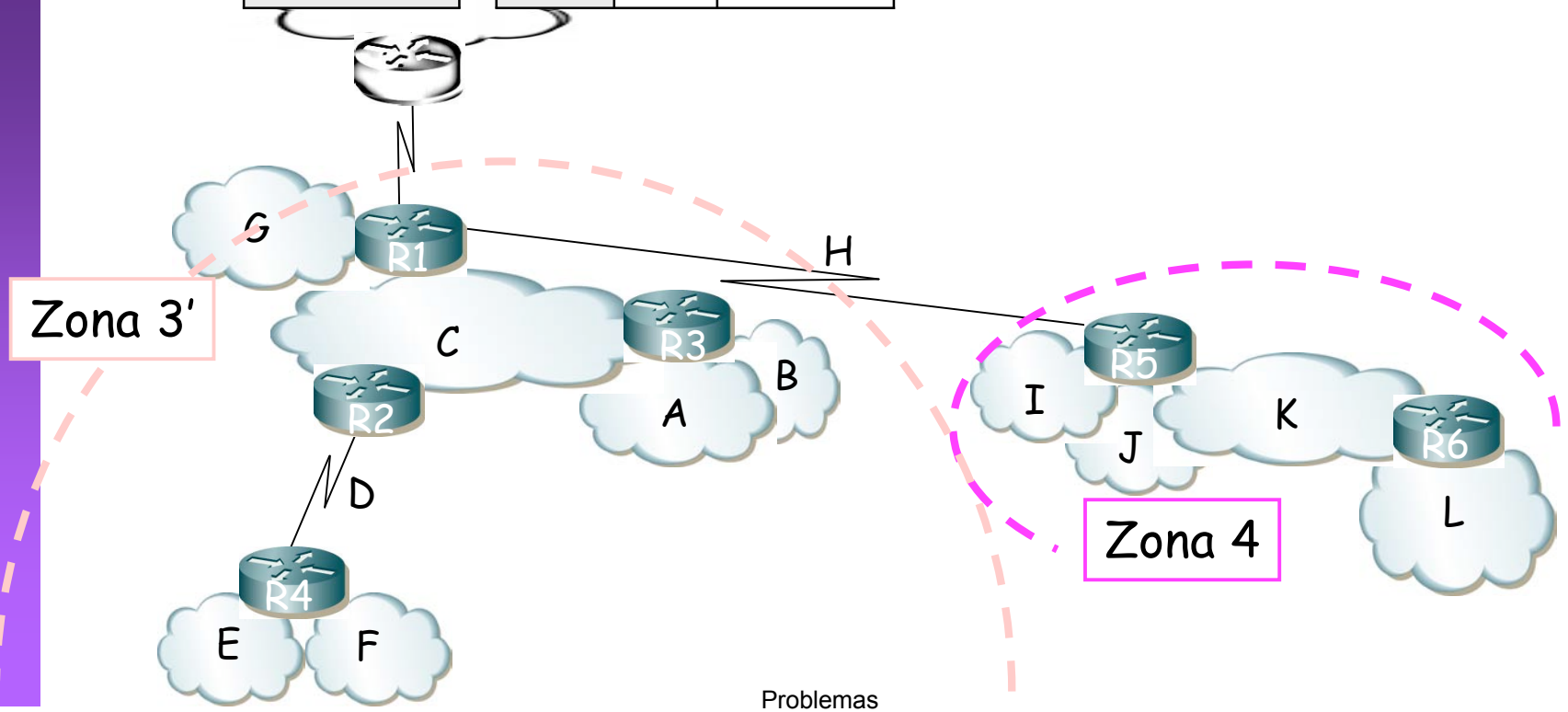
Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26



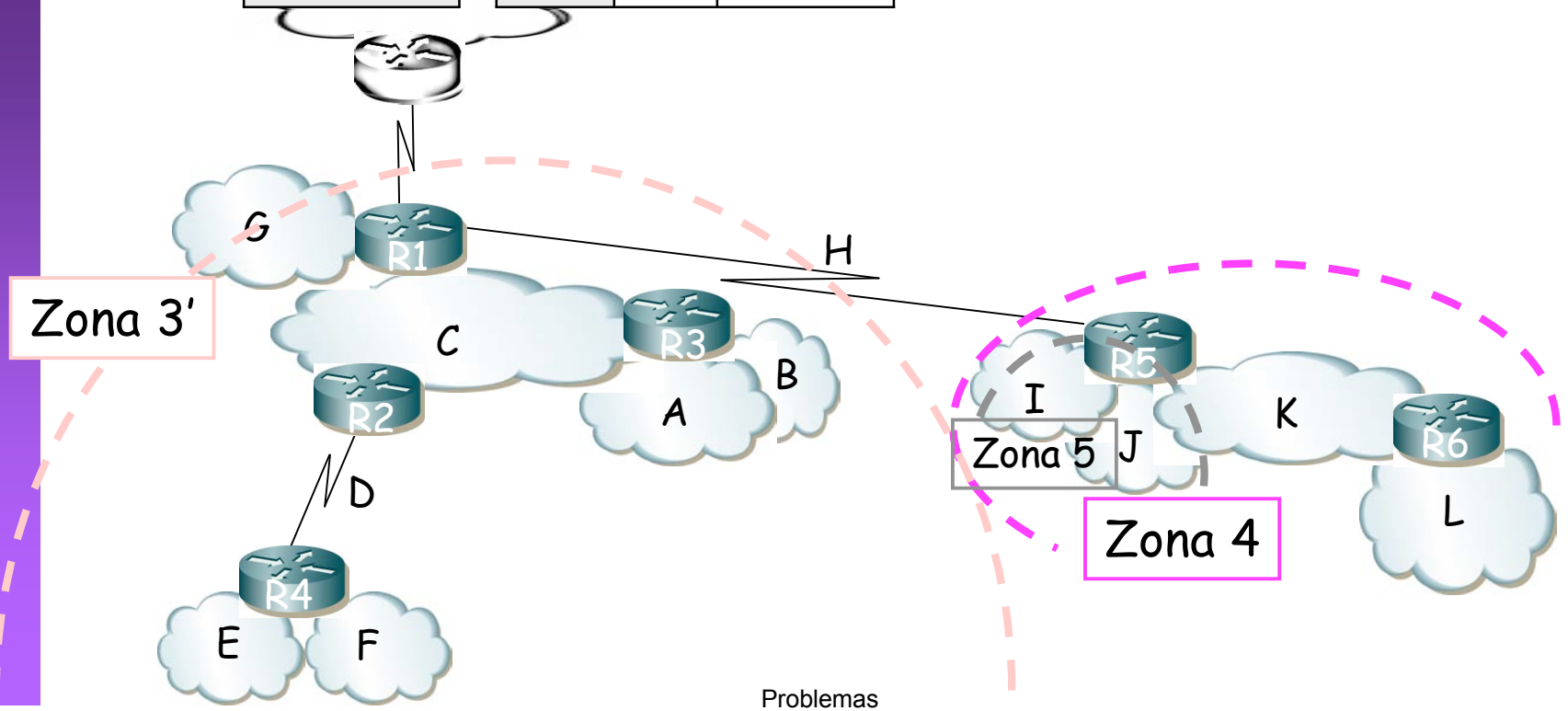
Ejemplo

Zona 3'	192.168.3	[0]	[0000000]		= 192.168.3.0 /25
Zona 4	192.168.3	[10]	[000000]		= 192.168.3.128 /26
I	192.168.3	[10]	[00]	[0000]	= 192.168.3.128 /28
J	192.168.3	[10]	[01]	[0000]	= 192.168.3.136 /28
K	192.168.3	[10]	[10]	[0000]	= 192.168.3.144 /28
L	192.168.3	[10]	[11]	[0000]	= 192.168.3.152 /28



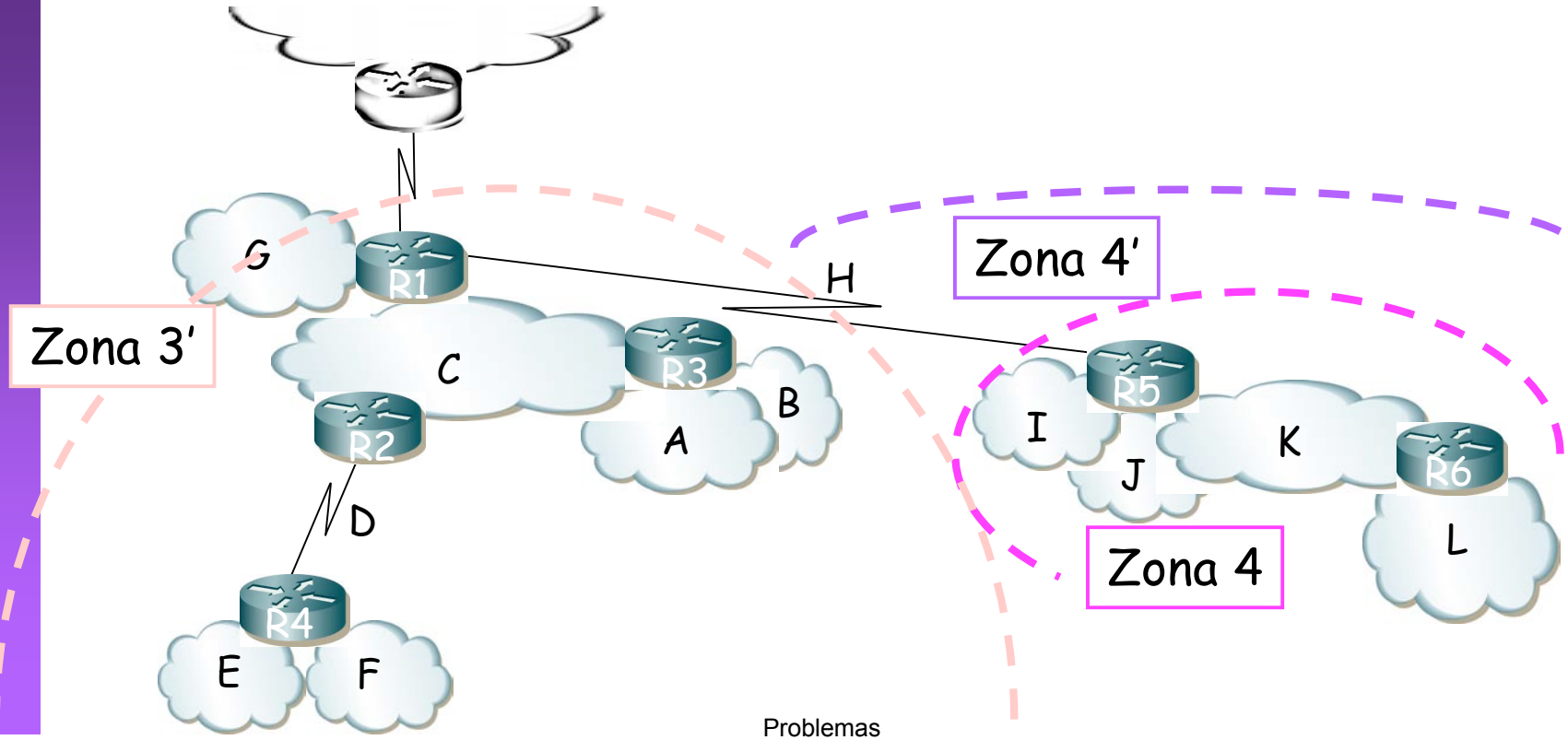
Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25	
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26	
I	192.168.3	.	[10]	[00] [0000]	= 192.168.3.128 /28	Zona 5: 192.168.3.128 /27
J	192.168.3	.	[10]	[01] [0000]	= 192.168.3.136 /28	
K	192.168.3	.	[10]	[10] [0000]	= 192.168.3.144 /28	
L	192.168.3	.	[10]	[11] [0000]	= 192.168.3.152 /28	



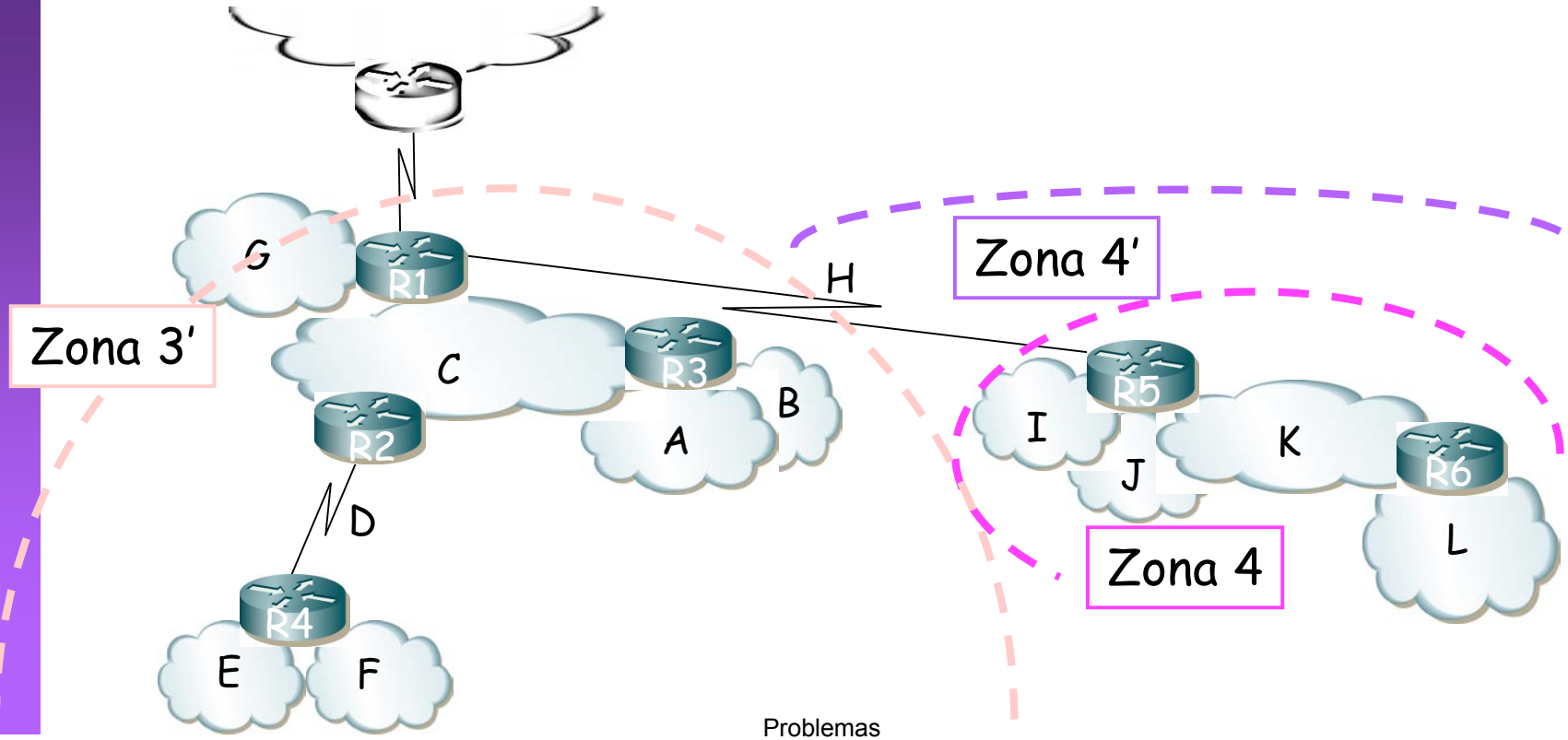
Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26



Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26
H	192.168.3	.	[11]	[0000] [00]	= 192.168.3.192 /30

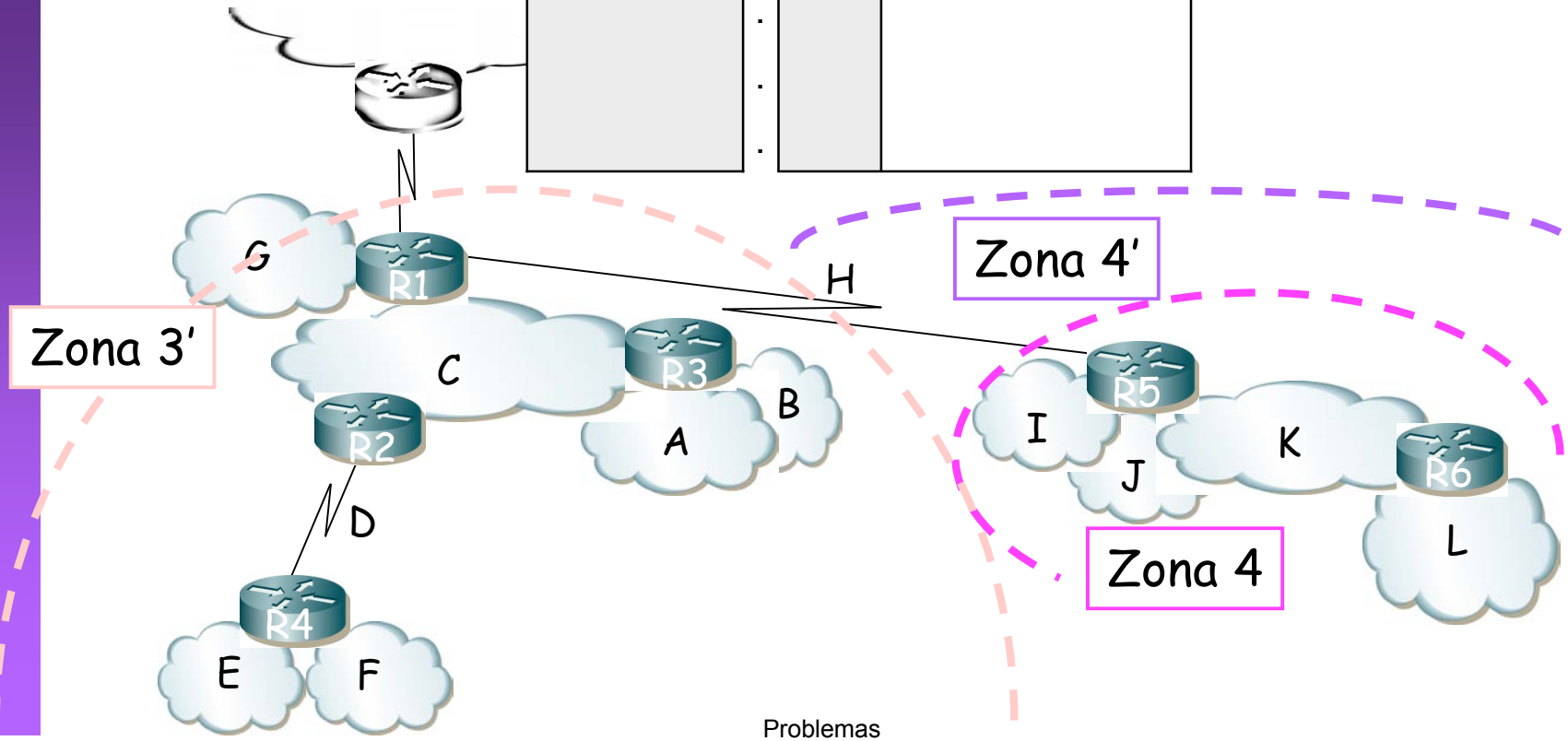


Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26
H	192.168.3	.	[11]	[0000] [00]	= 192.168.3.192 /30

Nuevas libres:

192.168.3	.	[11]	[0001] [00]	= 192.168.3.196 /30

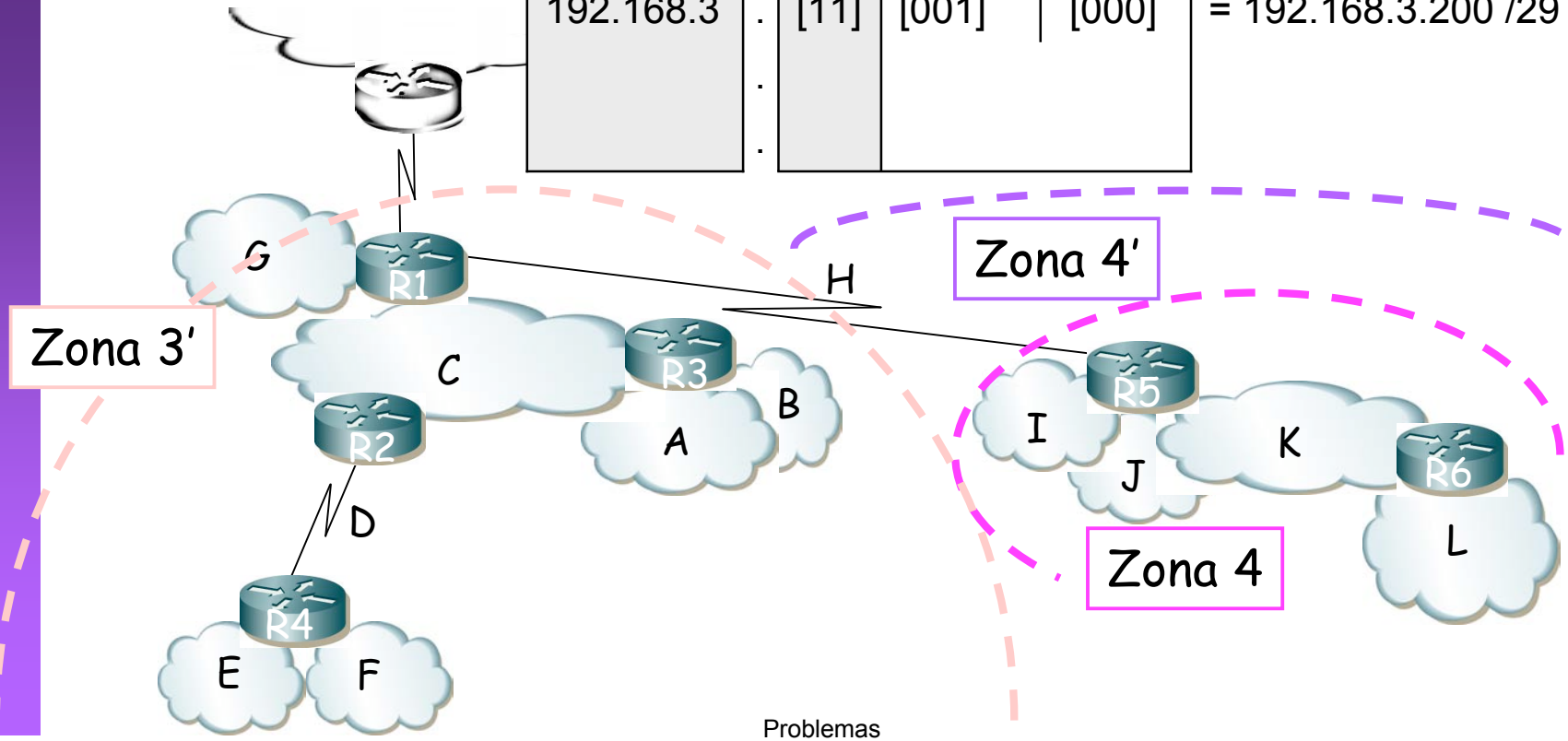


Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26
H	192.168.3	.	[11]	[0000] [00]	= 192.168.3.192 /30

Nuevas libres:

192.168.3	.	[11]	[0001] [00]	= 192.168.3.196 /30
192.168.3	.	[11]	[001] [000]	= 192.168.3.200 /29

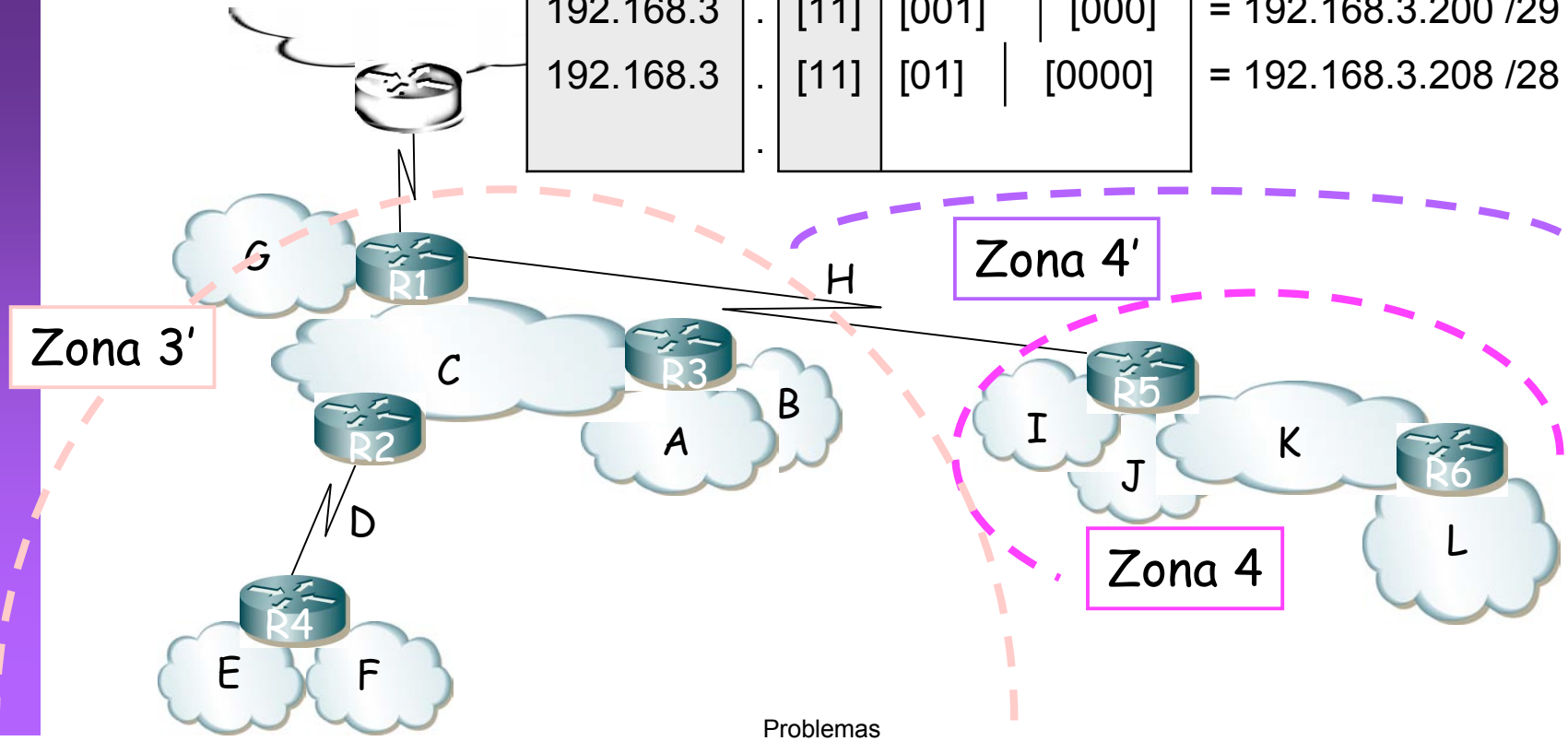


Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26
H	192.168.3	.	[11]	[0000] [00]	= 192.168.3.192 /30

Nuevas libres:

192.168.3	.	[11]	[0001] [00]	= 192.168.3.196 /30
192.168.3	.	[11]	[001] [000]	= 192.168.3.200 /29
192.168.3	.	[11]	[01] [0000]	= 192.168.3.208 /28

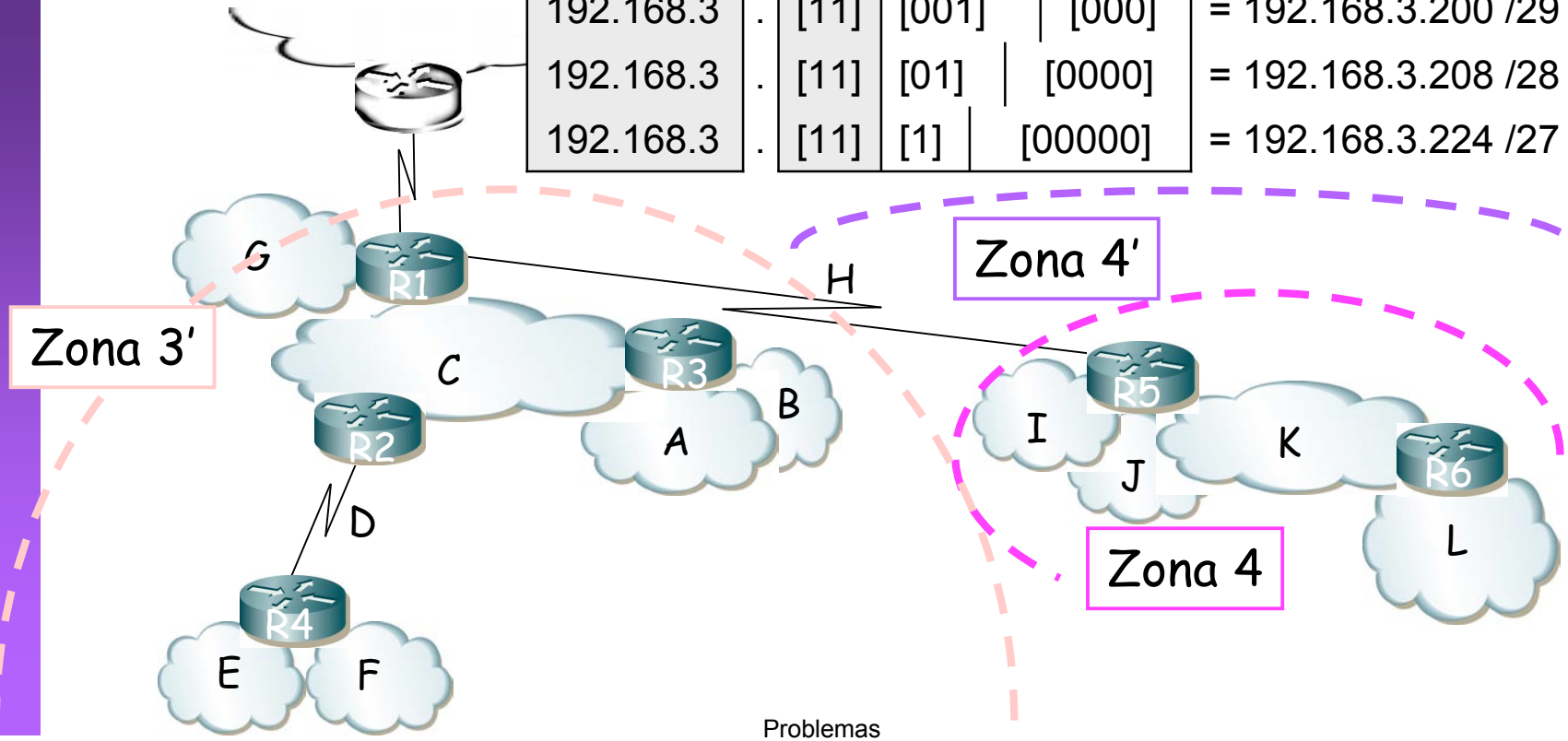


Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26
H	192.168.3	.	[11]	[0000] [00]	= 192.168.3.192 /30

Nuevas libres:

192.168.3	.	[11]	[0001]	[00]	= 192.168.3.196 /30
192.168.3	.	[11]	[001]	[000]	= 192.168.3.200 /29
192.168.3	.	[11]	[01]	[0000]	= 192.168.3.208 /28
192.168.3	.	[11]	[1]	[00000]	= 192.168.3.224 /27

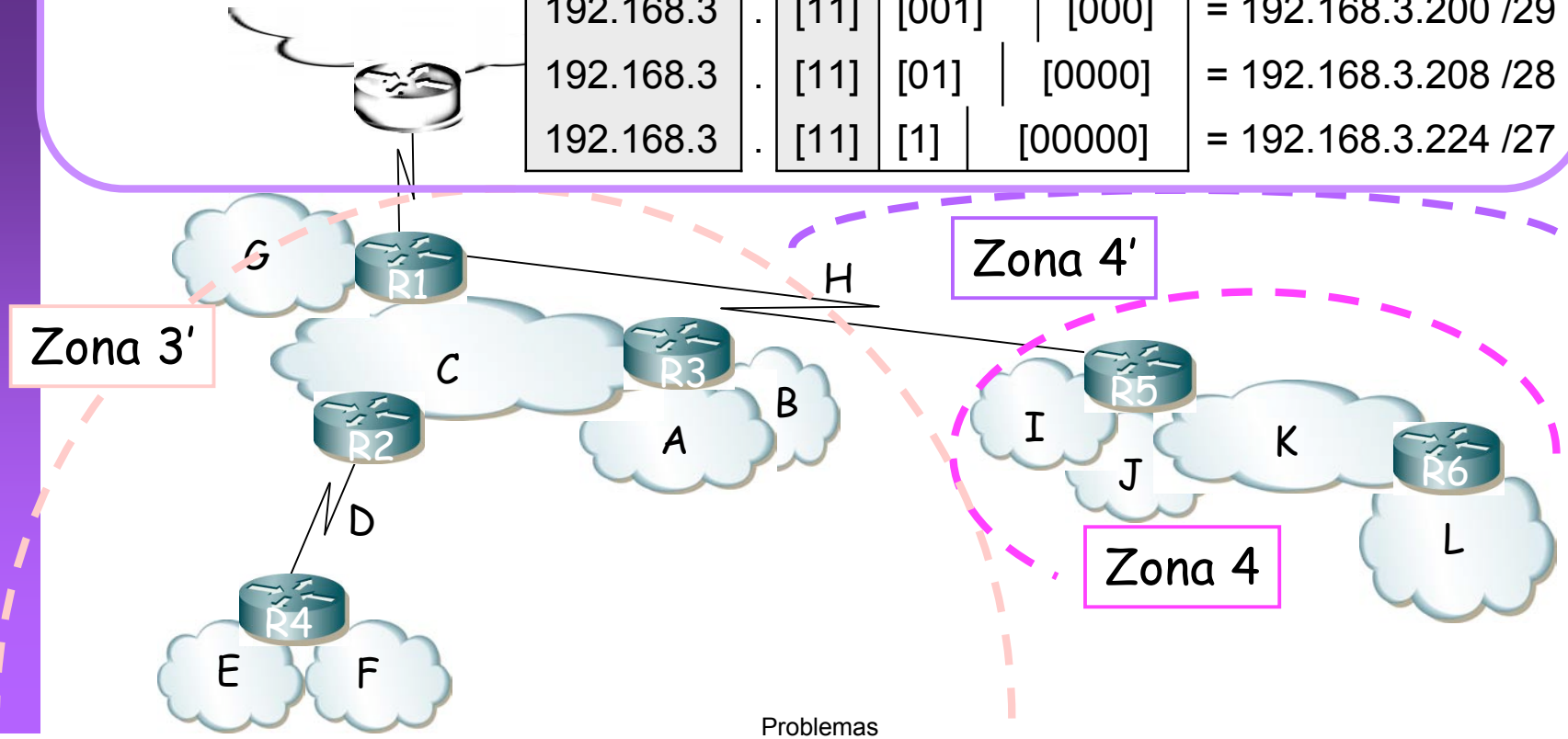


Ejemplo

Zona 3'	192.168.3	.	[0]	[0000000]	= 192.168.3.0 /25
Zona 4	192.168.3	.	[10]	[000000]	= 192.168.3.128 /26
H	192.168.3	.	[11]	[0000] [00]	= 192.168.3.192 /30

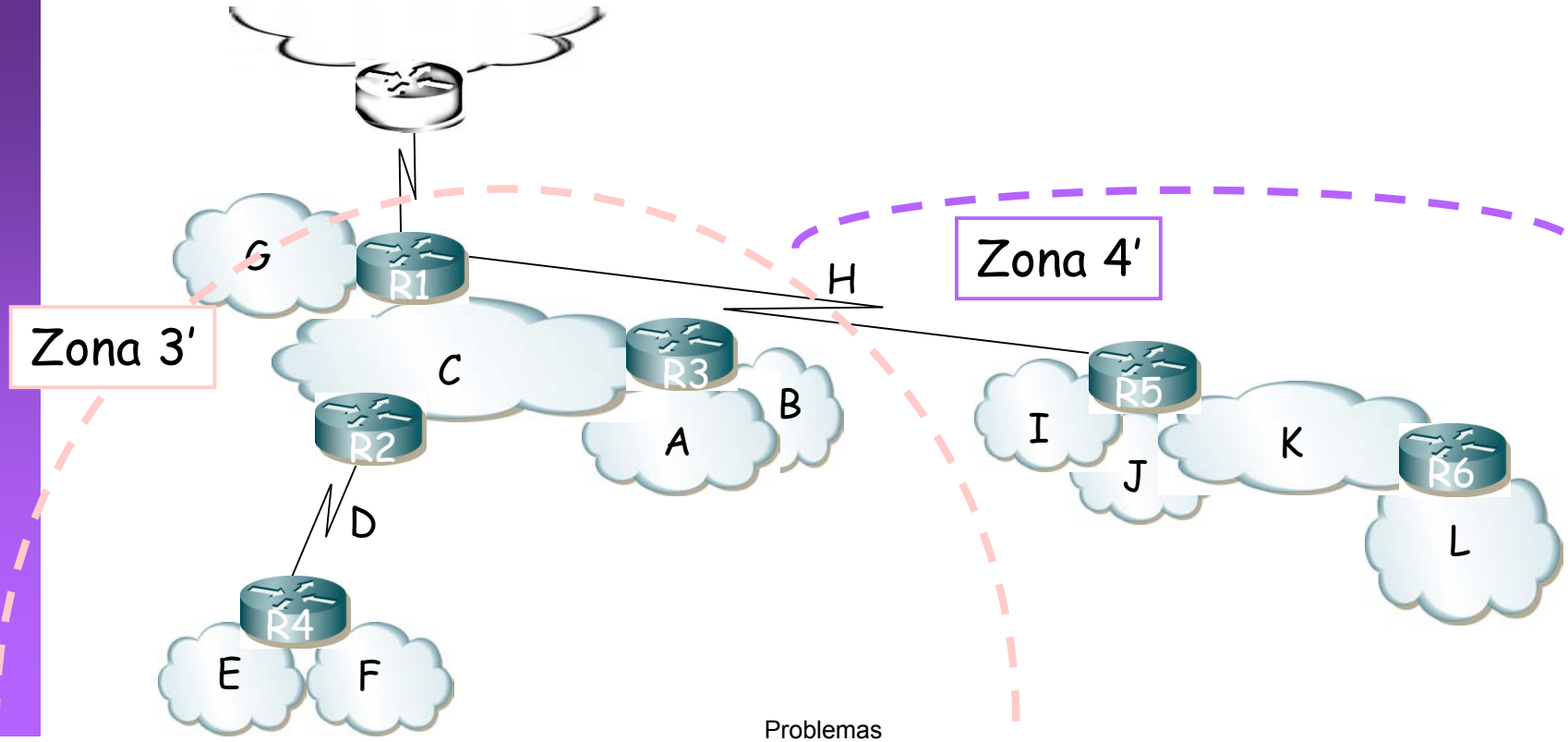
Nuevas libres:

192.168.3	.	[11]	[0001]	[00]	= 192.168.3.196 /30
192.168.3	.	[11]	[001]	[000]	= 192.168.3.200 /29
192.168.3	.	[11]	[01]	[0000]	= 192.168.3.208 /28
192.168.3	.	[11]	[1]	[00000]	= 192.168.3.224 /27



Ejemplo

Zona 3'	192.168.3	. [0]	[0000000]	= 192.168.3.0 /25
Zona 4'	192.168.3	. [1]	[0000000]	= 192.168.3.128 /25

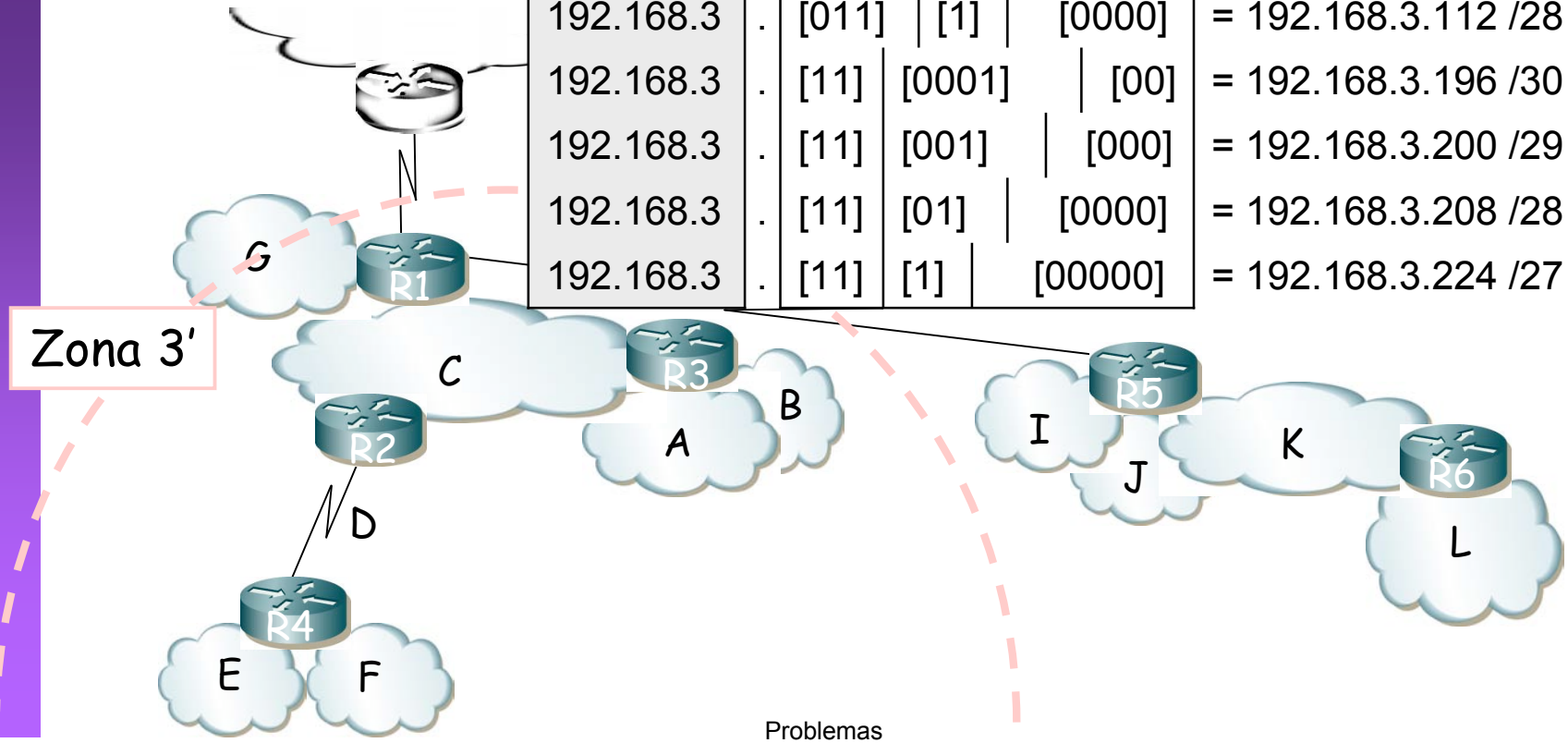


Ejemplo

Zona 3'	192.168.3	[0]	[0000000]	= 192.168.3.0 /25
Zona 4'	192.168.3	[1]	[0000000]	= 192.168.3.128 /25

Libres totales:

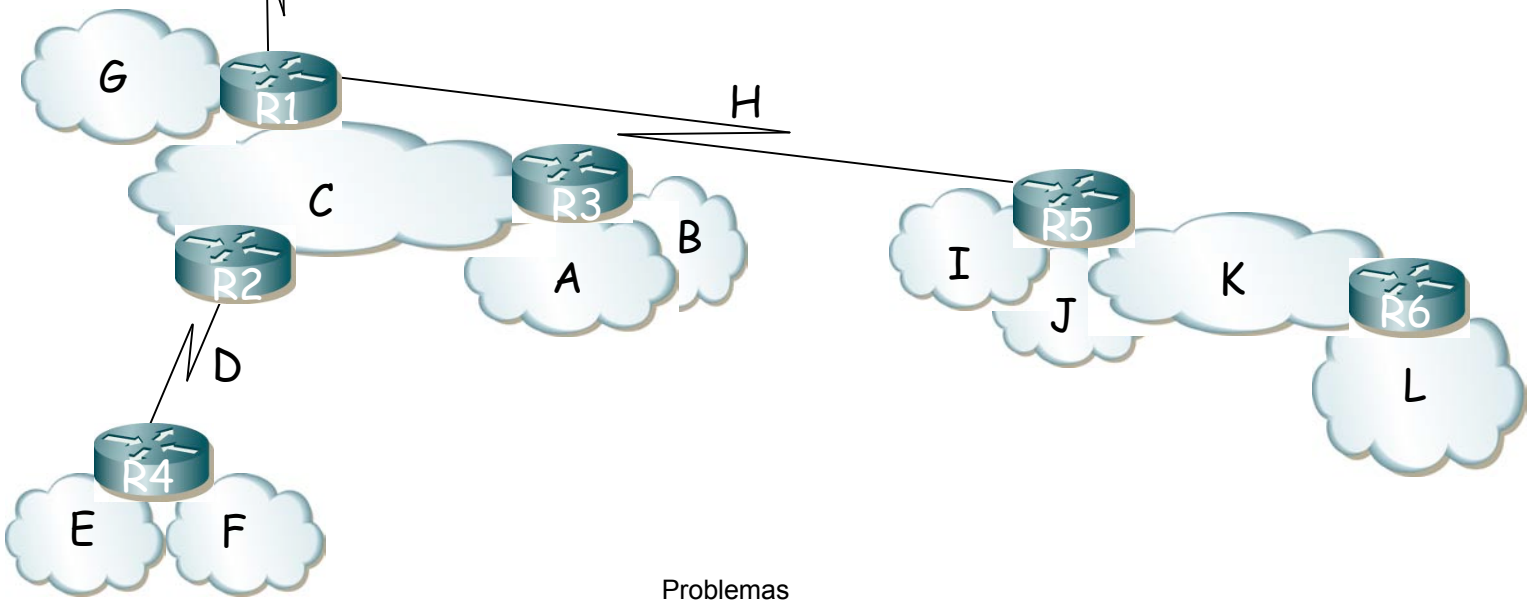
192.168.3	[011]	[001]	[00]	= 192.168.3.100 /30
192.168.3	[011]	[01]	[000]	= 192.168.3.104 /29
192.168.3	[011]	[1]	[0000]	= 192.168.3.112 /28
192.168.3	[11]	[0001]	[00]	= 192.168.3.196 /30
192.168.3	[11]	[001]	[000]	= 192.168.3.200 /29
192.168.3	[11]	[01]	[0000]	= 192.168.3.208 /28
192.168.3	[11]	[1]	[00000]	= 192.168.3.224 /27



Ejemplo

Tabla de rutas de R1:

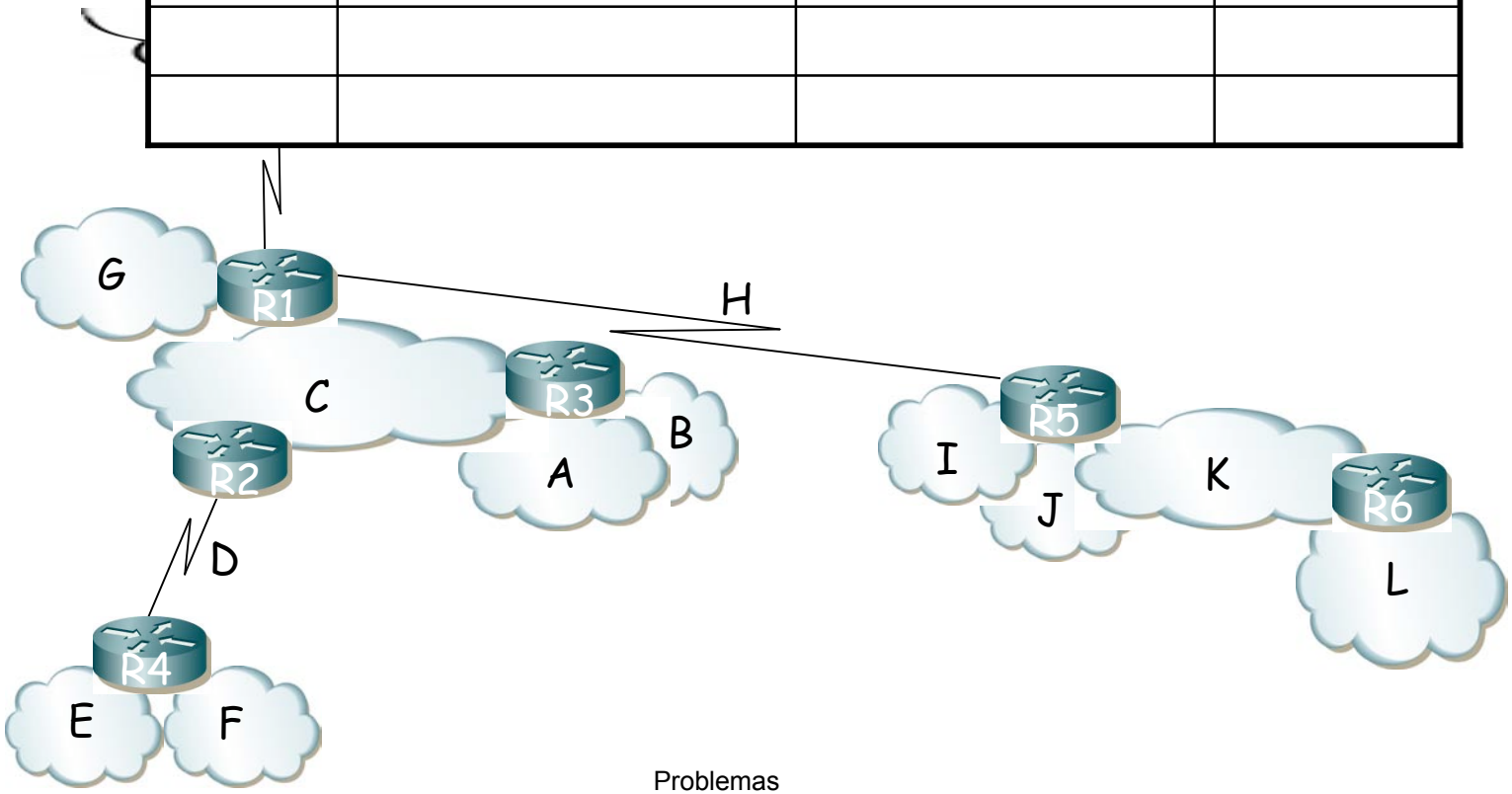
Destino		Next-hop	Interfaz



Ejemplo

Tabla de rutas de R1:

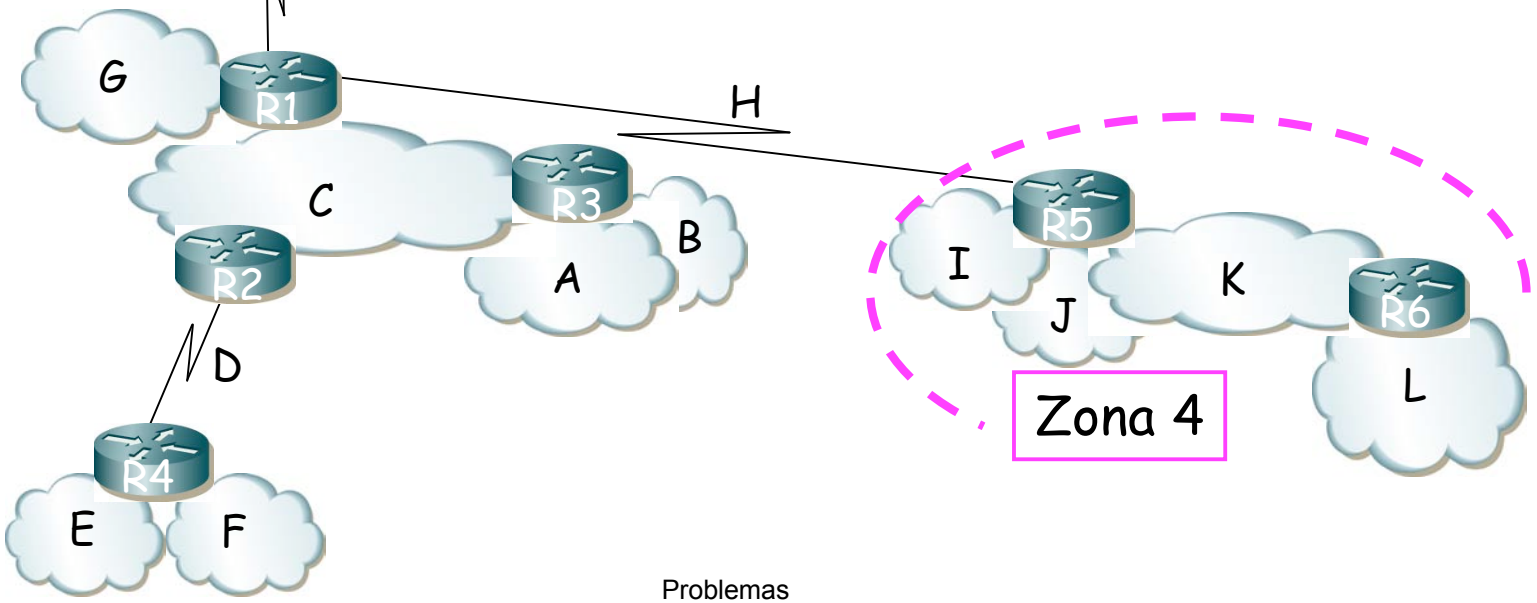
Destino		Next-hop	Interfaz
Red C	192.168.3.32 /28	(dir.connected)	ifR1RedC
Red G	192.168.3.48 /28	(dir.connected)	ifR1RedG
Red H	192.168.3.192 /30	(dir.connected)	ifR1RedH



Ejemplo

Tabla de rutas de R1:

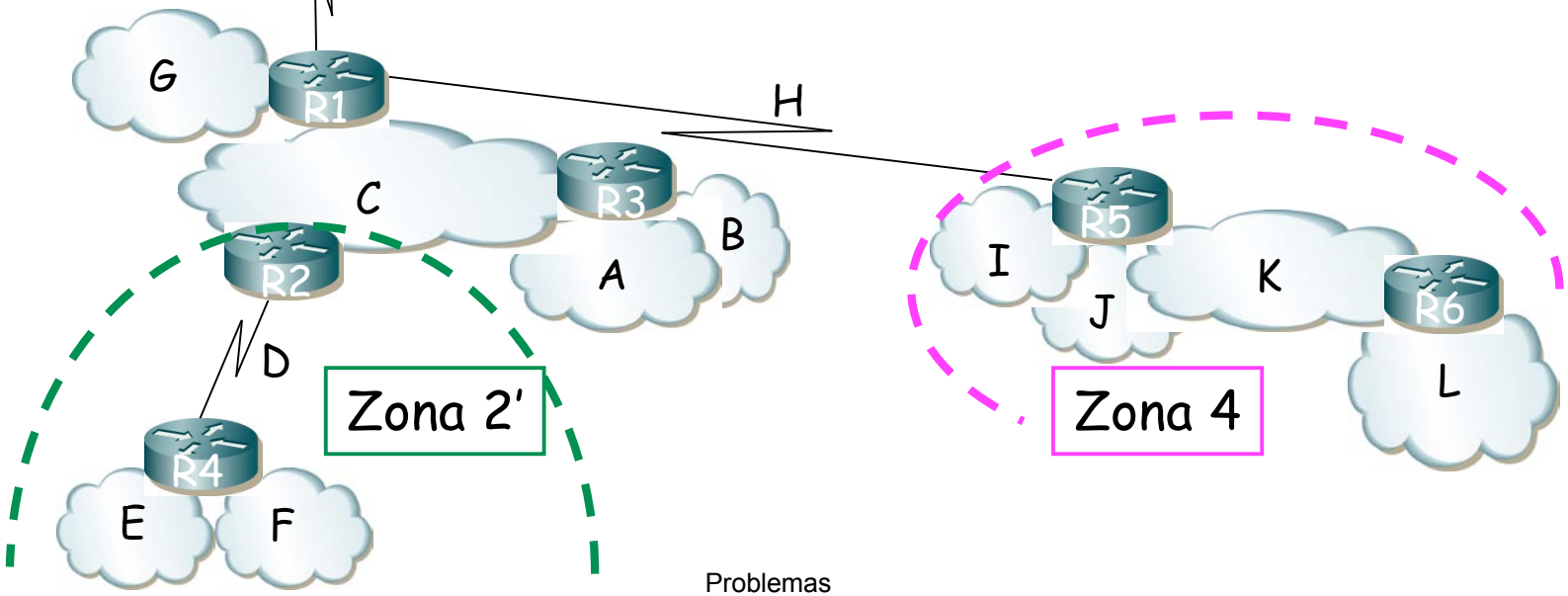
Destino		Next-hop	Interfaz
Red C	192.168.3.32 /28	(dir.connected)	ifR1RedC
Red G	192.168.3.48 /28	(dir.connected)	ifR1RedG
Red H	192.168.3.192 /30	(dir.connected)	ifR1RedH
Zona 4	192.168.3.128 /26	IPR5ifRedH	ifR1RedH



Ejemplo

Tabla de rutas de R1:

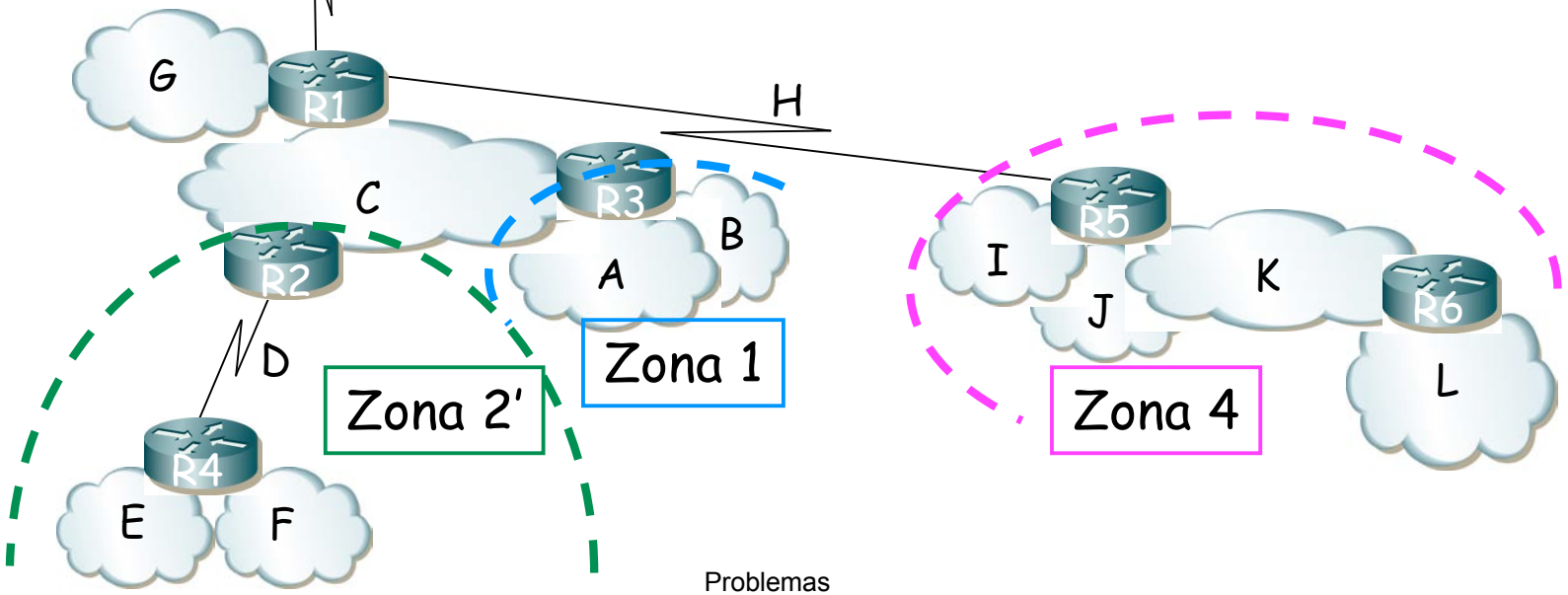
Destino		Next-hop	Interfaz
Red C	192.168.3.32 /28	(dir.connected)	ifR1RedC
Red G	192.168.3.48 /28	(dir.connected)	ifR1RedG
Red H	192.168.3.192 /30	(dir.connected)	ifR1RedH
Zona 4	192.168.3.128 /26	IPR5ifRedH	ifR1RedH
Zona 2'	192.168.3.64 /26	IPR2ifRedC	ifR1RedC



Ejemplo

Tabla de rutas de R1:

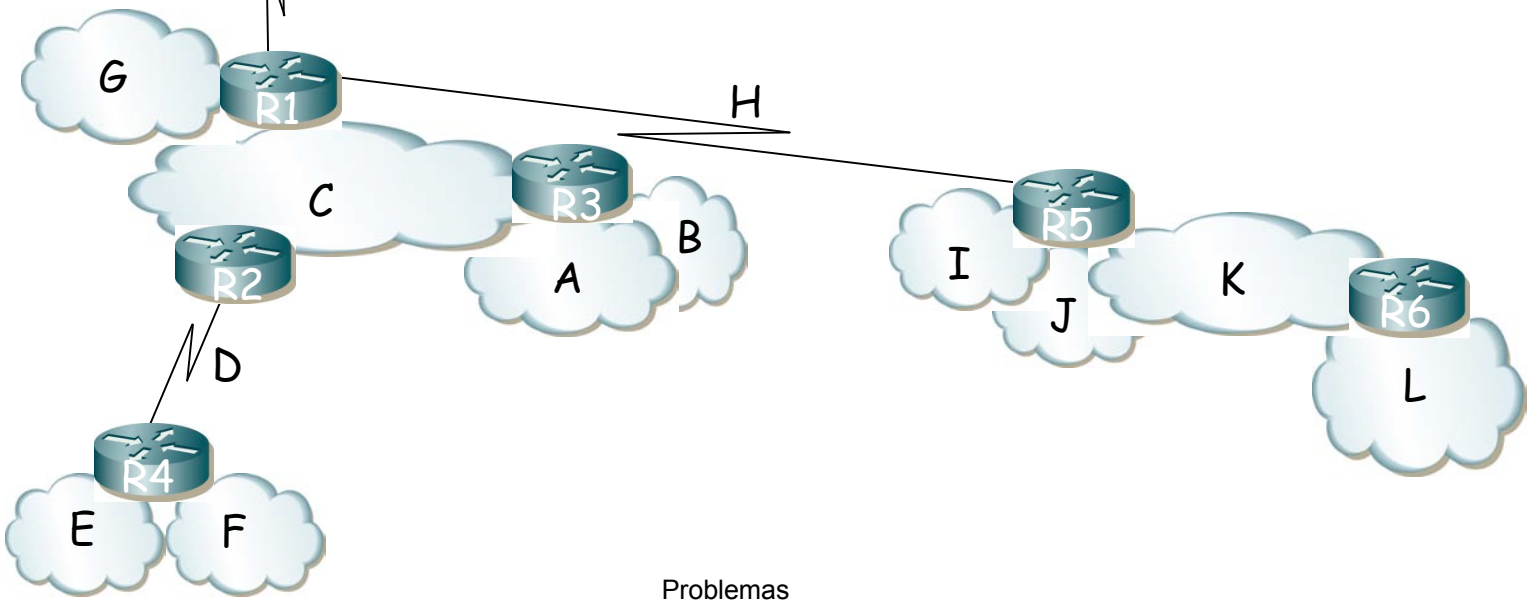
Destino		Next-hop	Interfaz
Red C	192.168.3.32 /28	(dir.connected)	ifR1RedC
Red G	192.168.3.48 /28	(dir.connected)	ifR1RedG
Red H	192.168.3.192 /30	(dir.connected)	ifR1RedH
Zona 4	192.168.3.128 /26	IPR5ifRedH	ifR1RedH
Zona 2'	192.168.3.64 /26	IPR2ifRedC	ifR1RedC
Zona 1	192.168.3.0 /27	IPR3ifRedC	ifR1RedC



Ejemplo

Tabla de rutas de R5:

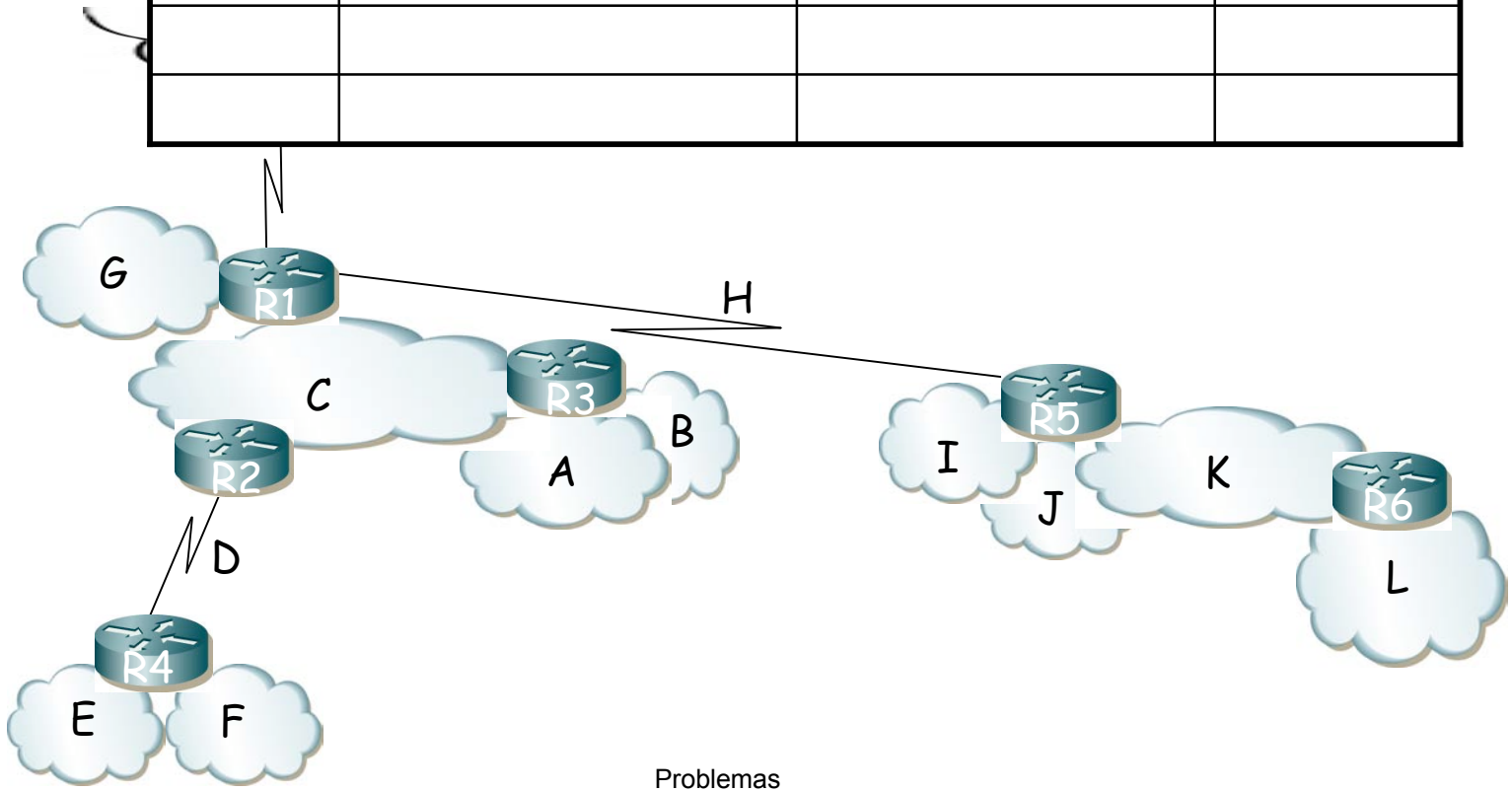
Destino		Next-hop	Interfaz



Ejemplo

Tabla de rutas de R5:

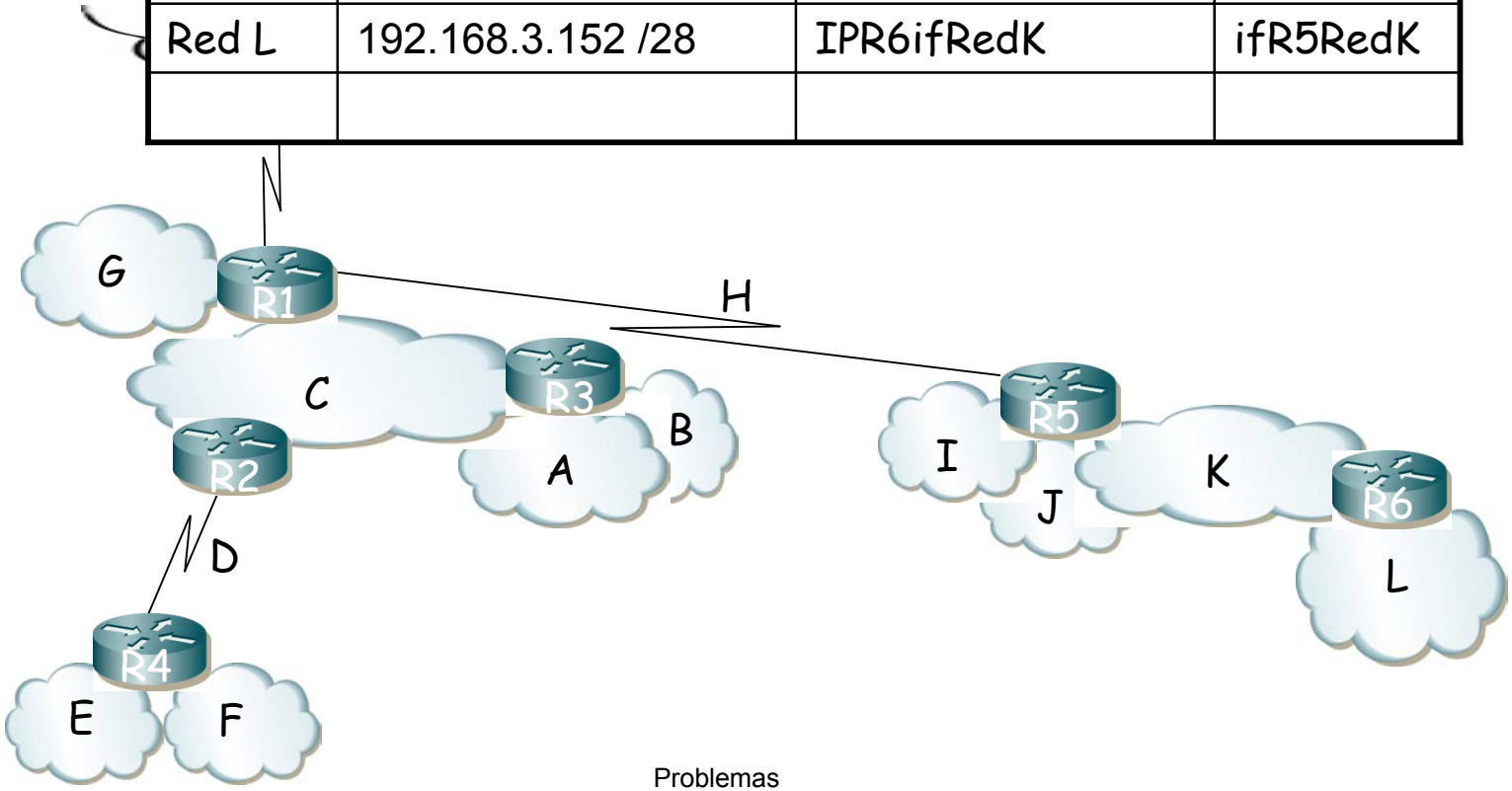
Destino		Next-hop	Interfaz
Red I	192.168.3.128 /28	(dir.connected)	ifR5RedI
Red J	192.168.3.136 /28	(dir.connected)	ifR5RedJ
Red K	192.168.3.136 /28	(dir.connected)	ifR5RedK
Red H	192.168.3.192 /30	(dir.connected)	ifR5RedH



Ejemplo

Tabla de rutas de R5:

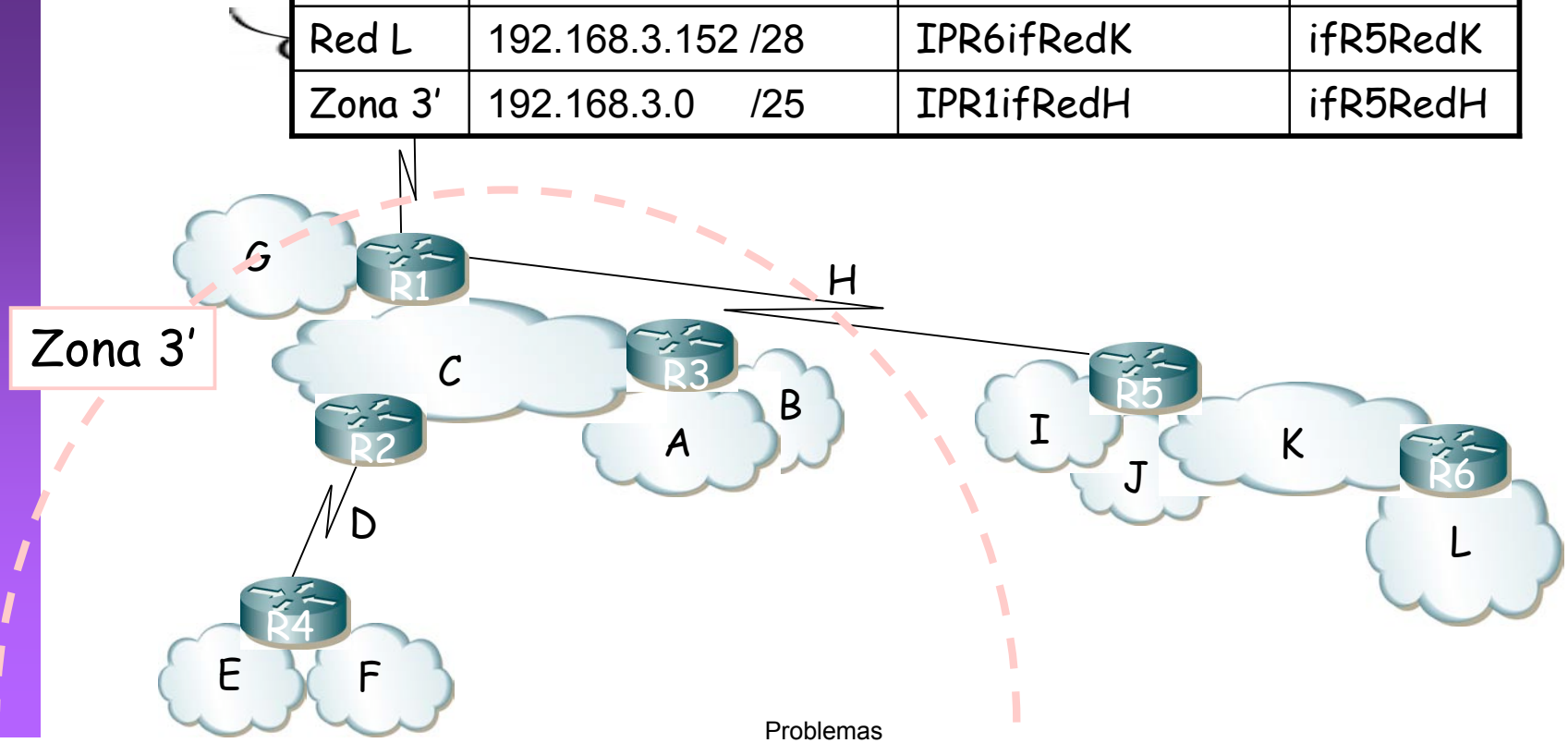
Destino		Next-hop	Interfaz
Red I	192.168.3.128 /28	(dir.connected)	ifR5RedI
Red J	192.168.3.136 /28	(dir.connected)	ifR5RedJ
Red K	192.168.3.136 /28	(dir.connected)	ifR5RedK
Red H	192.168.3.192 /30	(dir.connected)	ifR5RedH
Red L	192.168.3.152 /28	IPR6ifRedK	ifR5RedK



Ejemplo

Tabla de rutas de R5:

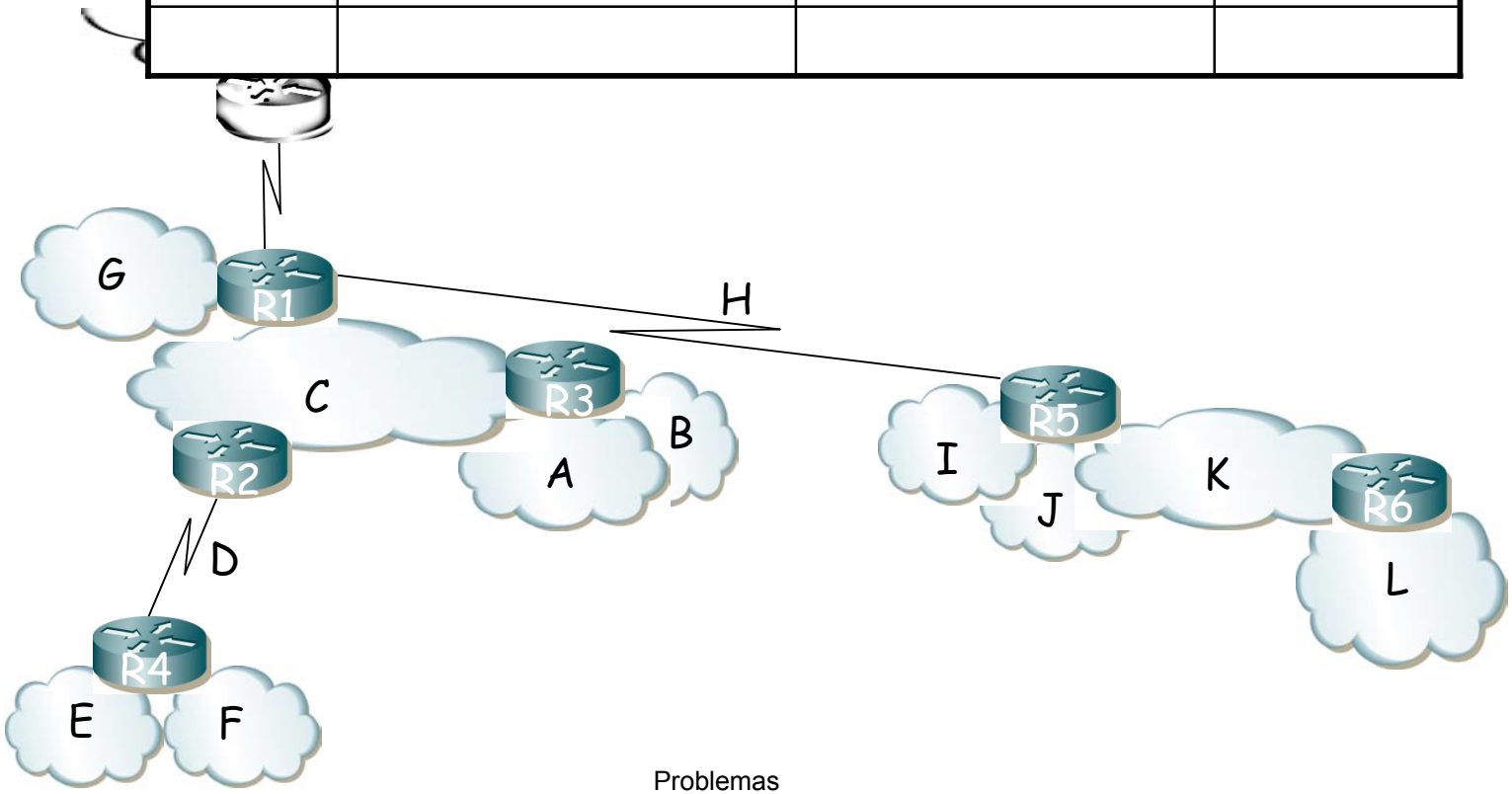
Destino		Next-hop	Interfaz
Red I	192.168.3.128 /28	(dir.connected)	ifR5RedI
Red J	192.168.3.136 /28	(dir.connected)	ifR5RedJ
Red K	192.168.3.136 /28	(dir.connected)	ifR5RedK
Red H	192.168.3.192 /30	(dir.connected)	ifR5RedH
Red L	192.168.3.152 /28	IPR6ifRedK	ifR5RedK
Zona 3'	192.168.3.0 /25	IPR1ifRedH	ifR5RedH



Ejemplo

Tabla de rutas de R6:

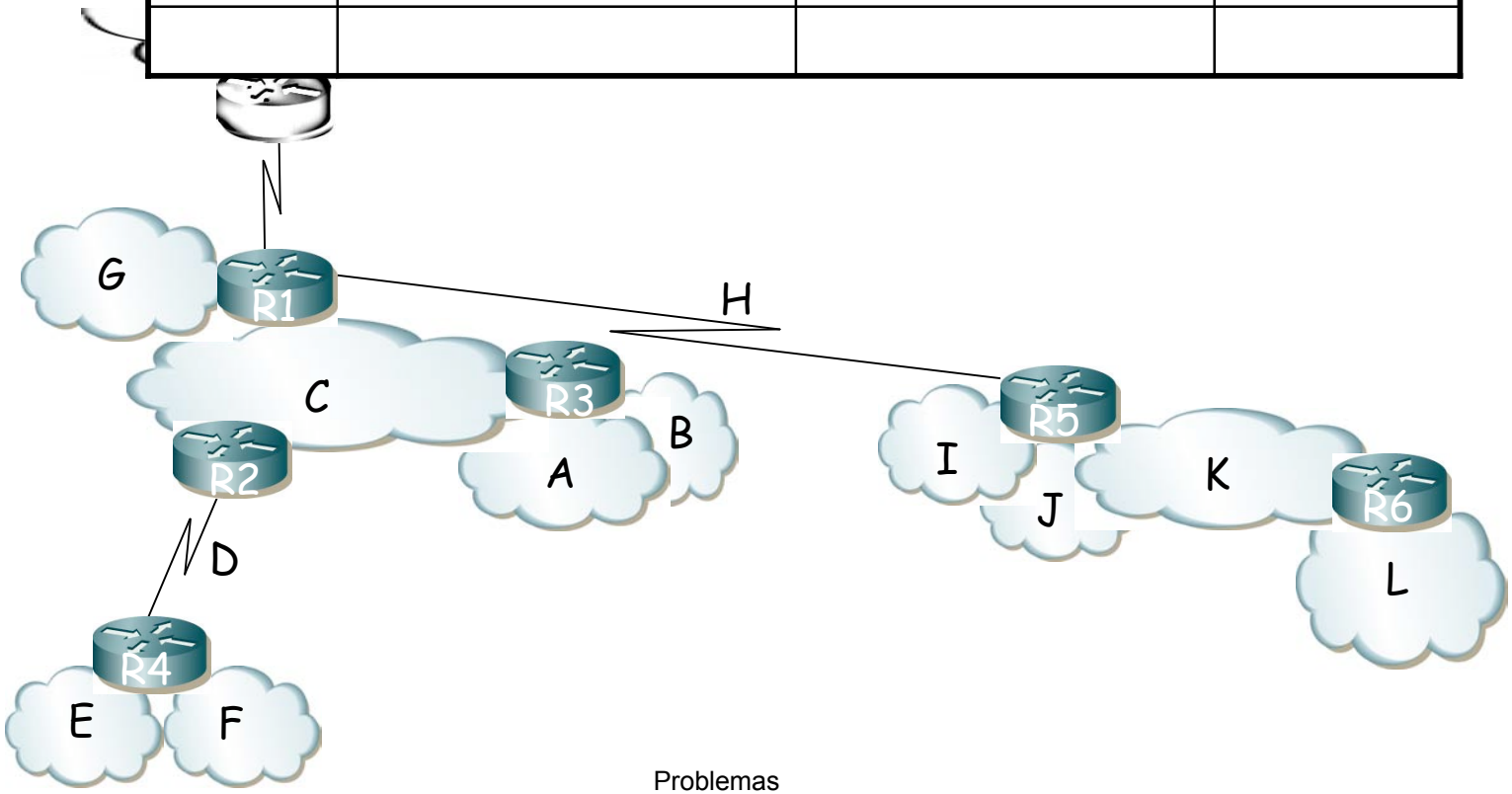
Destino		Next-hop	Interfaz



Ejemplo

Tabla de rutas de R6:

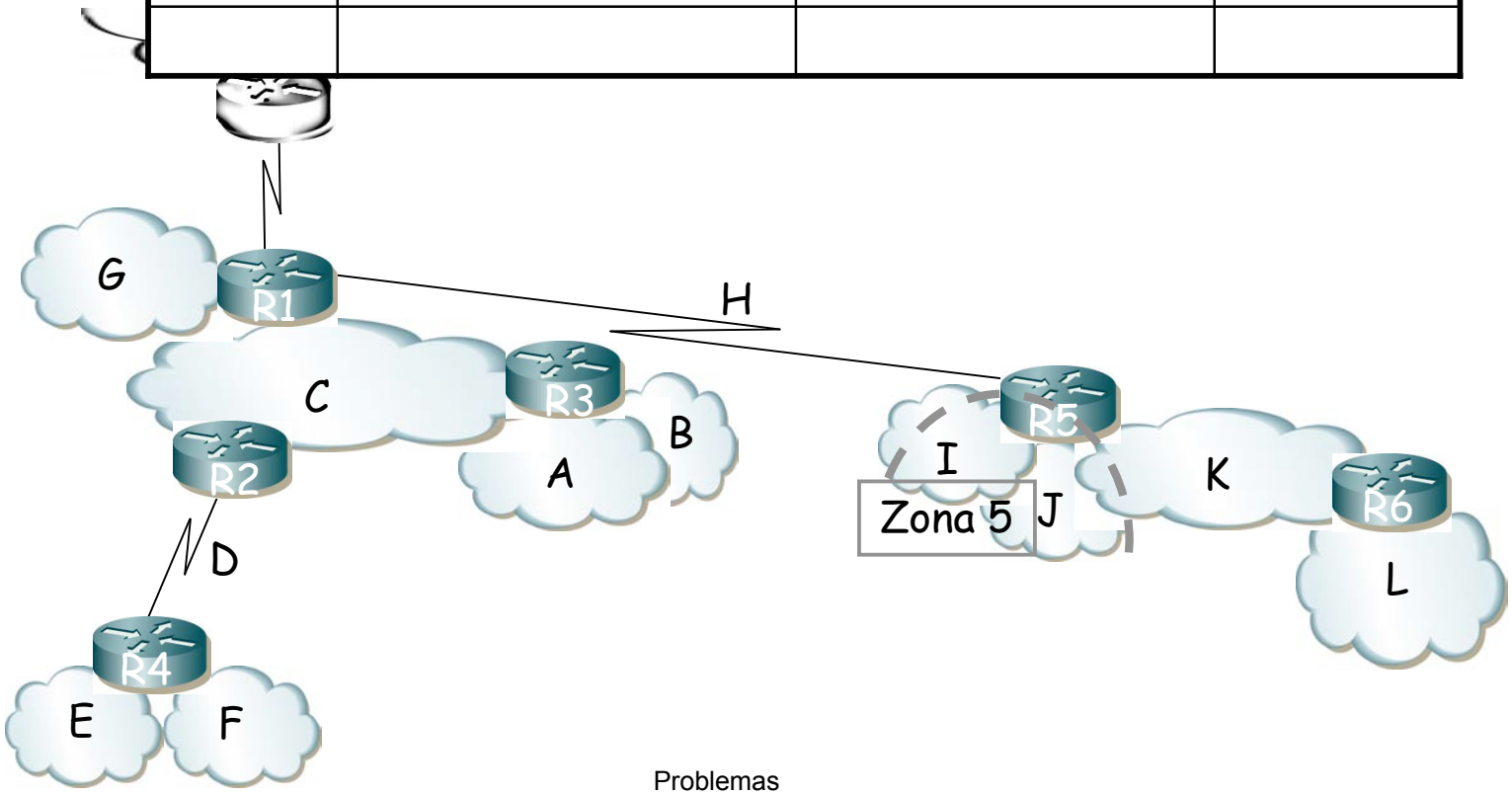
Destino		Next-hop	Interfaz
Red K	192.168.3.136 /28	(dir.connected)	ifR6RedK
Red L	192.168.3.152 /28	(dir.connected)	ifR6RedL



Ejemplo

Tabla de rutas de R6:

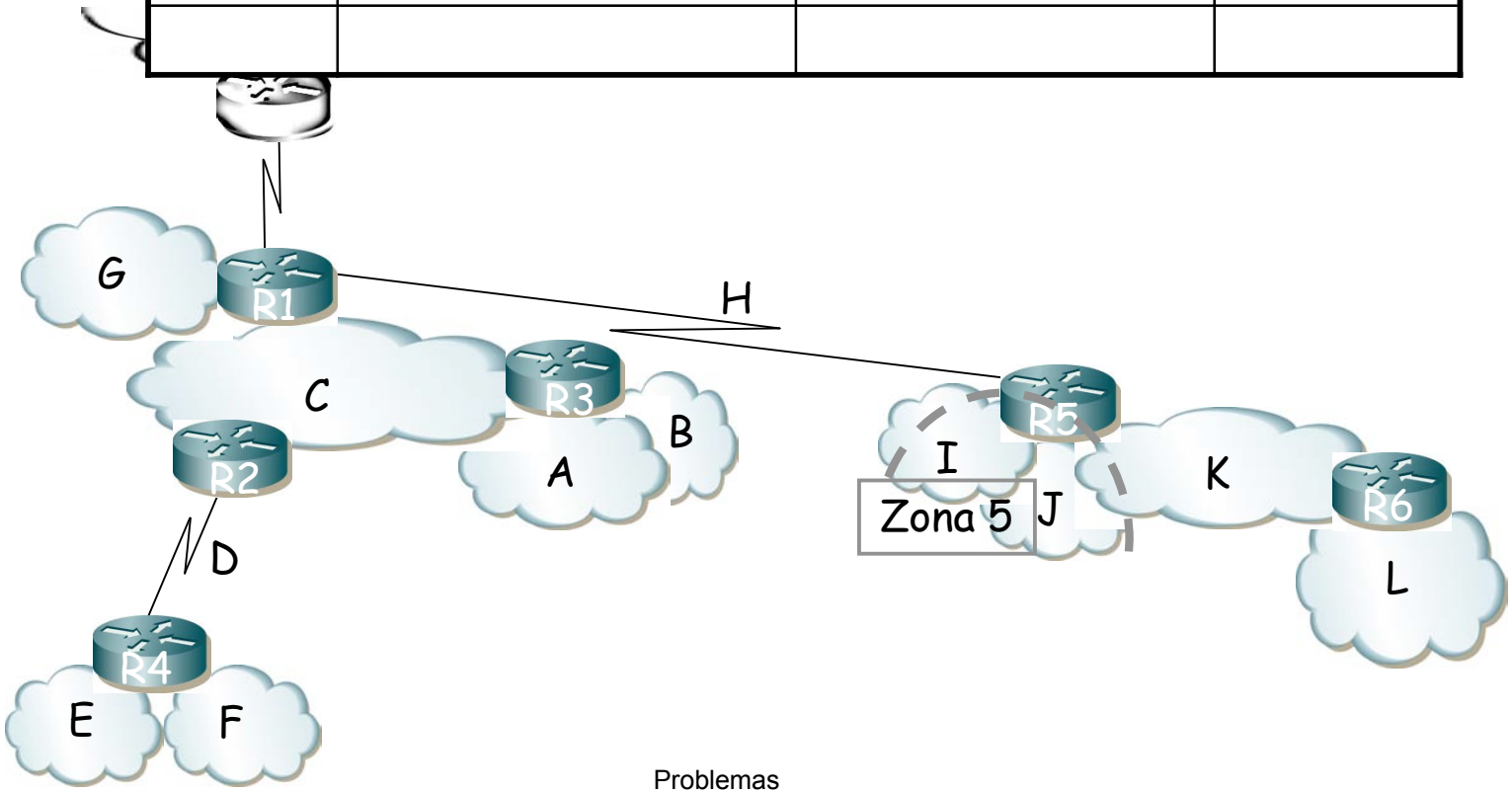
Destino		Next-hop	Interfaz
Red K	192.168.3.136 /28	(dir.connected)	ifR6RedK
Red L	192.168.3.152 /28	(dir.connected)	ifR6RedL
Zona 5	192.168.3.128 /27	IPR5ifRedK	ifR6RedK



Ejemplo

Tabla de rutas de R6:

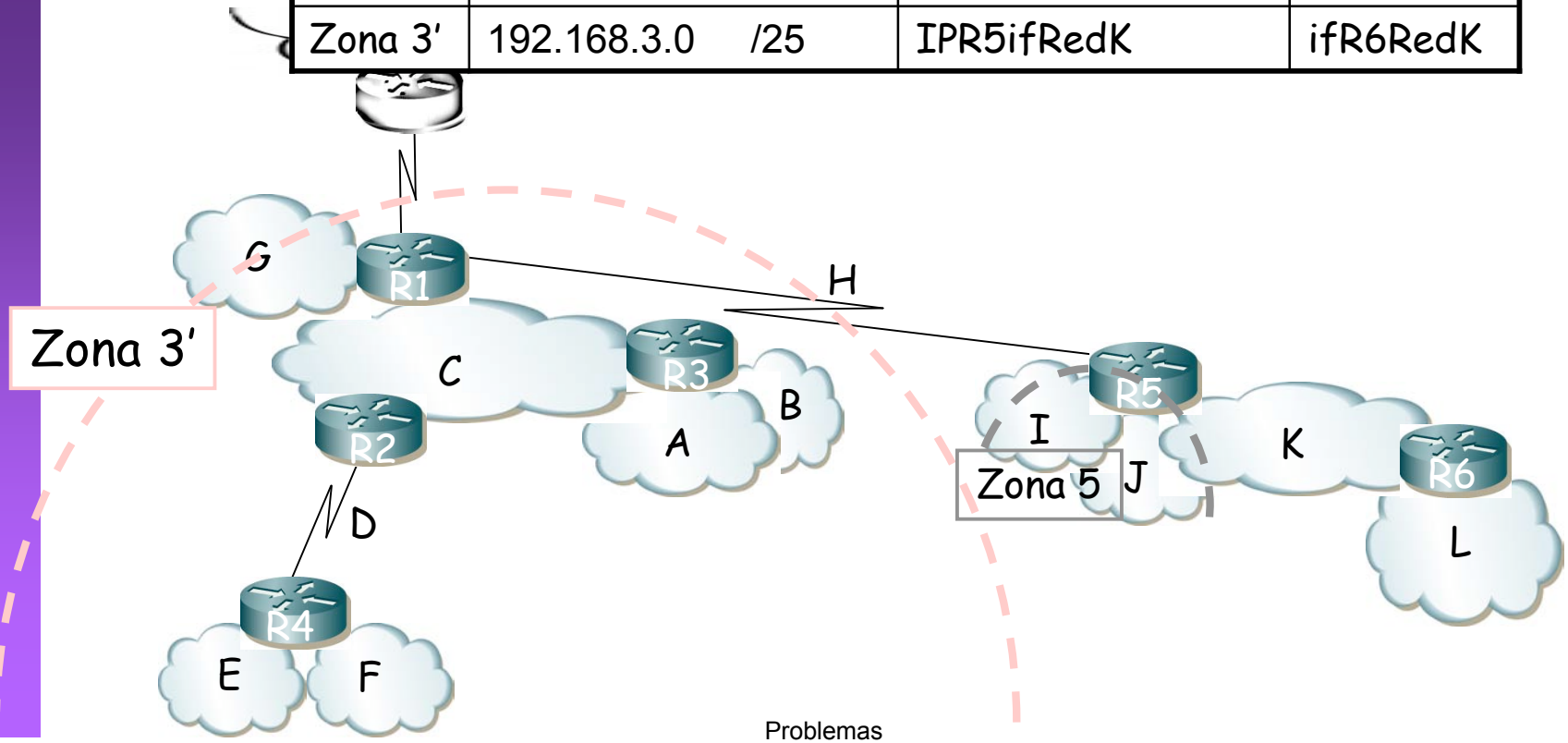
Destino		Next-hop	Interfaz
Red K	192.168.3.136 /28	(dir.connected)	ifR6RedK
Red L	192.168.3.152 /28	(dir.connected)	ifR6RedL
Zona 5	192.168.3.128 /27	IPR5ifRedK	ifR6RedK
Red H	192.168.3.192 /30	IPR5ifRedK	ifR6RedK



Ejemplo

Tabla de rutas de R6:

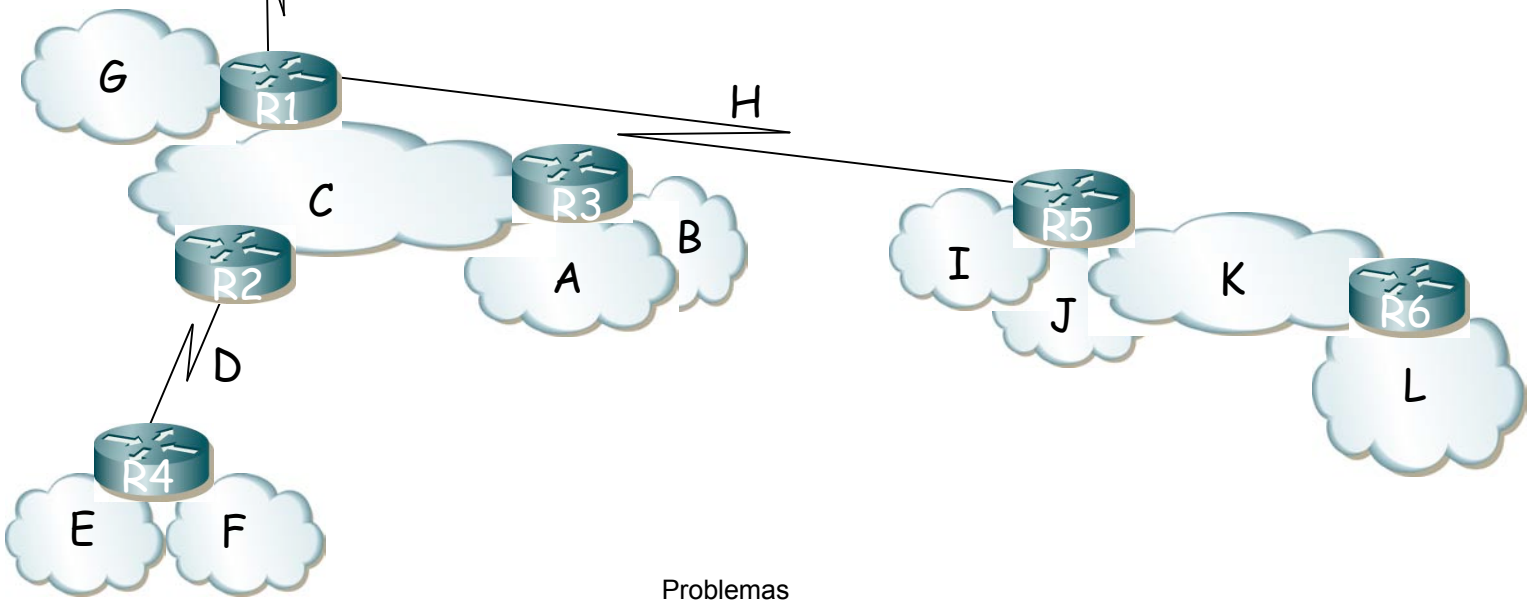
Destino		Next-hop	Interfaz
Red K	192.168.3.136 /28	(dir.connected)	ifR6RedK
Red L	192.168.3.152 /28	(dir.connected)	ifR6RedL
Zona 5	192.168.3.128 /27	IPR5ifRedK	ifR6RedK
Red H	192.168.3.192 /30	IPR5ifRedK	ifR6RedK
Zona 3'	192.168.3.0 /25	IPR5ifRedK	ifR6RedK



Ejemplo

Tabla de rutas de R3:

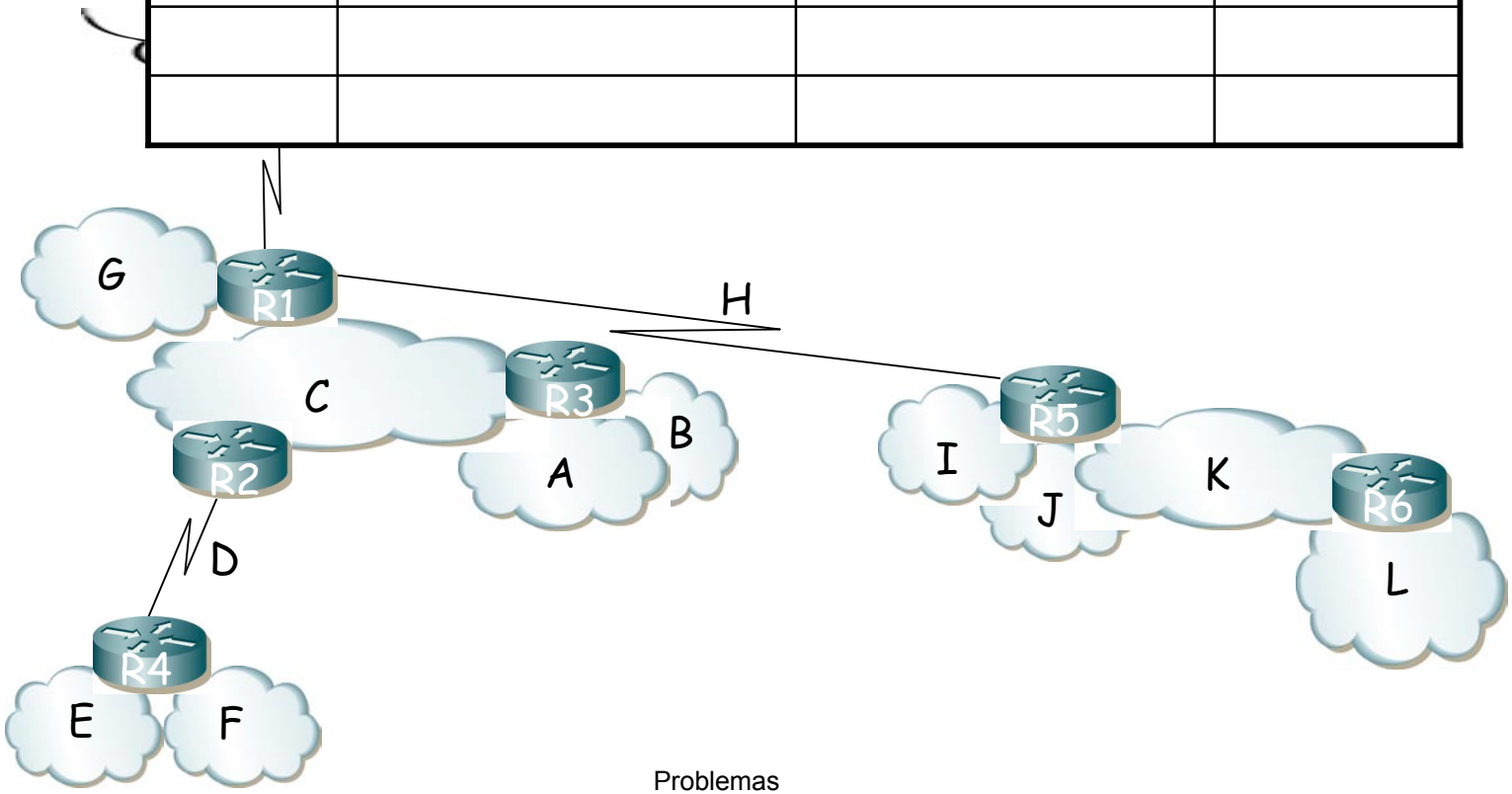
Destino		Next-hop	Interfaz



Ejemplo

Tabla de rutas de R3:

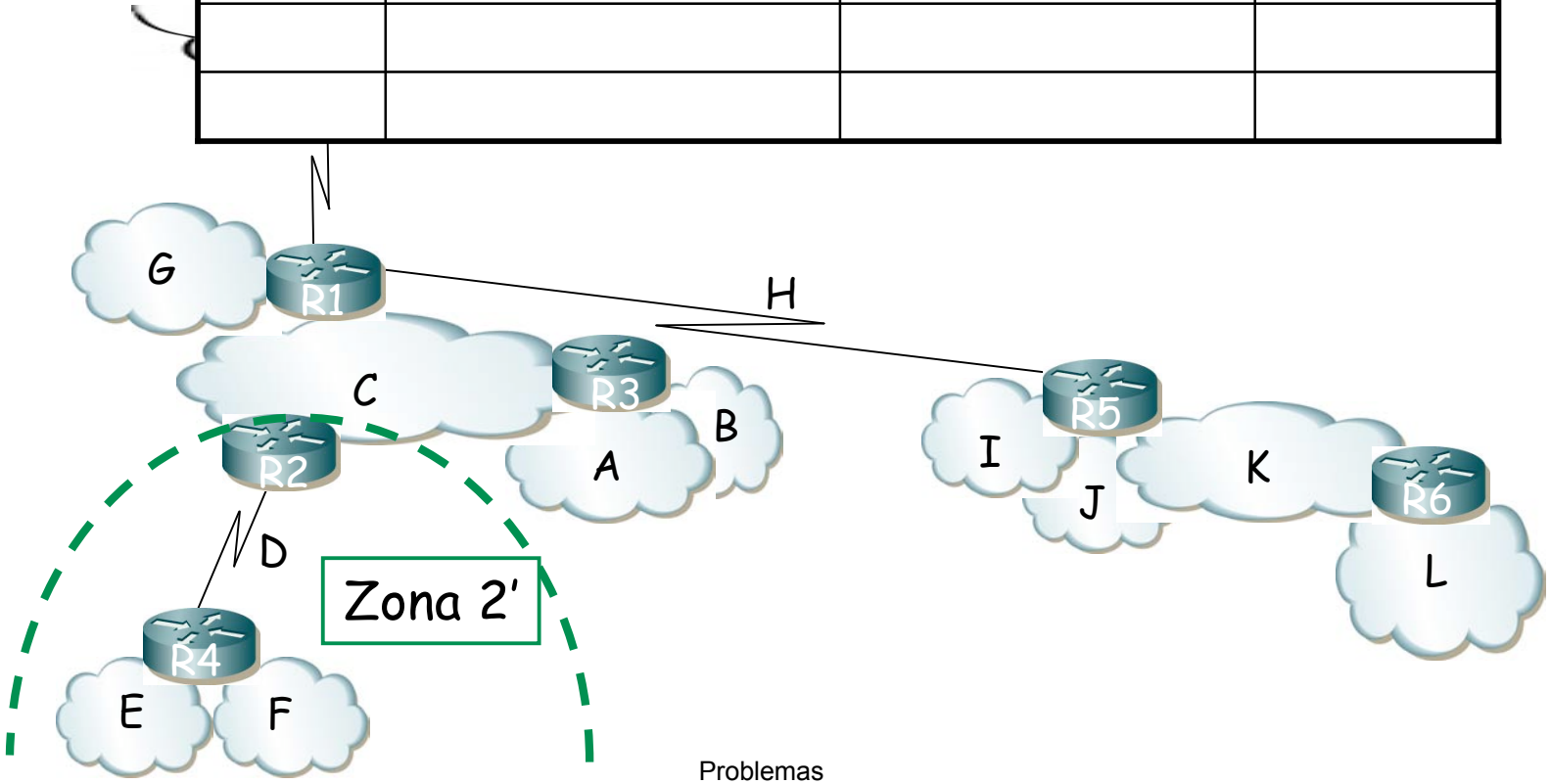
Destino		Next-hop	Interfaz
Red A	192.168.3.0 /28	(dir.connected)	ifR3RedA
Red B	192.168.3.16 /28	(dir.connected)	ifR3RedB
Red C	192.168.3.32 /28	(dir.connected)	ifR3RedC



Ejemplo

Tabla de rutas de R3:

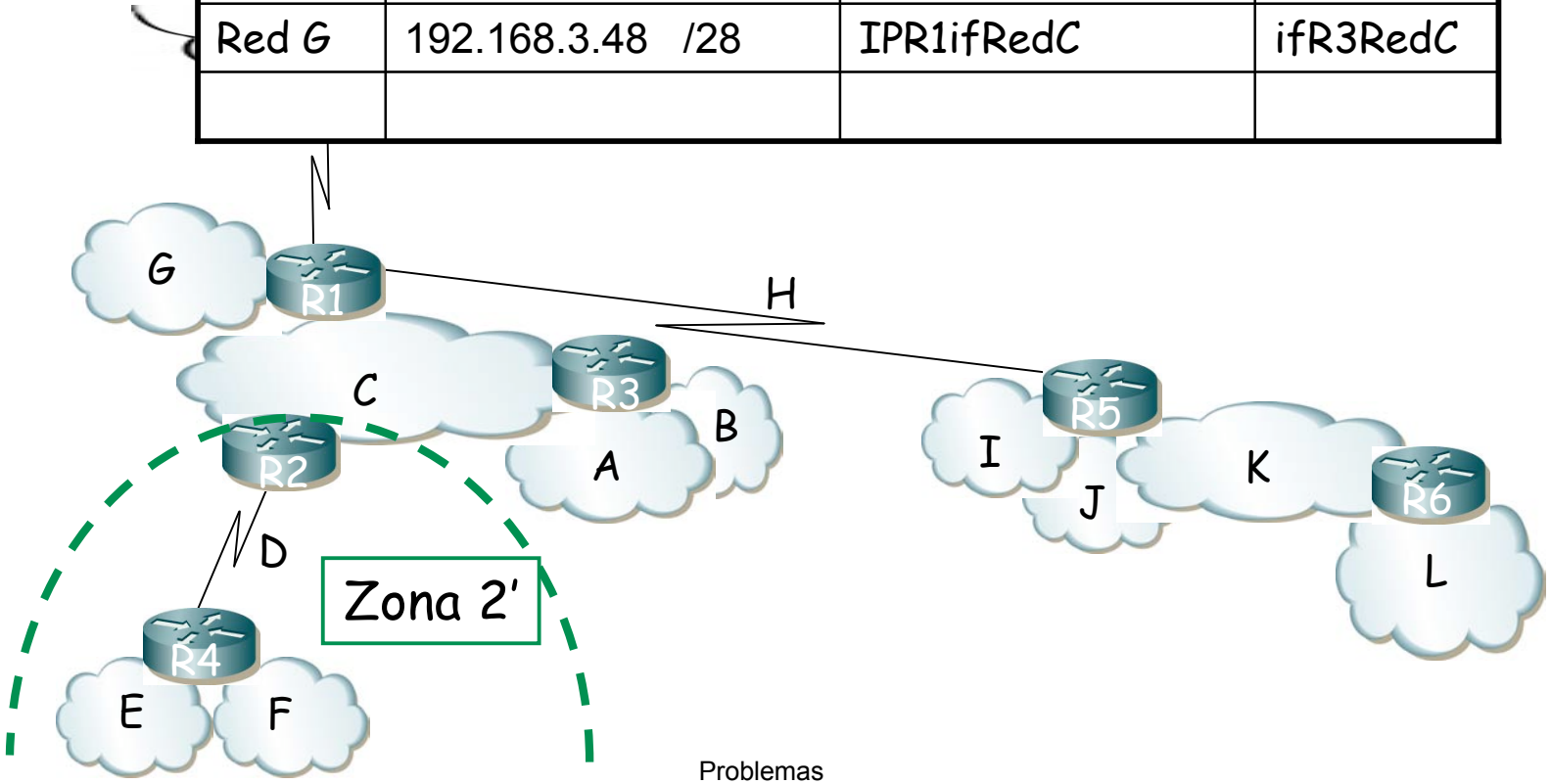
Destino		Next-hop	Interfaz
Red A	192.168.3.0 /28	(dir.connected)	ifR3RedA
Red B	192.168.3.16 /28	(dir.connected)	ifR3RedB
Red C	192.168.3.32 /28	(dir.connected)	ifR3RedC
Zona 2'	192.168.3.64 /26	IPR2ifRedC	ifR3RedC



Ejemplo

Tabla de rutas de R3:

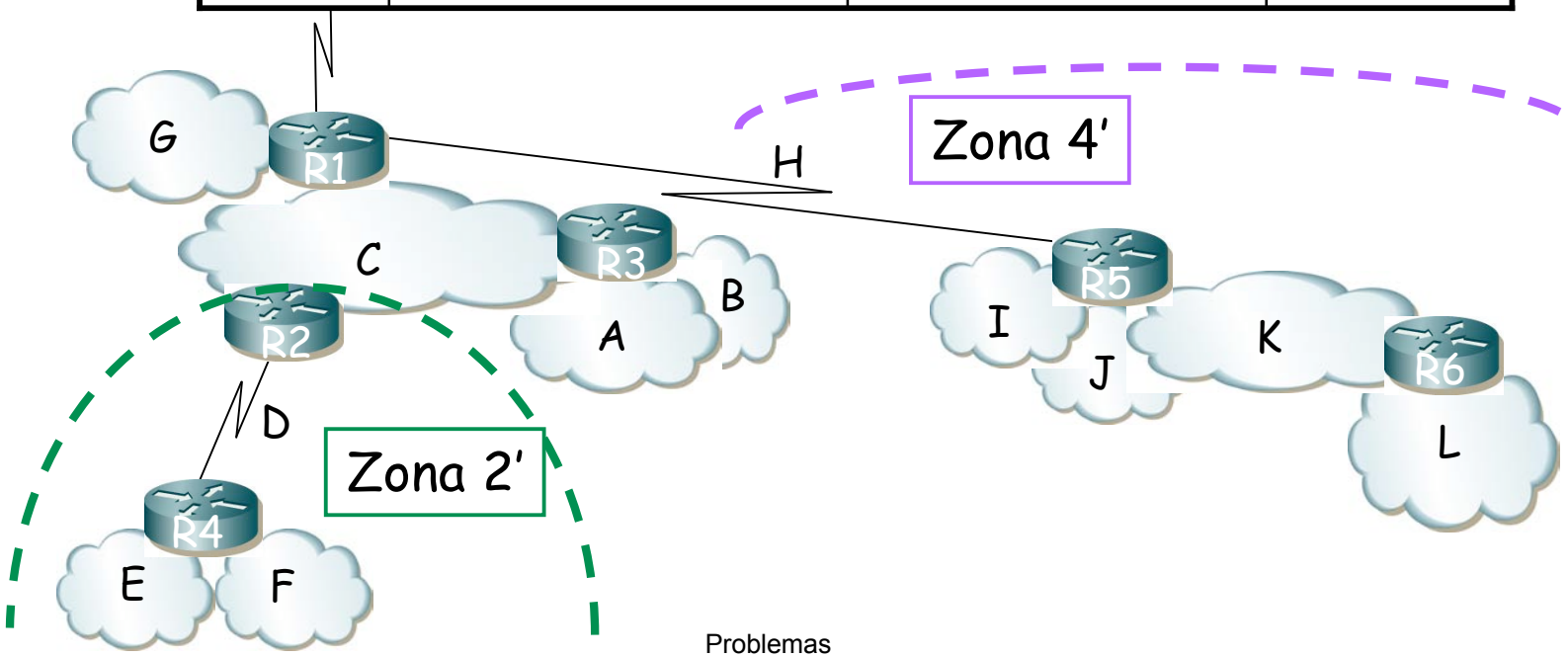
Destino		Next-hop	Interfaz
Red A	192.168.3.0 /28	(dir.connected)	ifR3RedA
Red B	192.168.3.16 /28	(dir.connected)	ifR3RedB
Red C	192.168.3.32 /28	(dir.connected)	ifR3RedC
Zona 2'	192.168.3.64 /26	IPR2ifRedC	ifR3RedC
Red G	192.168.3.48 /28	IPR1ifRedC	ifR3RedC



Ejemplo

Tabla de rutas de R3:

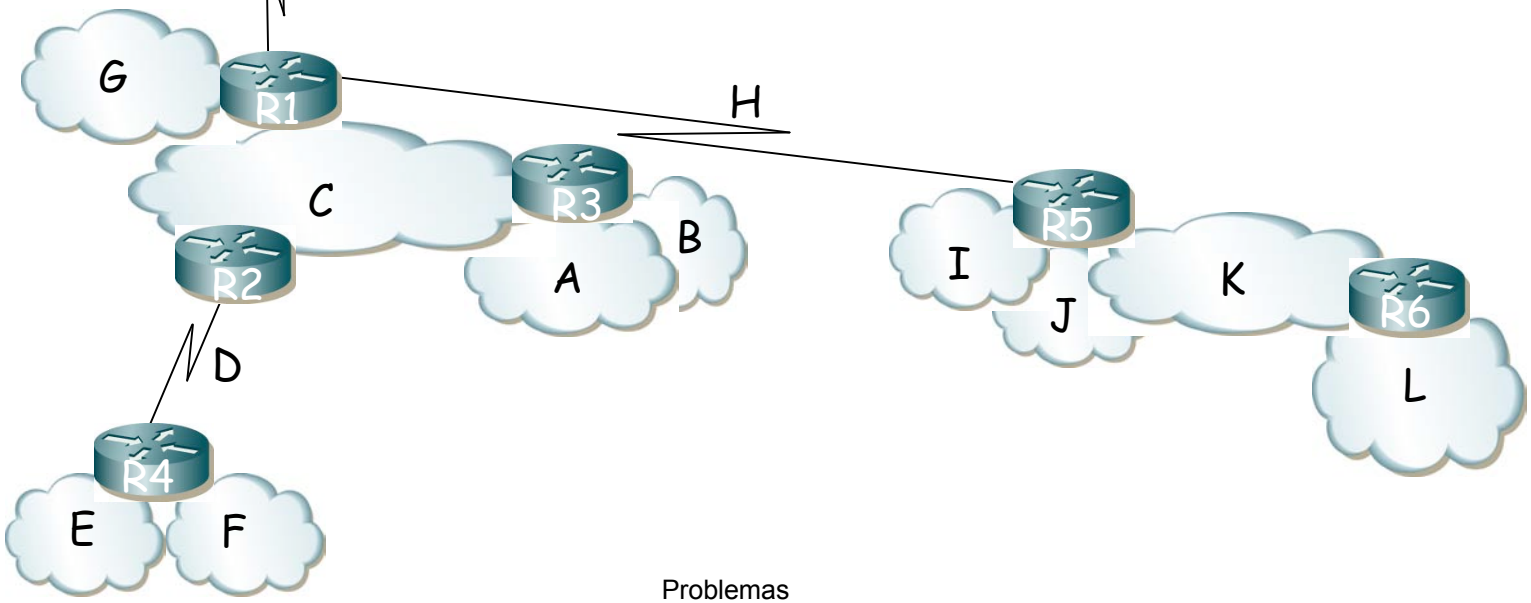
Destino		Next-hop	Interfaz
Red A	192.168.3.0 /28	(dir.connected)	ifR3RedA
Red B	192.168.3.16 /28	(dir.connected)	ifR3RedB
Red C	192.168.3.32 /28	(dir.connected)	ifR3RedC
Zona 2'	192.168.3.64 /26	IPR2ifRedC	ifR3RedC
Red G	192.168.3.48 /28	IPR1ifRedC	ifR3RedC
Zona 4'	192.168.3.128 /25	IPR1ifRedC	ifR3RedC



Ejemplo

Tabla de rutas de R2:

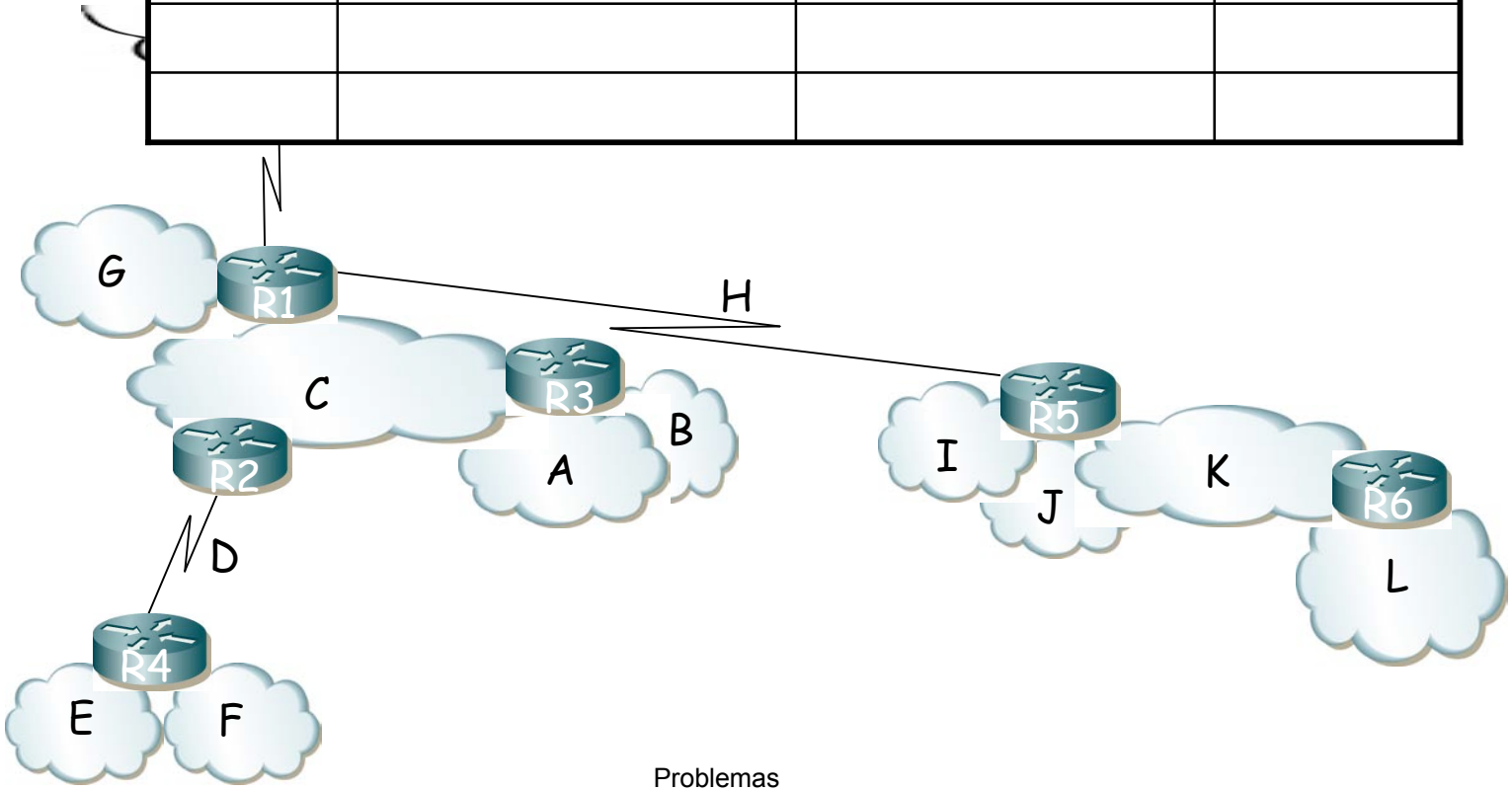
Destino		Next-hop	Interfaz



Ejemplo

Tabla de rutas de R2:

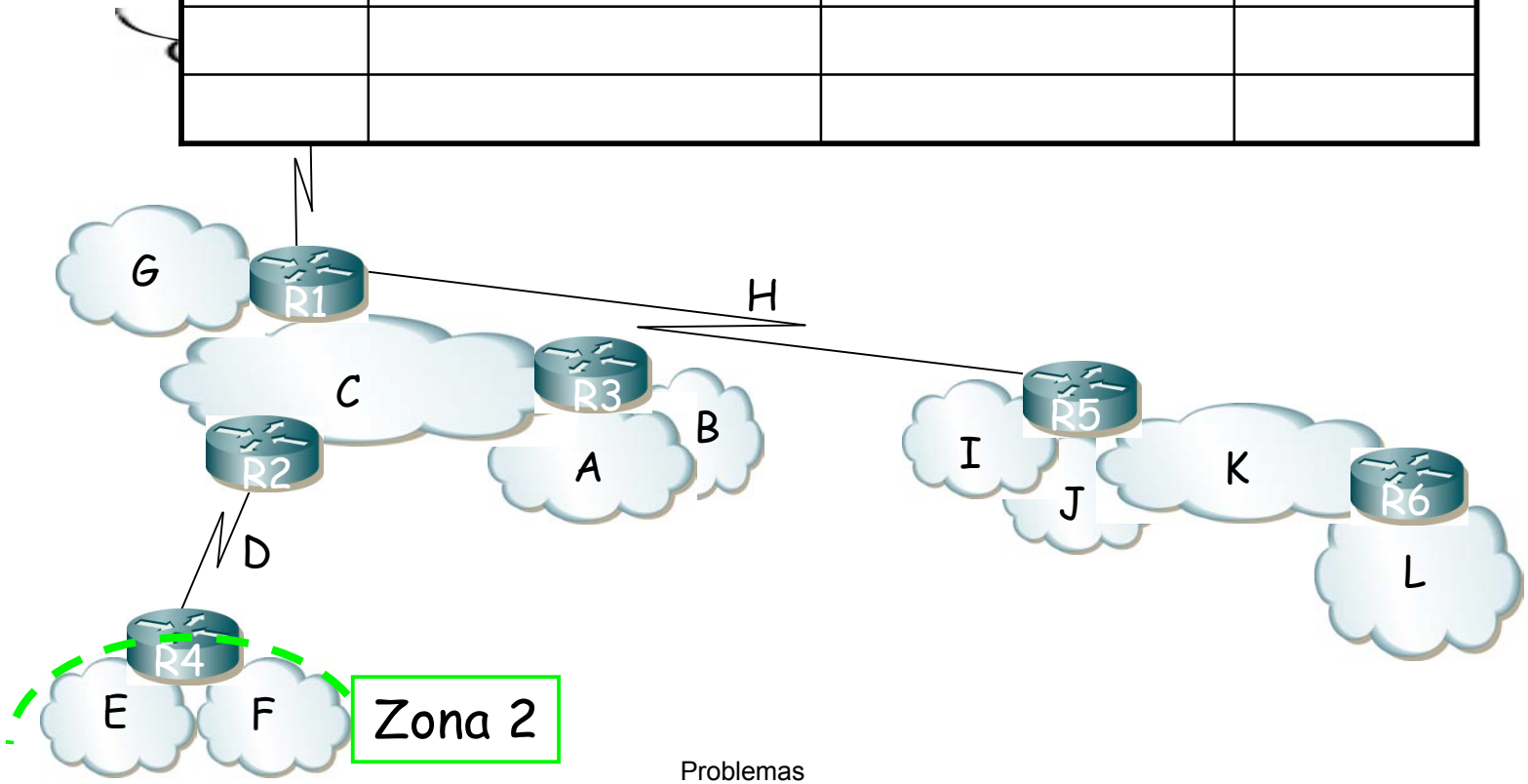
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR2RedD
Red C	192.168.3.32 /28	(dir.connected)	ifR2RedC



Ejemplo

Tabla de rutas de R2:

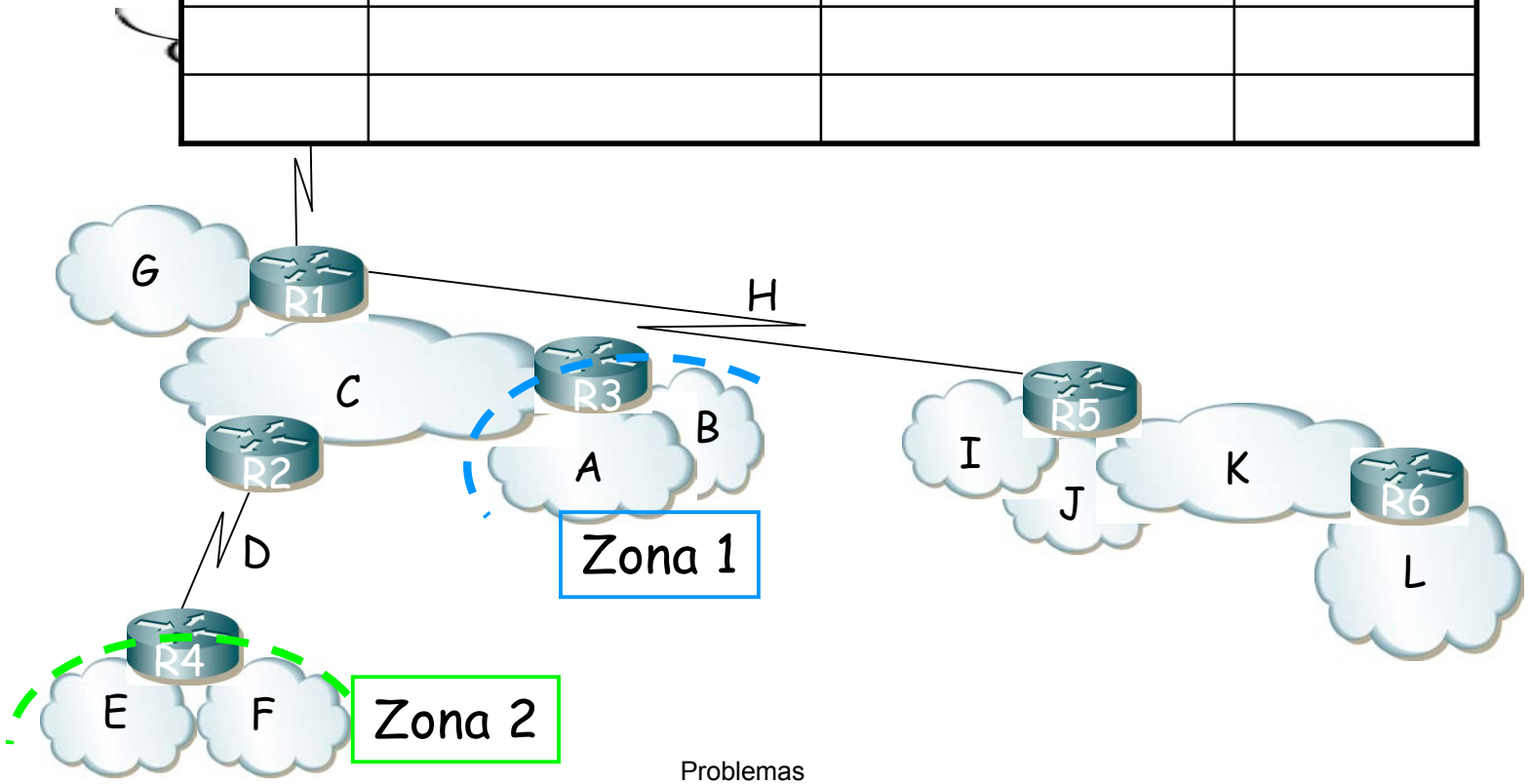
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR2RedD
Red C	192.168.3.32 /28	(dir.connected)	ifR2RedC
Zona 2	192.168.3.64 /27	IPR4ifRedD	ifR2RedD



Ejemplo

Tabla de rutas de R2:

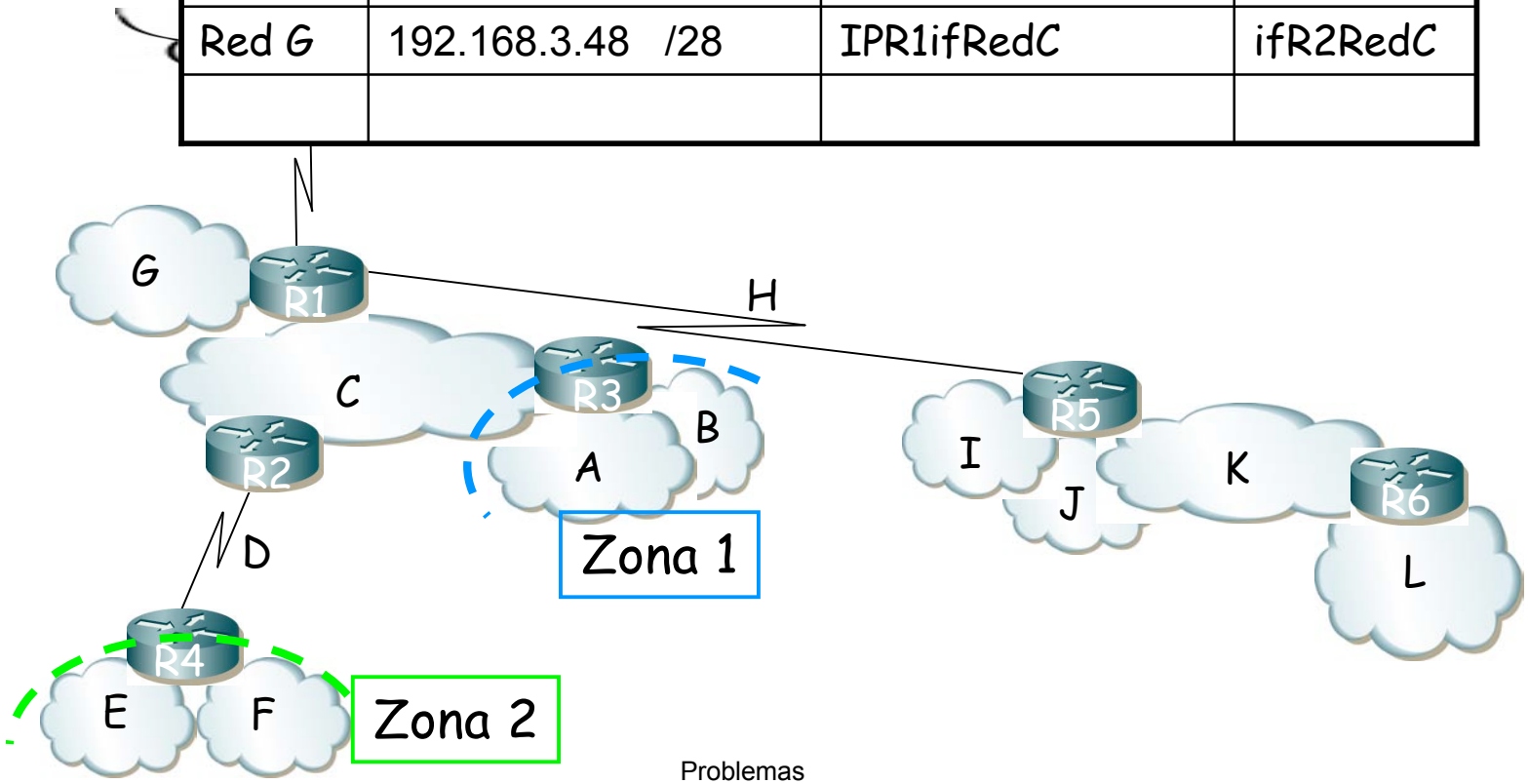
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR2RedD
Red C	192.168.3.32 /28	(dir.connected)	ifR2RedC
Zona 2	192.168.3.64 /27	IPR4ifRedD	ifR2RedD
Zona 1	192.168.3.0 /27	IPR3ifRedC	ifR2RedC



Ejemplo

Tabla de rutas de R2:

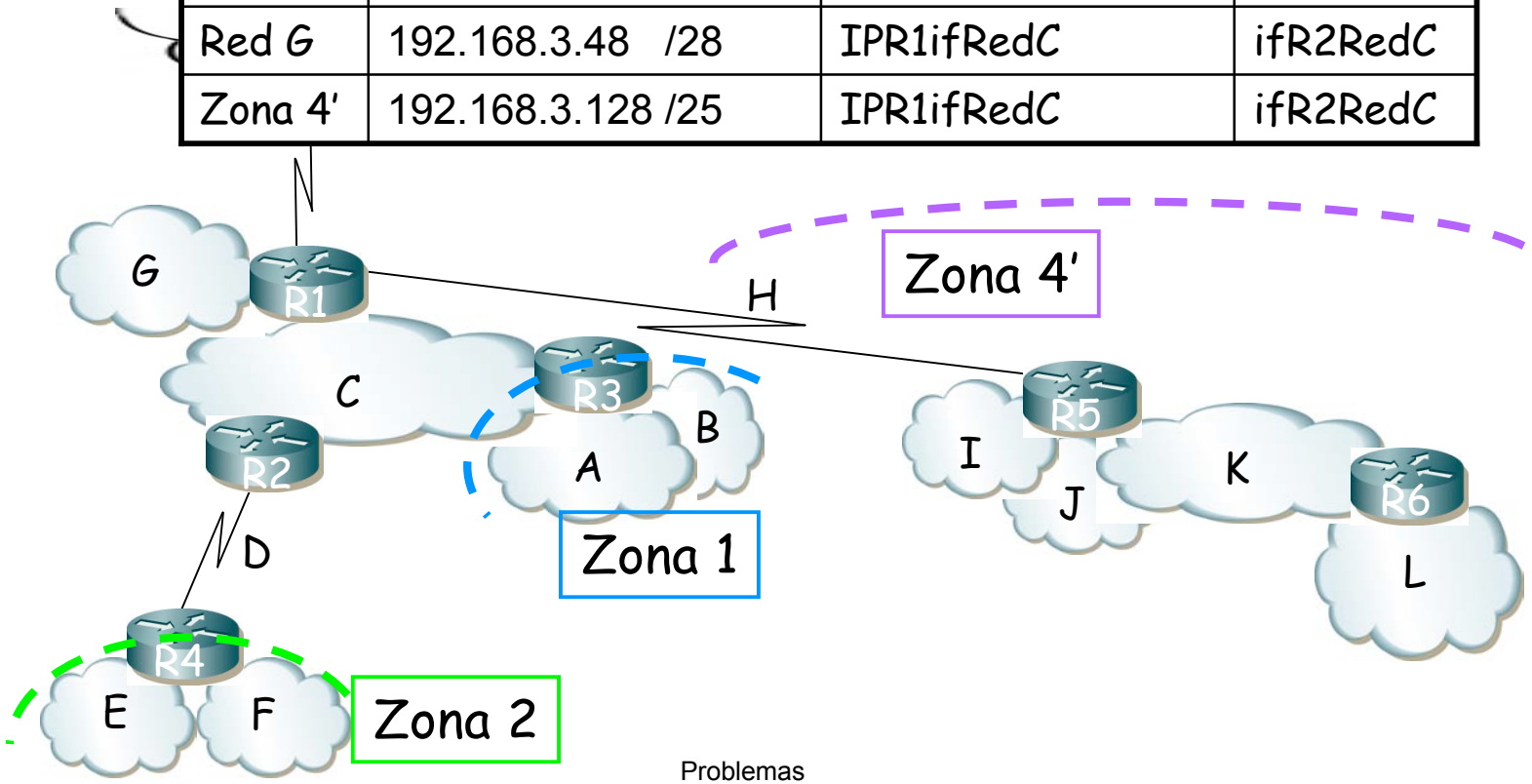
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR2RedD
Red C	192.168.3.32 /28	(dir.connected)	ifR2RedC
Zona 2	192.168.3.64 /27	IPR4ifRedD	ifR2RedD
Zona 1	192.168.3.0 /27	IPR3ifRedC	ifR2RedC
Red G	192.168.3.48 /28	IPR1ifRedC	ifR2RedC



Ejemplo

Tabla de rutas de R2:

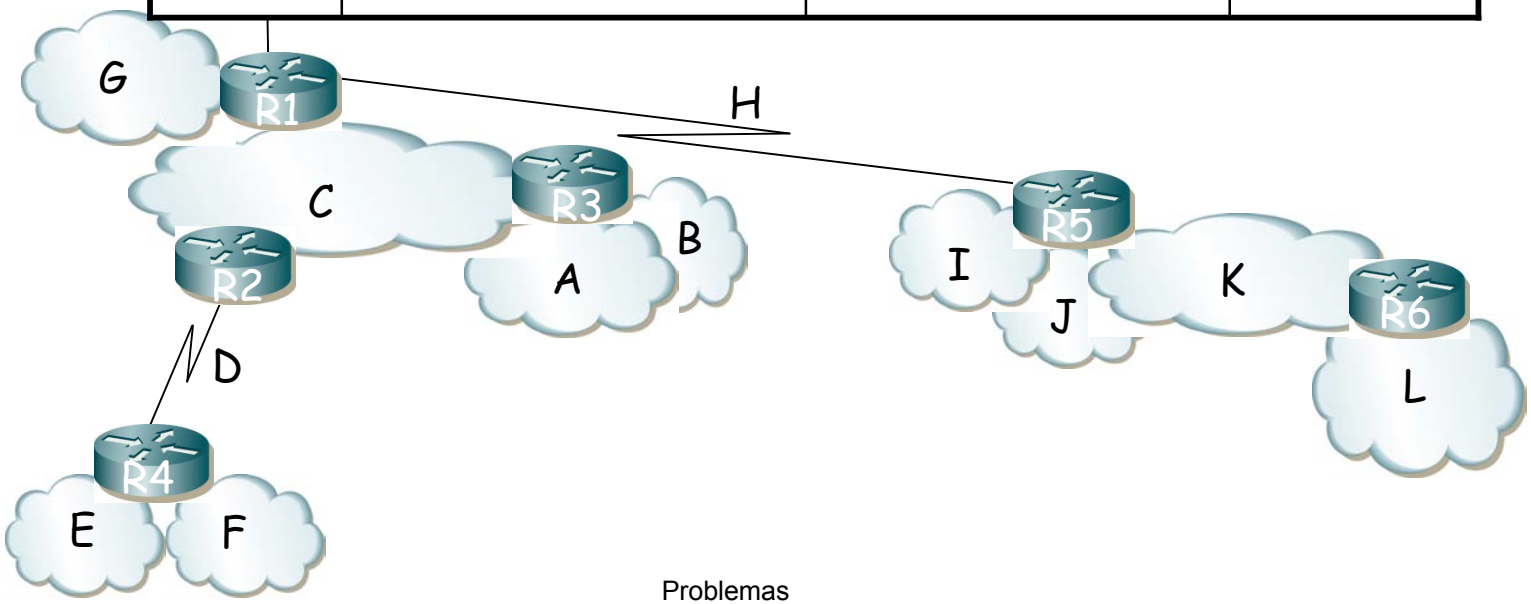
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR2RedD
Red C	192.168.3.32 /28	(dir.connected)	ifR2RedC
Zona 2	192.168.3.64 /27	IPR4ifRedD	ifR2RedD
Zona 1	192.168.3.0 /27	IPR3ifRedC	ifR2RedC
Red G	192.168.3.48 /28	IPR1ifRedC	ifR2RedC
Zona 4'	192.168.3.128 /25	IPR1ifRedC	ifR2RedC



Ejemplo

Tabla de rutas de R4:

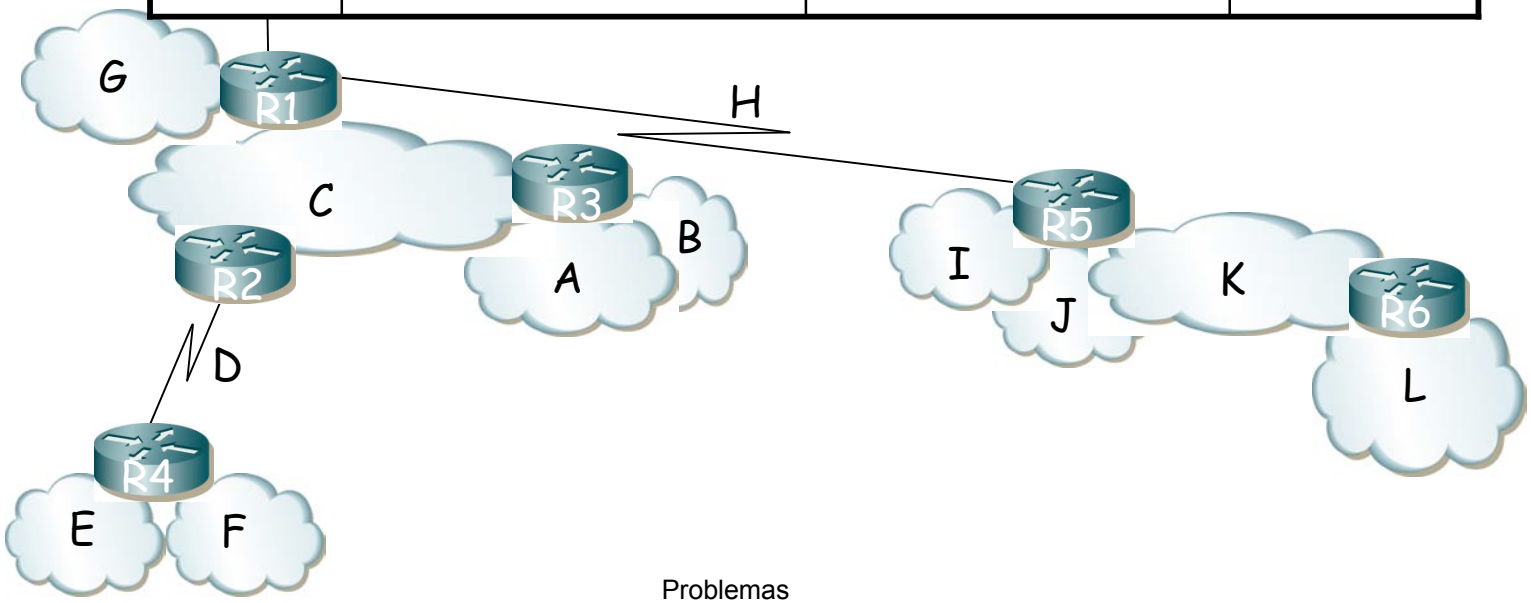
Destino		Next-hop	Interfaz



Ejemplo

Tabla de rutas de R4:

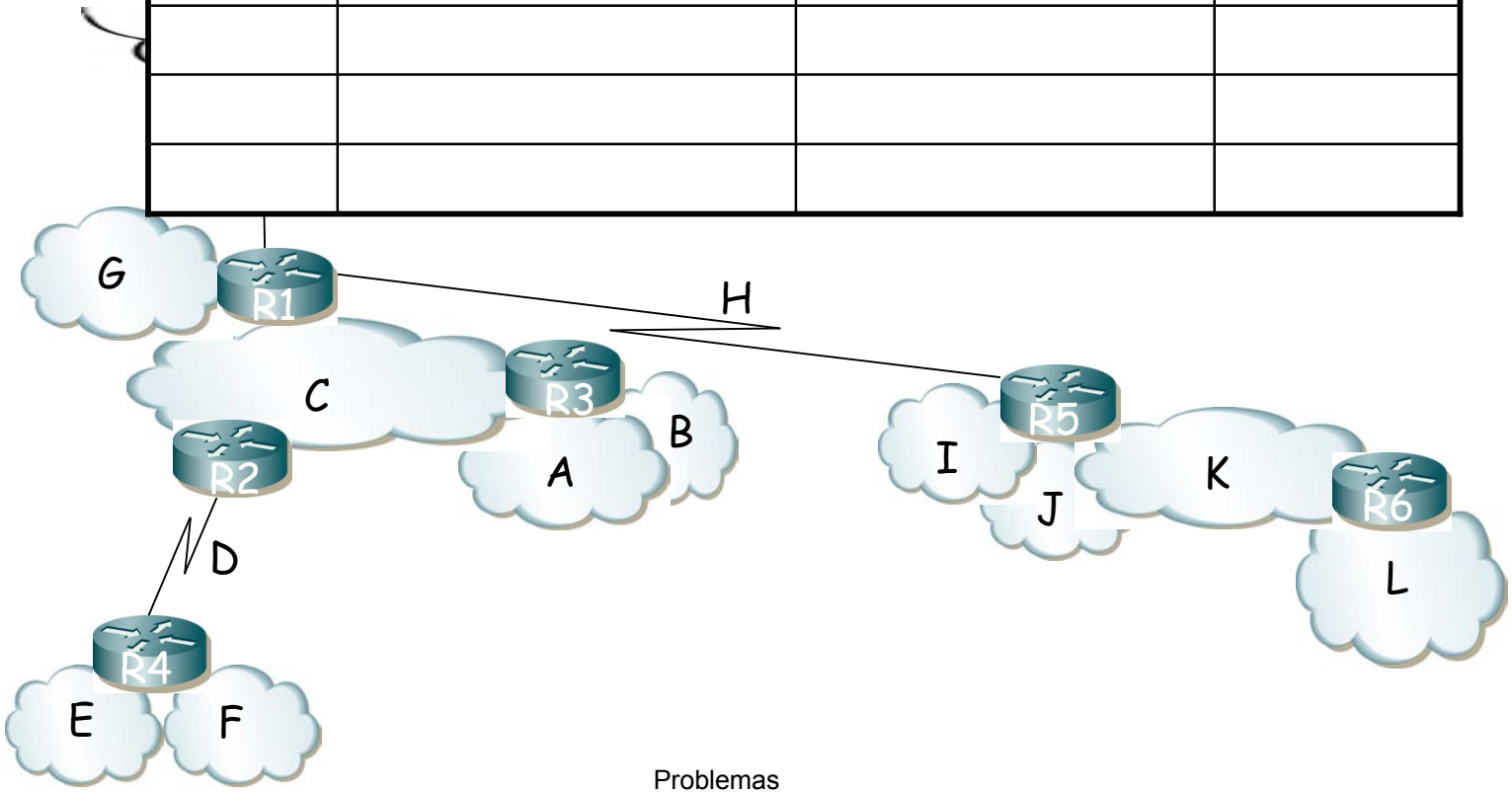
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR4RedD
Red E	192.168.3.64 /28	(dir.connected)	ifR4RedE
Red F	192.168.3.80 /28	(dir.connected)	ifR4RedF



Ejemplo

Tabla de rutas de R4:

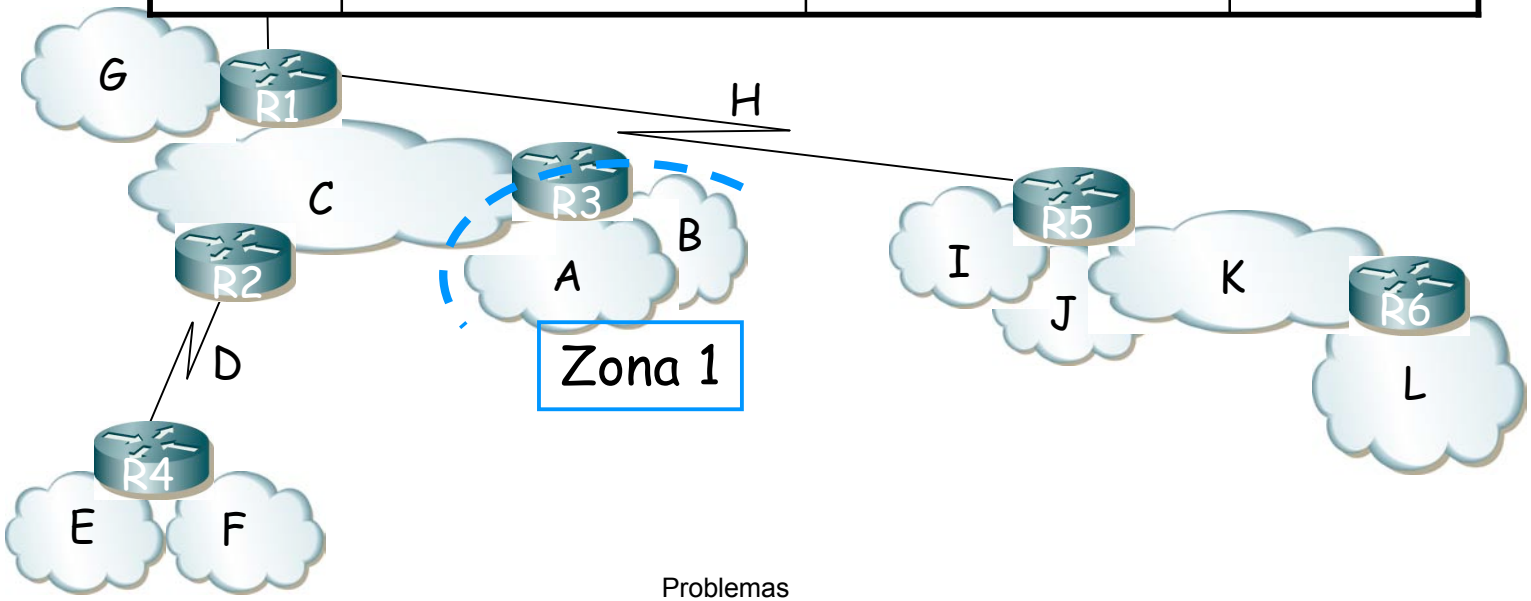
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR4RedD
Red E	192.168.3.64 /28	(dir.connected)	ifR4RedE
Red F	192.168.3.80 /28	(dir.connected)	ifR4RedF
Red C	192.168.3.32 /28	IPR2ifRedD	ifR4RedD



Ejemplo

Tabla de rutas de R4:

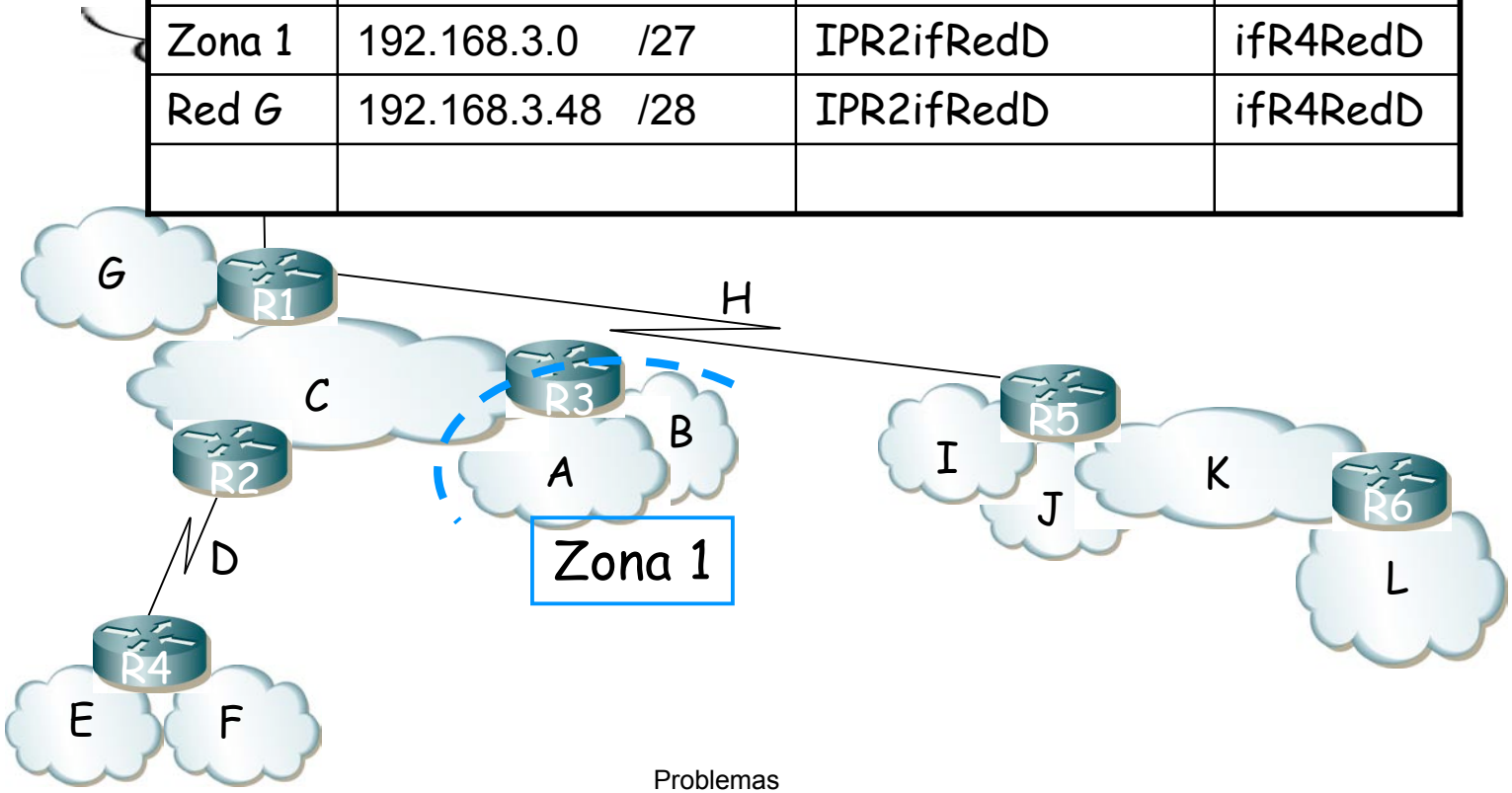
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR4RedD
Red E	192.168.3.64 /28	(dir.connected)	ifR4RedE
Red F	192.168.3.80 /28	(dir.connected)	ifR4RedF
Red C	192.168.3.32 /28	IPR2ifRedD	ifR4RedD
Zona 1	192.168.3.0 /27	IPR2ifRedD	ifR4RedD



Ejemplo

Tabla de rutas de R4:

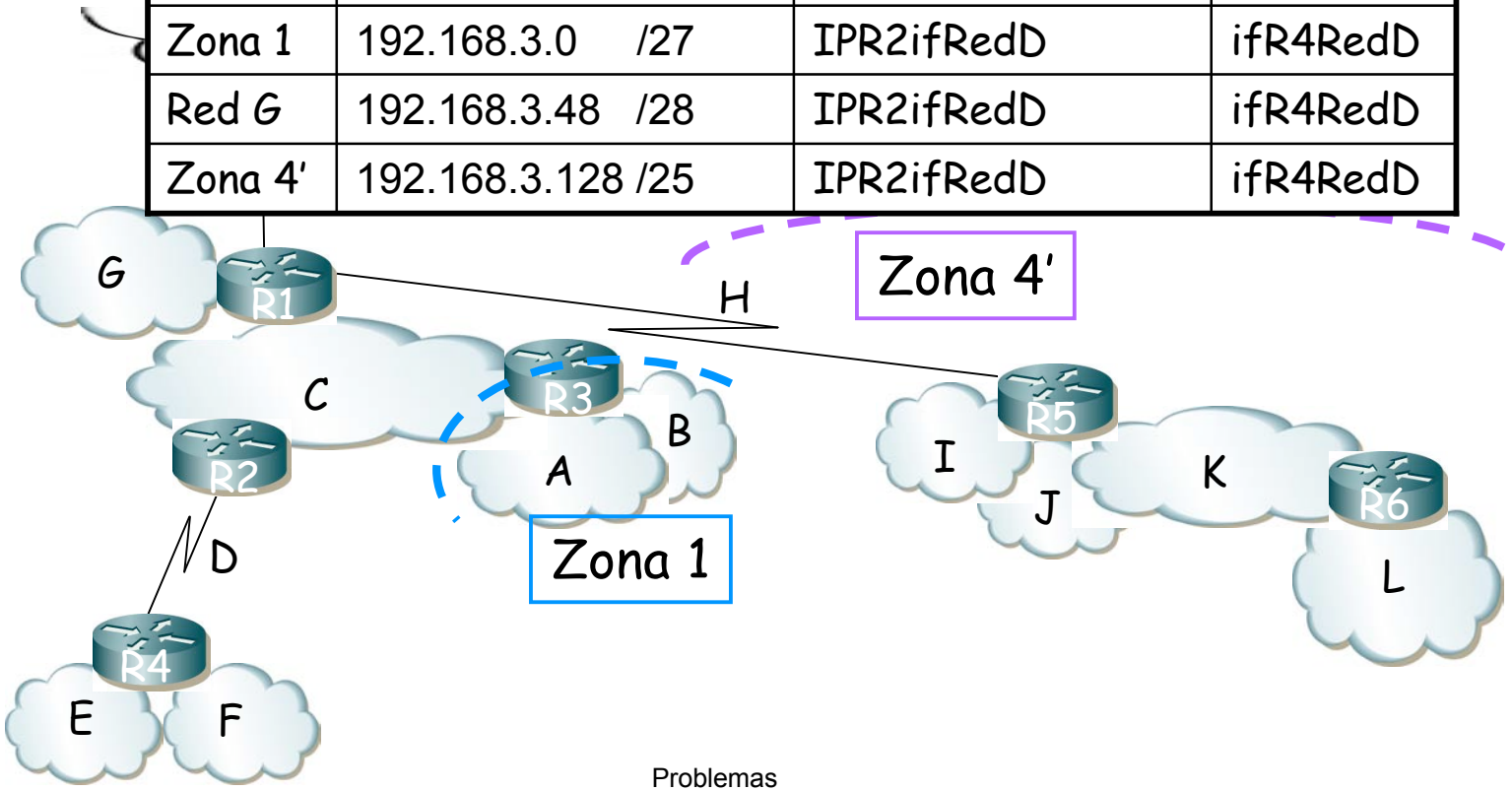
Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR4RedD
Red E	192.168.3.64 /28	(dir.connected)	ifR4RedE
Red F	192.168.3.80 /28	(dir.connected)	ifR4RedF
Red C	192.168.3.32 /28	IPR2ifRedD	ifR4RedD
Zona 1	192.168.3.0 /27	IPR2ifRedD	ifR4RedD
Red G	192.168.3.48 /28	IPR2ifRedD	ifR4RedD



Ejemplo

Tabla de rutas de R4:

Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR4RedD
Red E	192.168.3.64 /28	(dir.connected)	ifR4RedE
Red F	192.168.3.80 /28	(dir.connected)	ifR4RedF
Red C	192.168.3.32 /28	IPR2ifRedD	ifR4RedD
Zona 1	192.168.3.0 /27	IPR2ifRedD	ifR4RedD
Red G	192.168.3.48 /28	IPR2ifRedD	ifR4RedD
Zona 4'	192.168.3.128 /25	IPR2ifRedD	ifR4RedD

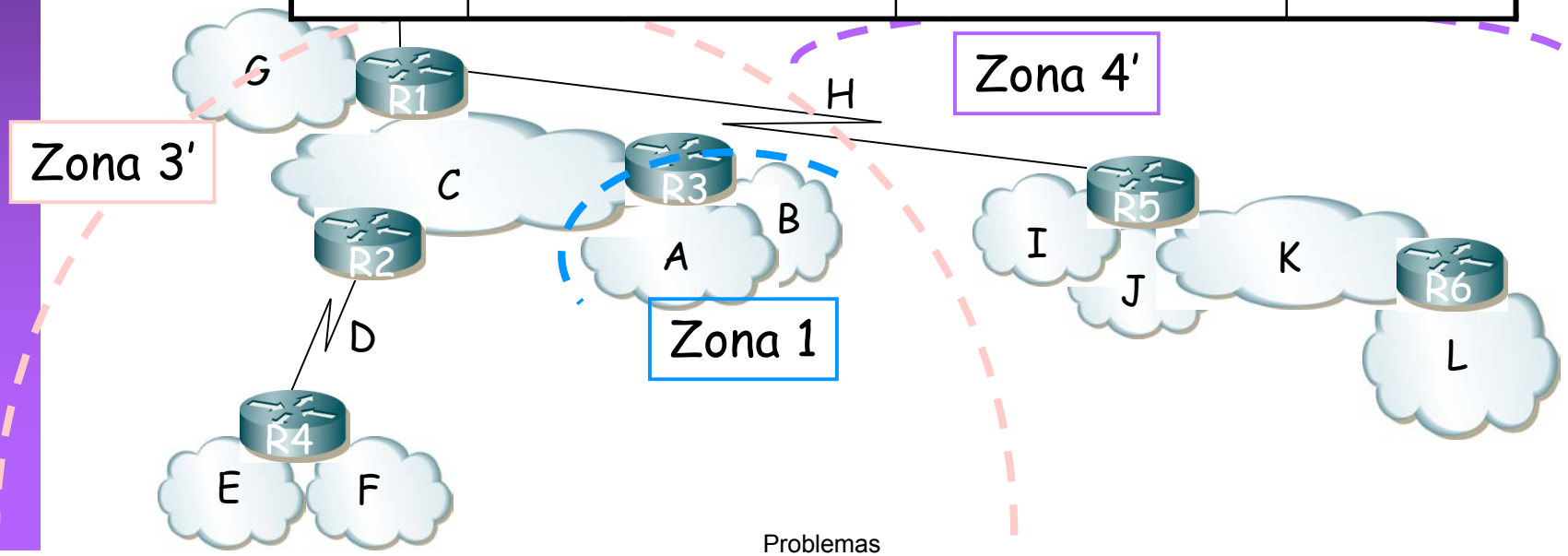


Ejemplo

Mejora 1

Tabla de rutas de R4:

Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR4RedD
Red E	192.168.3.64 /28	(dir.connected)	ifR4RedE
Red F	192.168.3.80 /28	(dir.connected)	ifR4RedF
Zona 3'	192.168.3.0 /25	IPR2ifRedD	ifR4RedD
Zona 4'	192.168.3.128 /25	IPR2ifRedD	ifR4RedD

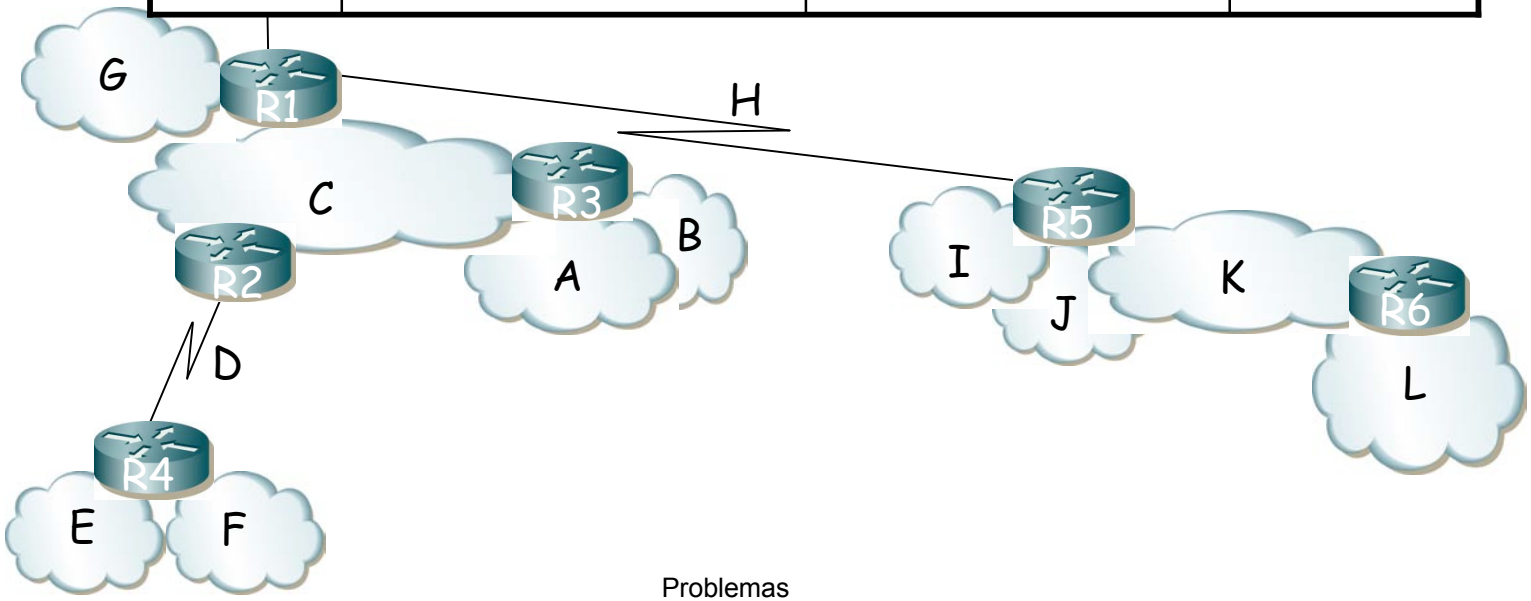


Ejemplo

Mejora 2

Tabla de rutas de R4:

Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR4RedD
Red E	192.168.3.64 /28	(dir.connected)	ifR4RedE
Red F	192.168.3.80 /28	(dir.connected)	ifR4RedF
Red	192.168.3.0 /24	IPR2ifRedD	ifR4RedD



Ejemplo

Mejora 3

Tabla de rutas de R4:

Destino		Next-hop	Interfaz
Red D	192.168.3.96 /30	(dir.connected)	ifR4RedD
Red E	192.168.3.64 /28	(dir.connected)	ifR4RedE
Red F	192.168.3.80 /28	(dir.connected)	ifR4RedF
(def.)	0.0.0.0 /0	IPR2ifRedD	ifR4RedD