

DIVISION

Find supplier numbers for suppliers who supply all parts

SP

snumber	pnumber	qty
s1	p1	100
s1	p2	300
s1	p3	150
s1	p4	200
s1	p5	200
s1	p6	180
s2	p1	400
s2	p2	300
s3	p2	150
s4	p3	100
s5	p5	400
s4	p4	600

SUPPLIER

PART

snumber	sname	city	status	pnumber	pname	city	color
s1	white	london	20	p1	bolt	london	white
s2	black	paris	25	p2	bolt	paris	black
s3	green	paris	21	p3	screw	paris	yellow
s4	black	london	15	p4	screw	paris	blue
s5	papas	athens	18	p5	bolt	rome	white
s6	pireli	rome	32	p6	bolt	athens	white

1. CARTESIAN PRODUCT

π snumber(supplier) * π pnumber(part)

snumber	pnumber
s1	p6
s5	p6
s2	p1
s4	p3
s6	p4
s5	p2
s3	p5
s1	p3
s2	p4
s6	p3
s3	p1
s4	p2
s5	p3
s4	p6
s6	p2
s3	p6
s1	p4
s2	p3
s4	p1
s6	p6
s3	p2
s5	p4
s4	p5
s2	p6
s3	p4
s1	p1
s2	p2
s6	p1
s3	p3
s5	p5
s1	p5
s4	p4
s6	p5
s5	p1
s1	p2
s2	p5

2. Suppliers Who do not supply all parts

π snumber(A - π snumber, pnumber(sp))

snumber
s4
s6
s3
s5
s2

3. Supplies who supply all parts

π snumber(supplier) – suppliersWhoDoNotSupplyAllParts

s3

snumber	pnumber
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s1	p6
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s5	p6
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s2	p1
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s4	p3
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s6	p4
----	----

s5	p2
----	----

s3	p5
----	----

s1	p3
----	----

s2	p4
----	----

s6	p3
----	----

s3	p1
----	----

s4	p2
----	----

s5	p3
----	----

s4	p6
----	----

s6	p2
----	----

s3	p6
----	----

s1	p4
----	----

s2	p3
----	----

s4	p1
----	----

s6	p6
----	----

s3	p2
----	----

s5	p4
----	----

s4	p5
----	----

s2	p6
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s3	p4
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