O4

1)

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) s.snumber, s.sname FROM supplier s WHERE [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_not) EXISTS ( [SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) p.pnumber FROM part p WHERE p.city = "london" [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_not) EXISTS ( [SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM sp WHERE sp.pnumber = p.pnumber [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) sp.snumber = s.snumber ) )

OR

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) supplier.snumber, supplier.sname FROM supplier JOIN sp ON sp.snumber = supplier.snumber JOIN part ON part.pnumber = sp.pnumber WHERE part.city [IN](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/comparison-operators.html#function_in)('london') GROUP BY supplier.snumber HAVING [COUNT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_count)( part.city) = 2

2)

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html" \t "mysql_doc) DISTINCT s.snumber, sname FROM supplier s JOIN sp ON s.snumber = sp.snumber WHERE EXISTS ([SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM part p WHERE [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_not) EXISTS ([SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM sp sp2 WHERE sp2.pnumber = p.pnumber [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) sp2.snumber = s.snumber) [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) p.city = 'london')

3)

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) snumber FROM ( [SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) s.city,s.snumber, s.sname FROM supplier s WHERE [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_not) EXISTS ( [SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) p.pnumber FROM part p WHERE p.city = "london" [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_not) EXISTS ( [SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM sp WHERE sp.pnumber = p.pnumber [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) sp.snumber = s.snumber ) ) )t WHERE t.city <> 'london'

4)

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) s.snumber FROM supplier s WHERE [NOT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_not) EXISTS ( [SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) p.pnumber FROM part p WHERE EXISTS ( [SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) \* FROM sp WHERE sp.pnumber = p.pnumber [AND](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/logical-operators.html#operator_and) sp.snumber = s.snumber ) )

5)

[SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) DISTINCT A.snumber, A.average FROM ([SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) snumber,[avg](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_avg)(qty) average FROM sp GROUP BY snumber) A WHERE A.average > ([SELECT](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/select.html) [AVG](http://localhost/phpmyadmin/url.php?url=https://dev.mysql.com/doc/refman/5.5/en/group-by-functions.html#function_avg)(qty) FROM sp)