MANUAL LMD SQL

SELECT basics

Introducing the world table of countries

1. The example uses a WHERE clause to show the population of 'France'. Note that strings (pieces of text area that are data) should be in 'single quotes'.
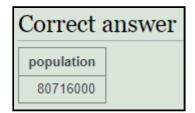
Modify it to show the population of Germany.

Código:

```
select population from world where name = 'France';
```

Corrección:

```
select population from world where name='Germany';
```

Scandinavia

2. Checking a list with the word IN allows us to check if an item is in a list. The example shows the name and population for the countries 'Brazil', 'Russia', 'India' and 'China'.

Show the name and the population for 'Sweden', 'Norway' and 'Denmark'.

Código:

```
select name, population from world where name in ('Brazil', 'Russia', 'India',
'China');
```

Corrección:

```
select name, population from world where name in('Sweden', 'Norway', 'Denmark');
```

Correct answer	
name	population
Denmark	5634437
Norway	5124383
Sweden	9675885

Just the right size

3. Which countries are not too small and not too big? `between` **allows range checking (range specified is inclusive of boundary values). The example below shows countries with an area of 250,000-300,000 sq. km.**

Modify it to show the country and the area for countries with an area between 200,000 and 250,000.

Código:

```
select name, area from world where area between 250000 and 300000;
```

Corrección:

```
select name, area from world where area between 200000 and 250000;
```
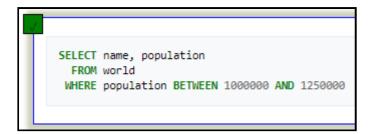
Correct answer	
name	area
Belarus	207600
Ghana	238533
Guinea	245857
Guyana	214969
Laos	236800
Romania	238391
Uganda	241550

SELECT basics - quiz

1. Select the code which produces this table:

name	population
Bahrain	1234571
Swaziland	1220000
Timor-Leste	1066409

Respuesta:

```
SELECT name, population
  FROM world
 WHERE population BETWEEN 1000000 AND 1250000
```
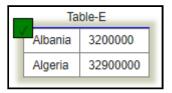
2. Pick the result you would obtain from this code:

```
select name, population from world where name like "Al%"
```

Respuesta:

Table-E	
Albania	3200000
Algeria	32900000

3. Select the code which shows the countries that end in A or L.

Respuesta:

```
SELECT name FROM world
 WHERE name LIKE '%a' OR name LIKE '%l'
```

4. Pick the result from the query:

```
select name, length(name) from world where length(name)=5 and region='Europe';
```

Respuesta:

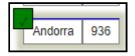| name	length(name)
Italy	5
Malta	5
Spain	5

5. Here are the first few rows of the world table:

name	region	area	population	gdp
Afghanistan	South Asia	652225	26000000	
Albania	Europe	28728	3200000	6656000000
Algeria	Middle East	2400000	32900000	75012000000
Andorra	Europe	468	64000	
...				

Pick the result you would obtain from this code:

```
select name, area*2 from world where population=64000;
```

Respuesta:

Andorra	936

6. Select the code that would show the countries with an area larger than 50000 and a population smaller than 10000000.

Respuesta:

```
SELECT name, area, population
  FROM world
 WHERE area > 50000 AND population < 10000000
```

7. Select the code that shows the population density of Chine, Australia, Nigeria and France.

Respuesta:

```
SELECT name, population/area
  FROM world
 WHERE name IN ('China', 'Nigeria', 'France', 'Australia')
```

SELECT from world

Introduction

1. Observe the result of running this SQL command to show the name, continent and population of all countries.

Código:

```sql
select name, continent, population from world;
```

Corrección (es lo mismo):

```sql
select name, continent, population from world;
```

name	continent	population
Afghanistan	Asia	25500100
Albania	Europe	2821977
Algeria	Africa	38700000
Andorra	Europe	76098
Angola	Africa	19183590
Antigua and Barbuda	Caribbean	86295
Argentina	South America	42669500

Large Countries

2. Show the name for the countries that have a population of at least 200 million. 200 million is 200000000, there are eight zeros.

Código:

```sql
select name from world where population=64105700;
```

Corrección:

```sql
select name from world where population>=200000000;
```

name
Brazil
China
India
Indonesia
United States

Per capita GDP

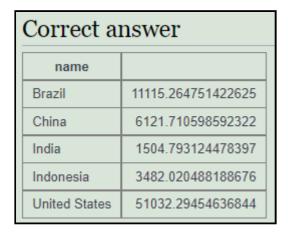**3. Give the `name` and the per capita GDP for those countries with a `population` of at least 200 million.**

Respuesta:

```
select name, gdp/population from world where population>=200000000;
```

name	
Brazil	11115.264751422625
China	6121.710598592322
India	1504.793124478397
Indonesia	3482.020488188676
United States	51032.29454636844

South America In millions

4. Show the `name` and `population` in millions for the countries of the `continent` 'South America'. Divide the population by 1000000 to get population in millions.

Respuesta:

```
select name, population/1000000 from world where continent='South America';
```

name	
Argentina	42.6695
Bolivia	10.027254
Brazil	202.794
Chile	17.773
Colombia	47.662
Ecuador	15.7742
Guyana	0.784894

France, Germany, Italy

5. Show the `name` and `population` for France, Germany, Italy.

Respuesta:

```sql
select name, population from world where name in('France', 'Germany', 'Italy');
```

Correct answer

name	population
France	65906000
Germany	80716000
Italy	60782668

United

6. Show the countries which have a `name` that includes the word 'United'.

Respuesta:

```sql
select name from world where name like '%United%';
```

Correct answer

name
United Arab Emirates
United Kingdom
United States

Two ways to be big

7. Two ways to be big: A country is big if it has an area of more than 3 million sq km or it has a population of more than 250 million.

Show the countries that are big by area or big by population. Show name, population and area.

Respuesta:

```
select name, population, area from world where area>3000000 or
population>250000000;
```

Correct answer

name	population	area
Australia	23545500	7692024
Brazil	202794000	8515767
Canada	35427524	9984670
China	1365370000	9596961
India	1246160000	3166414
Indonesia	252164800	1904569
Russia	146000000	17125242

One or the other (but not both)

8. Exclusive OR (XOR). Show the countries that are big by area (more than 3 million) or big by population (more than 250 million) but not both. Show name, population and area.

Respuesta:

```
select name, population, area from world where (area>3000000 and
population<250000000) or (area<3000000 and population>250000000);
```

Correct answer

name	population	area
Australia	23545500	7692024
Brazil	202794000	8515767
Canada	35427524	9984670
Indonesia	252164800	1904569
Russia	146000000	17125242

Rounding

9. Show the `name` and `population` in millions and the GDP in billions for the countries of the `continent` 'South America'. Use the ROUND function to show the values to two decimal places.

For South America show population in millions and GDP in billions both to 2 decimal places.

Respuesta:

```
select name, round(population/1000000, 2), round(gdp/1000000000, 2) from world
where continent='South America';
```

Correct answer

name		
Argentina	42.67	477.03
Bolivia	10.03	27.04
Brazil	202.79	2254.11
Chile	17.77	268.31
Colombia	47.66	369.81
Ecuador	15.77	87.5
Guyana	0.78	2.85

Trillion dollar economies

10. Show the `name` and per-capita GDP for those countries with a GDP of at least one trillion (1000000000000; that is 12 zeros). Round this value to the nearest 1000.

Show per-capita GDP for the trillion dollar countries to the nearest $1000.

Respuesta: