Set 13

Winners from 1950

1. 😊

Change the query shown so that it displays Nobel prizes for 1950.

```
SELECT yr, subject, winner
  FROM nobel
 WHERE yr = 1950
```

[Submit SQL] [Restore default]

Correct answer

yr	subject	winner
1950	Chemistry	Kurt Alder
1950	Chemistry	Otto Diels
1950	Literature	Bertrand Russell
1950	Medicine	Philip S. Hench
1950	Medicine	Edward C. Kendall
1950	Medicine	Tadeus Reichstein
1950	Peace	Ralph Bunche

1962 Literature

2. 😊

Show who won the 1962 prize for Literature.

```
SELECT winner
  FROM nobel
 WHERE yr = 1962
   AND subject = 'Literature'
```

[Submit SQL] [Restore default]

Correct answer

winner
John Steinbeck

Albert Einstein

3. 😊

Show the year and subject that won 'Albert Einstein' his prize.

```
SELECT yr, subject
FROM nobel
WHERE winner = 'Albert Einstein'
```

[Submit SQL] [Restore default]

Correct answer

yr	subject
1921	Physics

Recent Peace Prizes

4. 😊

Give the name of the 'Peace' winners since the year 2000, including 2000.

```
SELECT winner
FROM nobel
WHERE subject = 'Peace' AND yr >= 2000
```

[Submit SQL] [Restore default]

Correct answer

winner
Tunisian National Dialogue Quartet
Kailash Satyarthi
Malala Yousafzai
European Union
Ellen Johnson Sirleaf
Leymah Gbowee
Tawakel Karman

Literature in the 1980's

5. 😊

Show all details (**yr**, **subject**, **winner**) of the Literature prize winners for 1980 to 1989 inclusive.

```
SELECT yr,subject,winner
FROM nobel
WHERE (yr >= 1980 AND yr <= 1989) AND subject = 'Literature'
```

[Submit SQL] [Restore default]

Correct answer

yr	subject	winner
1989	Literature	Camilo José Cela
1988	Literature	Naguib Mahfouz
1987	Literature	Joseph Brodsky
1986	Literature	Wole Soyinka
1985	Literature	Claude Simon
1984	Literature	Jaroslav Seifert
1983	Literature	William Golding

Only Presidents

6.

Show all details of the presidential winners:

- Theodore Roosevelt
- Woodrow Wilson
- Jimmy Carter
- Barack Obama

```
SELECT * FROM nobel
WHERE winner IN ('Theodore Roosevelt', 'Woodrow Wilson', 'Jimmy Carter', 'Barack Obama')
```

Correct answer

yr	subject	winner
2009	Peace	Barack Obama
2002	Peace	Jimmy Carter
1919	Peace	Woodrow Wilson
1906	Peace	Theodore Roosevelt

John

7.

Show the winners with first name John

```
SELECT winner
FROM nobel
WHERE winner LIKE'John%'
```

Submit SQL   Restore default

Correct answer

winner
John O'Keefe
John B. Gurdon
John C. Mather
John L. Hall
John B. Fenn
John E. Sulston
John Pople

Chemistry and Physics from different years

8.

Show the year, subject, and name of Physics winners for 1980 together with the Chemistry winners for 1984.

```
SELECT *
FROM nobel
WHERE (yr = 1980 AND subject = 'Physics') OR (yr = 1984 AND subject = 'Chemistry')
```

Submit SQL   Restore default

Correct answer

yr	subject	winner
1984	Chemistry	Bruce Merrifield
1980	Physics	James Cronin
1980	Physics	Val Fitch

Exclude Chemists and Medics

9.

Show the year, subject, and name of winners for 1980 excluding Chemistry and Medicine

```
SELECT *
FROM nobel
WHERE yr = 1980 AND subject NOT IN ('Chemistry','Medicine')
```

Submit SQL   Restore default

Correct answer

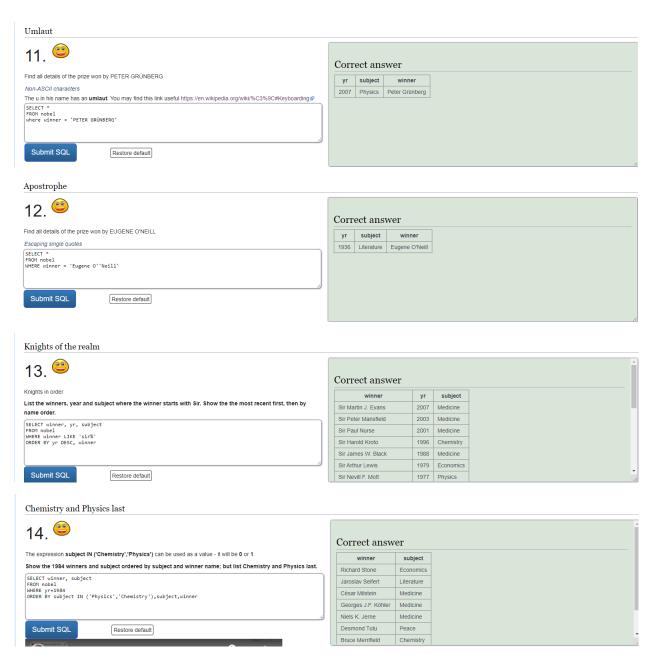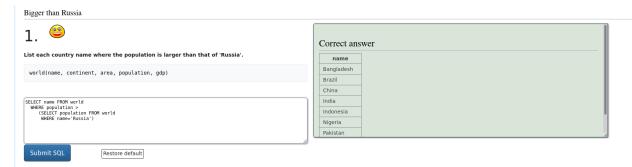| yr	subject	winner
1980	Economics	Lawrence R. Klein
1980	Literature	Czesław Miłosz
1980	Peace	Adolfo Pérez Esquivel
1980	Physics	James Cronin
1980	Physics	Val Fitch

Early Medicine, Late Literature

10.

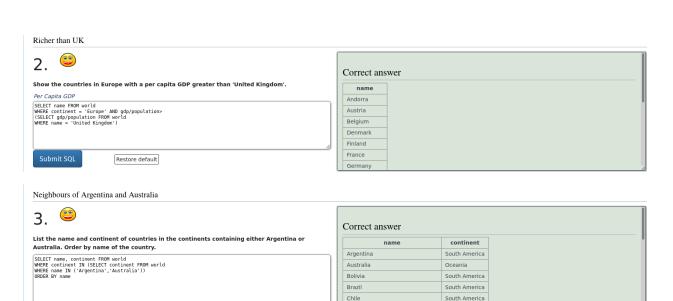Show year, subject, and name of people who won a 'Medicine' prize in an early year (before 1910, not including 1910) together with winners of a 'Literature' prize in a later year (after 2004, including 2004)

```
SELECT *
FROM nobel
where (yr<1910 AND subject = 'Medicine') OR (yr>= 2004 AND subject = 'Literature')
```

Submit SQL   Restore default

Correct answer

yr	subject	winner
2015	Literature	Svetlana Alexievich
2014	Literature	Patrick Modiano
2013	Literature	Alice Munro
2012	Literature	Mo Yan
2011	Literature	Tomas Tranströmer
2010	Literature	Mario Vargas Llosa
2009	Literature	Herta Müller

Umlaut

11. 😛

Find all details of the prize won by PETER GRÜNBERG

Non-ASCII characters

The u in his name has an **umlaut**. You may find this link useful https://en.wikipedia.org/wiki/%C3%9C#Keyboarding 🔗

```
SELECT *
FROM nobel
where winner = 'PETER GRÜNBERG'
```

Submit SQL   Restore default

Correct answer

yr	subject	winner
2007	Physics	Peter Grünberg

Apostrophe

12. 😛

Find all details of the prize won by EUGENE O'NEILL

Escaping single quotes

```
SELECT *
FROM nobel
WHERE winner = 'Eugene O''Neill'
```

Submit SQL   Restore default

Correct answer

yr	subject	winner
1936	Literature	Eugene O'Neill

Knights of the realm

13. 😛

Knights in order

List the winners, year and subject where the winner starts with Sir. Show the the most recent first, then by name order.

```
SELECT winner, yr, subject
FROM nobel
WHERE winner LIKE 'sir%'
ORDER BY yr DESC, winner
```

Submit SQL   Restore default

Correct answer

winner	yr	subject
Sir Martin J. Evans	2007	Medicine
Sir Peter Mansfield	2003	Medicine
Sir Paul Nurse	2001	Medicine
Sir Harold Kroto	1996	Chemistry
Sir James W. Black	1988	Medicine
Sir Arthur Lewis	1979	Economics
Sir Nevill F. Mott	1977	Physics

Chemistry and Physics last

14. 😛

The expression **subject IN ('Chemistry','Physics')** can be used as a value - it will be **0** or **1**.

Show the 1984 winners and subject ordered by subject and winner name; but list Chemistry and Physics last.

```
SELECT winner, subject
FROM nobel
WHERE yr=1984
ORDER BY subject IN ('Physics','Chemistry'),subject,winner
```

Submit SQL   Restore default

Correct answer

winner	subject
Richard Stone	Economics
Jaroslav Seifert	Literature
César Milstein	Medicine
Georges J.F. Köhler	Medicine
Niels K. Jerne	Medicine
Desmond Tutu	Peace
Bruce Merrifield	Chemistry

Set 14

Bigger than Russia

1. 😛

List each country name where the population is larger than that of 'Russia'.

```
world(name, continent, area, population, gdp)
```

```
SELECT name FROM world
  WHERE population >
    (SELECT population FROM world
      WHERE name='Russia')
```

Submit SQL   Restore default

Correct answer

name
Bangladesh
Brazil
China
India
Indonesia
Nigeria
Pakistan

Richer than UK

2. 😜

Show the countries in Europe with a per capita GDP greater than 'United Kingdom'.

Per Capita GDP

```
SELECT name FROM world
WHERE continent = 'Europe' AND gdp/population>
(SELECT gdp/population FROM world
WHERE name = 'United Kingdom')
```

[Submit SQL]　　　[Restore default]

Correct answer

name
Andorra
Austria
Belgium
Denmark
Finland
France
Germany

Neighbours of Argentina and Australia

3. 😜

List the name and continent of countries in the continents containing either Argentina or Australia. Order by name of the country.

```
SELECT name, continent FROM world
WHERE continent IN (SELECT continent FROM world
WHERE name IN ('Argentina','Australia'))
ORDER BY name
```

[Submit SQL]　　　[Restore default]

Correct answer

name	continent
Argentina	South America
Australia	Oceania
Bolivia	South America
Brazil	South America
Chile	South America
Colombia	South America
Ecuador	South America

Between Canada and Poland

4. 😜

Which country has a population that is more than Canada but less than Poland? Show the name and the population.

```
SELECT name,population FROM world
WHERE population > (SELECT population FROM world WHERE name = 'Canada')
AND
population < (SELECT population FROM world WHERE name = 'Poland')
```

[Submit SQL]　　　[Restore default]

Correct answer

name	population
Iraq	36004552
Sudan	37289406

Percentages of Germany

5. 😜

Germany (population 80 million) has the largest population of the countries in Europe. Austria (population 8.5 million) has 11% of the population of Germany.

Show the name and the population of each country in Europe. Show the population as a percentage of the population of Germany.

The format should be *Name, Percentage* for example:

name	percentage
Albania	3%
Andorra	0%
Austria	11%
...	...

Decimal places

Percent symbol %

```
SELECT name, CONCAT(ROUND(population/(SELECT population FROM world
WHERE name = 'Germany')*100,0),'%')
FROM world WHERE continent = 'Europe'
```

[Submit SQL]　　　[Restore default]

Correct answer

name	CONCAT(ROUND(..
Albania	3%
Andorra	0%
Austria	11%
Belarus	12%
Belgium	14%
Bosnia and Herzegovina	5%
Bulgaria	9%

Bigger than every country in Europe

6. 🥴

Which countries have a GDP greater than every country in Europe? [Give the name only.] (Some countries may have NULL gdp values)

```
SELECT name FROM world
WHERE gdp > ALL(SELECT gdp FROM world
WHERE gdp > 0 AND continent = 'Europe')
```

Submit SQL   Restore default

Correct answer

name
China
Japan
United States

Largest in each continent

7. 🥴

Find the largest country (by area) in each continent, show the continent, the name and the area:

```
SELECT continent, name, area FROM world x
  WHERE area >= ALL
    (SELECT area FROM world y
        WHERE y.continent=x.continent
            AND area>0)
```

Submit SQL   Restore default

Correct answer

continent	name	area
Africa	Algeria	2381741
Oceania	Australia	7692024
South America	Brazil	8515767
North America	Canada	9984670
Asia	China	9596961
Caribbean	Cuba	109884
Europe	Kazakhstan	2724900

The above example is known as a **correlated** or **synchronized** sub-query.

Using correlated subqueries

A correlated subquery works like a nested loop: the subquery only has access to rows related to a single

First country of each continent (alphabetically)

8. 🥴

List each continent and the name of the country that comes first alphabetically.

```
SELECT continent, name FROM world x
WHERE name <= ALL
(SELECT name FROM world y
WHERE y.continent=x.continent)
```

Submit SQL   Restore default

Correct answer

continent	name
Africa	Algeria
Asia	Afghanistan
Caribbean	Antigua and Barbuda
Eurasia	Armenia
Europe	Albania
North America	Belize
Oceania	Australia

Difficult Questions That Utilize Techniques Not Covered In Prior Sections

9. 🥴

Find the continents where all countries have a population <= 25000000. Then find the names of the countries associated with these continents. Show name, continent and population.

```
SELECT name, continent, population FROM world x
WHERE 25000000 >= ALL(SELECT population
FROM world y
WHERE x.continent = y.continent
AND y.population>0);
```

Submit SQL   Restore default

Correct answer

name	continent	population
Antigua and Barbuda	Caribbean	86295
Australia	Oceania	23545500
Bahamas	Caribbean	351461
Barbados	Caribbean	285000
Cuba	Caribbean	11167325
Dominica	Caribbean	71293
Dominican Republic	Caribbean	9445281

10. 🥴

Some countries have populations more than three times that of any of their neighbours (in the same continent). Give the countries and continents.

```
SELECT name, continent FROM world x
WHERE population >= ALL(SELECT population*3
FROM world y
WHERE x.continent = y.continent
and y.name != x.name)
```

Submit SQL   Restore default

Correct answer

name	continent
Australia	Oceania
Brazil	South America
Russia	Eurasia

5

Total world population

1. 😜

Show the total **population** of the world.

```
world(name, continent, area, population, gdp)
```

```
SELECT SUM(population)
FROM world
```

Submit SQL   Restore default

Correct answer

SUM(populatio..
7118632738

List of continents

2. 😜

List all the continents - just once each.

```
SELECT DISTINCT continent
FROM world
```

Submit SQL   Restore default

Correct answer

continent
Africa
Asia
Caribbean
Eurasia
Europe
North America
Oceania

GDP of Africa

3. 😜

Give the total GDP of Africa

```
SELECT SUM(gdp)
FROM world
WHERE continent = 'Africa'
```

Submit SQL   Restore default

Correct answer

SUM(gdp)
1811788000000

Count the big countries

4. 😜

How many countries have an **area** of at least 1000000

```
SELECT COUNT(name)
FROM world
WHERE area >= 1000000
```

Submit SQL   Restore default

Correct answer

COUNT(name)
29

Baltic states population

5. 😜

What is the total **population** of ('Estonia', 'Latvia', 'Lithuania')

```
SELECT SUM(population) FROM world
WHERE name IN ('Estonia','Latvia','Lithuania')
```

Submit SQL   Restore default

Correct answer

SUM(populatio..
6251750

Counting the countries of each continent

6.

For each **continent** show the **continent** and number of countries.

```
SELECT continent, COUNT(name) FROM world
GROUP BY continent
```

Submit SQL   Restore default

Correct answer

continent	COUNT(name)
Africa	53
Asia	47
Caribbean	11
Eurasia	2
Europe	44
North America	11
Oceania	14

Counting big countries in each continent

7.

For each **continent** show the **continent** and number of countries with populations of at least 10 million.

```
SELECT continent, COUNT(name) FROM world
WHERE population >=10000000
GROUP BY continent
```

Submit SQL   Restore default

Correct answer

continent	COUNT(name)
Africa	29
Asia	26
Caribbean	2
Eurasia	1
Europe	14
North America	4
Oceania	1
South America	8

Counting big continents

8.

List the continents that **have** a total population of at least 100 million.

```
SELECT continent FROM world
GROUP BY continent
HAVING SUM(population) >100000000
```

Submit SQL   Restore default

Correct answer

continent
Africa
Asia
Eurasia
Europe
North America
South America