Data Life Expectancy

Take the “Data life-expectancy.csv” csv file and then try to answer the following questions:

1. What is the average life expectancy *at birth* in Europe (*hint: the numeric variable related to the MetricObserved dimension is called Numeric*)?

```
SELECT avg(Numeric)
FROM `sql-sandbox-347110.DataAnalytics.life-expectancy`
where RegionDisplay = 'Europe' and MetricObserved = 'Life expectancy at birth (years)'
```

2. Is Europe the region with the highest life expectancy at birth? Which region has the lowest life expectancy at birth?

```
SELECT RegionDisplay, avg(Numeric)
FROM `sql-sandbox-347110.DataAnalytics.life-expectancy`
where MetricObserved = 'Life expectancy at birth (years)'
group by RegionDisplay
order by avg(Numeric) desc
```

3. Does Europe also have the highest life expectancy at age 60? Which country has the highest life expectancy after 60?

```
SELECT RegionDisplay, avg(Numeric)
FROM `sql-sandbox-347110.DataAnalytics.life-expectancy`
where MetricObserved = Life expectancy at age 60 (years)'
group by RegionDisplay
order by avg(Numeric) desc
```

4. Using a GROUP BY and a CASE-WHEN, create a pivot table that shows the average life expectancy for all three types of MetricObserved (in three separate columns) by each region (each in a separate row); the output should look something like this (LEAB = Life Expectancy At Birth):

Row	RegionDisplay	LEAB	HLEAB	LE60
1	Eastern Mediterranean	68.203158429118787	59.183823529411768	17.993618314176246
2	Africa	56.271860612612642	49.140338164251183	16.078459531531532
3	Europe	75.221733301886815	66.6505241090146	20.445165047169805
4	Americas	73.061249833333235	63.853968253968254	20.665792999999997
5	Western Pacific	71.0362527469136	62.959259259259262	18.793803518518541
6	South_East Asia	66.341902500000046	59.4181818181818	17.331689999999995

```
SELECT RegionDisplay,
 avg(case when MetricObserved = 'Life expectancy at birth (years)' then Numeric end)
as LEAB,
 avg(case when MetricObserved = 'Healthy life expectancy (HALE) at birth (years)'
then Numeric end) as HLEAB,
 avg(case when MetricObserved = 'Life expectancy at age 60 (years)' then Numeric end)
as LE60
FROM `sql-sandbox-347110.DataAnalytics.life-expectancy`
group by RegionDisplay
```

5. Which countries have the highest average life expectancy at birth?

```
select CountryDisplay, avg(Numeric) as avg_life_exp, avg(beer_servings) as
avg_beer_servings
from `sql-sandbox-347110.DataAnalytics.life-expectancy`
where MetricObserved = 'Life expectancy at birth (years)'
group by CountryDisplay
order by avg(Numeric) desc
```

6. Using three separate queries, check out which are the top 10 countries that consume the highest quantities of beer, wine and spirits respectively.

```
select CountryDisplay, avg(Numeric) as avg_life_exp, avg(beer_servings) as
avg_beer_servings, avg(wine_servings) as avg_wine_servings, avg(spirit_servings) as
avg_spirit_servings
from `sql-sandbox-347110.DataAnalytics.life-expectancy`
where MetricObserved = 'Life expectancy at birth (years)'
group by CountryDisplay
order by avg(beer_servings) desc
```

7. Now create a new variable that sums the average servings of beer + wine + spirit and call it “avg_alcohol_servings”; what are the top 10 countries that consume the highest quantities of alcohol overall?

```
select CountryDisplay, avg(Numeric) as avg_life_exp, avg(beer_servings)
+ avg(wine_servings) +avg(spirit_servings) as avg_alcohol_servings
from `sql-sandbox-347110.DataAnalytics.life-expectancy`
where MetricObserved = 'Life expectancy at birth (years)'
group by CountryDisplay
order by avg_alcohol_servings desc
```

8. With reference to the last query (last question), look at the country that consumed the highest quantity of alcohol overall, was it the first ranking country in terms of beer, wine or spirits? If not, was it in the top 10 of any of those 3 rankings (beer, wine or spirits)?

The country is denmark. It was not first in any of the 3 rankings, but it did appear in the top 10 of the wine servings.

9. Which Country in Europe has the lowest life expectancy at birth?

```
select CountryDisplay, avg(Numeric) as avg_life_exp
from `sql-sandbox-347110.DataAnalytics.life-expectancy`
where MetricObserved = 'Life expectancy at birth (years)' and RegionDisplay =
'Europe' group by CountryDisplay
order by avg(Numeric)
```

10. Generally, women live longer than men, create a new variable that shows the difference between females and males life expectancy at birth and call it avg_LE_delta_gender; which country has the highest gap (in terms of years) between females and males? Are there any countries where men live more than women?

```
select CountryDisplay,
 avg(Numeric) as avg_life_exp,
 avg(case when SexDisplay = 'Female' then Numeric end) - avg(case when SexDisplay
= 'Male' then Numeric end) as avg_LE_gender_gap
from `sql-sandbox-347110.DataAnalytics.life-expectancy`
where MetricObserved = 'Life expectancy at birth (years)'
group by CountryDisplay
order by avg_LE_gender_gap desc
```