1. **Create a new table that consolidates information from multiple tables using DAX.**

```
Consolidated Table = SUMMARIZE(
'Fact_Health Expenditure',
Dim_Country[CountryName],
Dim_Year[Year],
"GDP", SUM(Fact_GDP[GDPAmount]),
"Population", SUM(Fact_Population[PopulationCount]),
"Health Expenditure", SUM('Fact_Health Expenditure'[ExpenditureAmount]))
```

// This DAX function creates a table HealthExpenditureSummary. The preview of this table is shown below.

| CountryName | Year | GDP | Population | Health Expenditure |
|---|---|---|---|---|
| Algeria | 2018 | 4184 | 41927 | 1582 |
| Angola | 2018 | 3241 | 31274 | 667 |
| Botswana | 2018 | 6948 | 2451 | 2494 |
| Burkina Faso | 2018 | 788 | 20393 | 189 |
| Burundi | 2018 | 264 | 11493 | 69 |
| Benin | 2018 | 1193 | 11941 | 198 |
| Cabo Verde | 2018 | 3443 | 571 | 1063 |
| Cameroon | 2018 | 1594 | 25077 | 286 |
| Central African Republic | 2018 | 447 | 5095 | 79 |
| Chad | 2018 | 707 | 15604 | 94 |
| Comoros | 2018 | 1518 | 776 | 291 |
| Congo | 2018 | 2507 | 5441 | 483 |
| Côte d'Ivoire | 2018 | 2275 | 25494 | 403 |
| Democratic Republic of the Congo | 2018 | 541 | 87087 | 60 |
| Equatorial Guinea | 2018 | 8719 | 1502 | 1687 |
| Eritrea | 2018 | 582 | 3445 | 159 |
| Eswatini | 2018 | 4022 | 1160 | 1410 |
| Ethiopia | 2018 | 722 | 111129 | 116 |
| Gabon | 2018 | 7695 | 2192 | 1315 |
| Gambia | 2018 | 683 | 2445 | 142 |
| Ghana | 2018 | 2180 | 30871 | 456 |

Consolidated Table (573 rows)

2. **Find the countries/regions with the highest and lowest health expenditure for all years.**

```
highest expenditure country = var max_expenditure =
max('Consolidated Table'[Health Expenditure]) return
CALCULATE(max('Consolidated Table'[Country_Name]),filter('Consolidated Table'
,'Consolidated Table'[Health Expenditure]=max_expenditure))
```

HighestHealthExpenditure = MAX('Consolidated Table'[Health Expenditure])


Lowest expenditure country name = var max_expenditure =
MIN('Consolidated Table'[Health Expenditure]) return
CALCULATE(MIN('Consolidated Table'[CountryName]),filter('Consolidated Table'
,'Consolidated Table'[Health Expenditure]=max_expenditure))

LowestHealthExpenditure = MIN('Consolidated Table'[Health Expenditure])


3. **Determine the percentage of health expenditure as a share of GDP for each country.**

```
Total_Expenditure = SUM('Consolidated Table'[Health Expenditure])

// This DAX function returns the sum of the total expenditure.

Total gdp = sum('Consolidated Table'[GDP])

// This DAX function returns the sum of the total GDP.

gdp_share = DIVIDE([Total_Expenditure],[Total gdp])*100

// This DAX function returns the GDP share.


//Further, the below table visualization shows the consolidated result of each DAX
Function.
```

| CountryName | Total_Expenditure | Total gdp | gdp_share |
|---|---|---|---|
| Afghanistan | 429 | 1520 | 28.22 |
| Albania | 4801 | 15905 | 30.19 |
| Algeria | 4354 | 11591 | 37.56 |
| Andorra | 46198 | 121099 | 38.15 |
| Angola | 1598 | 7596 | 21.04 |
| Antigua and Barbuda | 12007 | 50634 | 23.71 |
| Argentina | 12058 | 30588 | 39.42 |
| Armenia | 3639 | 13727 | 26.51 |
| Australia | 72098 | 167934 | 42.93 |
| Austria | 77296 | 150502 | 51.36 |
| Azerbaijan | 4729 | 13499 | 35.03 |
| Bahamas | 19792 | 88858 | 22.27 |
| Bahrain | 25376 | 74789 | 33.93 |
| Bangladesh | 833 | 5394 | 15.44 |
| Barbados | 15932 | 53757 | 29.64 |
| Belarus | 7254 | 19220 | 37.74 |
| Belgium | 75972 | 139678 | 54.39 |
| Belize | 4881 | 13955 | 34.98 |
| Benin | 606 | 3605 | 16.81 |
| Bhutan | 2892 | 9394 | 30.79 |
| Bolivia (Plurinational State of) | 3705 | 10012 | 37.01 |
| Bosnia and Herzegovina | 7631 | 17957 | 42.50 |
| Botswana | 7184 | 19490 | 36.86 |
| Brazil | 9657 | 24761 | 39.00 |
| Brunei Darussalam | 29040 | 89163 | 32.57 |
| Total | 3354878 | 8617922 | 38.93 |

4. **Calculate the average health expenditure per capita for each country/region.**

avg expenditure per capita = divide('Consolidated Table'[Total_Expenditure],'Consolidated Table'[Total_Population])

// This DAX function returns the health expenditure per capita. This is further represented by following preview.

| CountryName | avg expenditure per capita |
|---|---|
| Afghanistan | 0.00 |
| Albania | 0.56 |
| Algeria | 0.03 |
| Andorra | 201.74 |
| Angola | 0.02 |
| Antigua and Barbuda | 43.35 |
| Argentina | 0.09 |
| Armenia | 0.43 |
| Australia | 0.95 |
| Austria | 2.91 |
| Azerbaijan | 0.15 |
| Bahamas | 16.32 |
| Bahrain | 5.69 |
| Bangladesh | 0.00 |
| Barbados | 18.94 |
| Belarus | 0.25 |
| Belgium | 2.21 |
| Belize | 4.19 |
| Benin | 0.02 |
| Bhutan | 1.26 |
| Bolivia (Plurinational State of) | 0.10 |
| Bosnia and Herzegovina | 0.76 |
| Botswana | 0.96 |
| Brazil | 0.02 |
| Brunei Darussalam | 22.10 |
| Total | 0.15 |