SELECT ROUND(AVG(county\_total), 2) AS avg\_county\_total

FROM (

SELECT

county,

SUM(total) AS county\_total

FROM sales

GROUP BY county

ORDER BY county\_total DESC

) AS blah;

SELECT

county,

SUM(total) AS county\_total

FROM sales

GROUP BY county

ORDER BY county\_total DESC;

SELECT ROUND(AVG(monthly\_total\_sales), 2) AS avg\_monthly\_total

FROM (

SELECT

EXTRACT(month FROM date) AS "month",

SUM(total) AS monthly\_total\_sales

FROM sales

GROUP BY "month"

ORDER BY monthly\_total\_sales

) AS monthly\_totals;

WITH monthly\_totals AS (

SELECT

EXTRACT(month FROM date) AS "month",

SUM(total) AS monthly\_total\_sales

FROM sales

GROUP BY "month"

ORDER BY monthly\_total\_sales

)

SELECT ROUND(AVG(monthly\_total\_sales), 2) AS avg\_monthly\_total

FROM monthly\_totals;

SELECT

county,

population

FROM counties

WHERE county IN ('Adair', 'Polk'); -- or WHERE county = 'Adair' OR county = 'Polk'

SELECT

county

COUNT(\*) AS number\_transactions

FROM sales

WHERE county IN (

SELECT

county

FROM counties

WHERE population < 100000

)

GROUP BY county

ORDER BY number\_transactions DESC;

WITH small\_counties AS (

SELECT

county

FROM counties

WHERE population < 100000

)

SELECT

county,

COUNT(\*) AS number\_transactions

FROM sales

WHERE county IN (SELECT \* FROM small\_counties)

GROUP BY county

ORDER BY number\_transactions DESC;

SELECT

sales.county,

COUNT(\*) AS number\_transactions

FROM sales

JOIN countries

USING(county)

WHERE counties.population < 100000

GROUP BY sales.county

ORDER BY number\_transactions DESC;

-- using NOT IN to reverse the filter

WITH small\_counties AS (

SELECT county

FROM counties

WHERE population < 100000

)

SELECT

county,

COUNT(\*) AS number\_transactions

FROM sales

WHERE county NOT IN (SELECT \* FROM small\_counties)

GROUP BY county

ORDER BY number\_transactions DESC;

-- same effect but by changing subquery to >= instead of <

WITH small\_counties AS (

SELECT county

FROM counties

WHERE population >= 100000

)

SELECT

county,

COUNT(\*) AS number\_transactions

FROM sales

WHERE county IN (SELECT \* FROM small\_counties)

GROUP BY county

ORDER BY number\_transactions DESC;

WITH subq AS (

SELECT

store,

CASE

WHEN total > 100 THEN 1

ELSE 0

END AS greater\_than\_100

FROM sales

)

SELECT

store,

ROUND(AVG(greater\_than\_100), 2) AS pct\_over\_100

FROM subq

GROUP BY store

ORDER BY pct\_over\_100 ASC

LIMIT 100;

/\*

1) Which counties have the highest sale of whisky or vodka products?

\*/

SELECT

county,

ROUND(AVG(whisk\_or\_vodka), 4) AS pct\_whisk\_or\_vodka

FROM (

SELECT

county,

CASE

WHEN category\_name ILIKE '%WHISK%' OR category\_name ILIKE '%VODKA%' THEN 1

ELSE 0

END AS whisk\_or\_vodka

FROM sales) AS temp

GROUP BY county

ORDER BY pct\_whisk\_or\_vodka DESC;

/\*

2) Which counties have the highest sale of items higher than 80 proof?

\*/

SELECT

county,

ROUND(AVG(proof\_80), 4) AS pct\_proof\_over\_80

FROM (

SELECT

county,

CASE

WHEN proof::numeric >= 80 THEN 1

ELSE 0

END AS proof\_80

FROM sales

JOIN products

ON sales.item = products.item\_no

) AS temp

GROUP BY county

ORDER BY pct\_proof\_over\_80 DESC;

/\*

3) What percentage of sales per county are more than $100? What are the top five counties

in this category?

\*/

SELECT

county,

ROUND(AVG(sales\_county), 4) AS pct\_sales

FROM (

SELECT

county,

CASE

WHEN total > '100' THEN 1

ELSE 0

END AS sales\_county

FROM sales) AS temp

GROUP BY county

ORDER BY pct\_sales

LIMIT 5;

/\*

4) What are the top five counties in terms of mL per capita?

\*/

SELECT

county,

ROUND((mL\_total::numeric)/population, 2) AS mL\_per\_capita

FROM counties

LEFT JOIN (

SELECT

county,

SUM(pack \* liter\_size \* bottle\_qty) AS mL\_total

FROM sales

GROUP BY county

) AS temp

USING (county)

ORDER BY mL\_per\_capita DESC

LIMIT 5;

/\*

5) Based on number of sales, what were the top five categories of liquor sold in the five most

populous counties?

\*/

SELECT

category\_name,

COUNT(\*) AS count\_of\_sales

FROM sales

WHERE county IN (

SELECT county

FROM counties

ORDER BY population DESC

LIMIT 5 )

GROUP BY category\_name

ORDER BY count\_of\_sales DESC

LIMIT 5;

-- Based on number of sales, what were the top five categories of liquor sold in the five most populous counties?

WITH populous\_counties AS (

SELECT

county

FROM counties

ORDER BY population DESC

LIMIT 5

)

SELECT

category,

category\_name,

COUNT(\*) AS number\_sales

FROM sales

WHERE county IN (SELECT \* FROM populous\_counties)

GROUP BY category, category\_name

ORDER BY number\_sales DESC

LIMIT 5;