1.

SELECT Sum(popn\_total) AS population

FROM nyc\_census\_blocks

WHERE boroname = 'Manhattan';

The population for Manhattan is 1585873.

2.

SELECT

boroname,

100 \* Sum(popn\_nativ)/Sum(popn\_total) AS native\_pct

FROM nyc\_census\_blocks

GROUP BY boroname;

"Brooklyn";0.539944903581267

"Manhattan";0.546638980548884

"The Bronx";1.31830875281927

"Queens";0.688776802513739

"Staten Island";0.361615428924967

3.

SELECT ST\_GeometryType(geom), ST\_SRID(geom)

FROM nyc\_streets

LIMIT 1;

"ST\_MultiLineString";26918

SELECT ST\_GeometryType(geom), ST\_SRID(geom)

FROM nyc\_subway\_stations

LIMIT 1;

"ST\_Point";26918

4.

SELECT ST\_Area(geom)

FROM nyc\_neighborhoods

WHERE name = 'East Village';

The area of East Village is 1632116.71718575 sq Meters

5.

SELECT Sum(ST\_Area(geom)) / 4047

FROM nyc\_census\_blocks

WHERE boroname = 'Brooklyn';

The area of Brooklyn in acres is: 44953.6688110616

6.

SELECT Sum(ST\_Length(geom)) / 1000

FROM nyc\_streets

Where name = '5th Ave';

The length of 5th Ave is 21.7975154329102 KM

7.

SELECT ST\_Length(geom), ST\_GeometryType(geom)

FROM nyc\_streets

WHERE name = 'Pelham St';

50.3231495166023;"ST\_MultiLineString"

8.

SELECT ST\_AsGML(geom)

FROM nyc\_subway\_stations

WHERE name = 'Broad St';

"<gml:Point srsName="EPSG:26918"><gml:coordinates>583571.90592131182,4506714.3411921822</gml:coordinates></gml:Point>"

SELECT ST\_AsKML(geom)

FROM nyc\_subway\_stations

WHERE name = 'Broad St';

"<Point><coordinates>-74.010671468873468,40.707104815584088</coordinates></Point>"

9. SELECT ST\_NumGeometries(geom)

FROM nyc\_neighborhoods

WHERE name = 'Red Hook';

There are 16 polygons in the Red Hook Neighborhood

10.

SELECT type, Sum(ST\_Length(geom)) AS length

FROM nyc\_streets

GROUP BY type

ORDER BY length DESC;

The residential street length in NYC is 8629870.3378660

11.

SELECT ST\_AsText(geom)

FROM nyc\_streets

WHERE name = 'Adlai Cir';

"MULTILINESTRING((570042.091206642 4488567.97609389,569955.629048514 4488593.91909435,569917.838118446 4488523.84925588,570019.761419395 4488491.94516951))"

12.

SELECT name, boroname

FROM nyc\_neighborhoods

WHERE ST\_Intersects(

geom,

ST\_GeomFromText('LINESTRING(570042.091206642 4488567.97609389,569955.629048514 4488593.91909435,569917.838118446 4488523.84925588,570019.761419395 4488491.94516951)', 26918)

);

"Annandale";"Staten Island"

13..

SELECT name FROM nyc\_streets WHERE ST\_DWithin( geom, ST\_GeomFromText('LINESTRING(570042.091206642 4488567.97609389,569955.629048514 4488593.91909435,569917.838118446 4488523.84925588,570019.761419395 4488491.94516951)', 26918),0.1);

Joins with the streets:

"Wilson Ave"

"Pompey Ave"

"Adlai Cir"

"Bent St"

14

SELECT Sum(popn\_total)

FROM nyc\_census\_blocks

WHERE ST\_DWithin(

geom,

ST\_GeomFromText('LINESTRING(570042.091206642 4488567.97609389,569955.629048514 4488593.91909435,569917.838118446 4488523.84925588,570019.761419395 4488491.94516951)', 26918),

.1

);

672 people live within 1km

15.

SELECT DISTINCT routes

FROM nyc\_subway\_stations AS subways

WHERE subways.routes LIKE '%A%'

16.

SELECT s.name, s.routes

FROM nyc\_subway\_stations AS s INNER JOIN nyc\_neighborhoods AS n ON ST\_Contains(n.geom, s.geom)

WHERE n.name = 'East Village';

"1st Ave";"L"

"3rd Ave";"L"

17.

SELECT DISTINCT n.name, n.boroname

FROM nyc\_subway\_stations AS s INNER JOIN nyc\_neighborhoods AS n ON ST\_Contains(n.geom, s.geom)

WHERE strpos(s.routes,'A') > 0;

"Harlem";"Manhattan"

"Downtown";"Brooklyn"

"Inwood";"Manhattan"

"West Village";"Manhattan"

"Bushwick";"Brooklyn"

"Financial District";"Manhattan"

"Washington Heights";"Manhattan"

"Woodhaven-Richmond Hill";"Queens"

"Bedford-Stuyvesant";"Brooklyn"

"Upper West Side";"Manhattan"

"Greenwich Village";"Manhattan"

"East Brooklyn";"Brooklyn"

"Central Park";"Manhattan"

"The Rockaways";"Queens"

"Tribeca";"Manhattan"

"Garment District";"Manhattan"

18.

SELECT SUM(popn\_total)

FROM nyc\_neighborhoods AS n INNER JOIN nyc\_census\_blocks AS c ON ST\_Intersects(n.geom, c.geom)

WHERE n.name = 'Central Park'

46600 People would need to be evacuated.

19.

SELECT n.name, SUM (c.popn\_total) / (ST\_Area(n.geom) / 1000000.0) AS popn\_per\_sqkm

FROM nyc\_census\_blocks AS c INNER JOIN nyc\_neighborhoods AS n ON ST\_Intersects(c.geom, n.geom)

WHERE n.name IN('Upper West Side','Upper East Side','Lower East Side')

GROUP BY n.name, n.geom;

"Lower East Side";36629.4647505188

"Upper East Side";48524.4877489857

"Upper West Side";40152.4896080024

20.

SELECT n.name, SUM (c.popn\_total) / (ST\_Area(n.geom) / 1000000.0) AS popn\_per\_sqkm

FROM nyc\_census\_blocks AS c INNER JOIN nyc\_neighborhoods AS n ON ST\_Intersects(c.geom, n.geom)

GROUP BY n.name, n.geom

Order BY popn\_per\_sqkm DESC;

MAX - "North Sutton Area";68435.1328377268

Min - "Fresh Kills";31.3810481406313