Toronto_60410_2018_Day1to7.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day1to7.csv dataset used in CHM 135 Experiment 1.

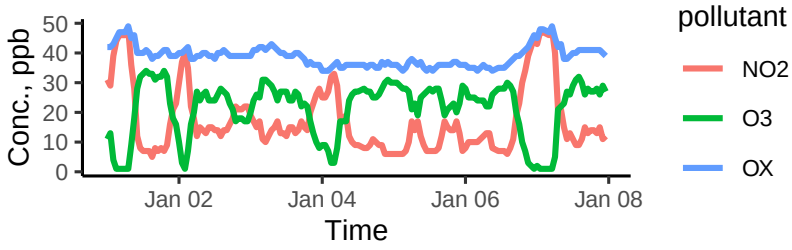

Figure 1: Time series of pollutant concentration.

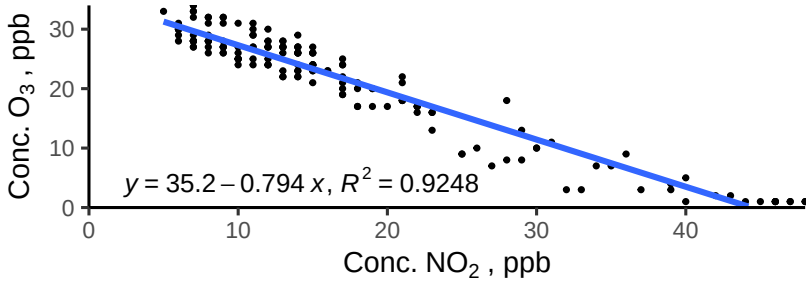

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	17.5	11.2	14	5	48
O3	21.4	9.2	24	1	34
OX	38.8	3.4	39	34	49
NO2_8hr	17.2	9.6	14	6	45
O3_8hr	21.5	7.8	24	1	33
OX_8hr	38.7	3.1	39	35	47

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day2to8.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day2to8.csv dataset used in CHM 135 Experiment 1.

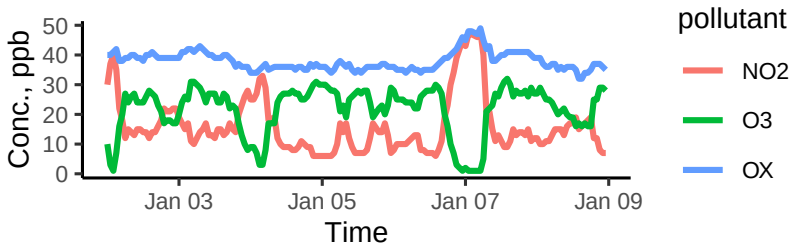

Figure 1: Time series of pollutant concentration.

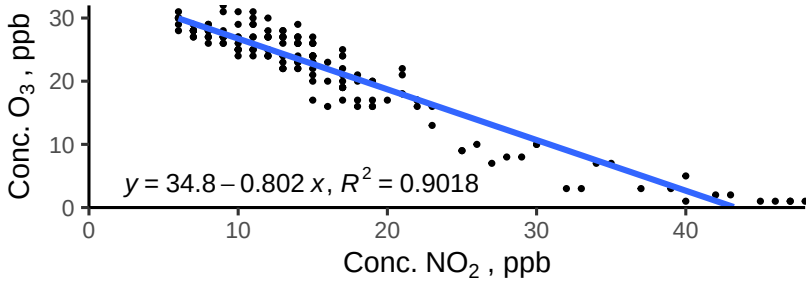

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	16.1	9.4	14	6	48
O3	21.8	8.0	25	1	32
OX	37.9	3.1	37	32	49
NO2_8hr	15.9	8.1	14	6	45
O3_8hr	22.0	6.7	24	1	30
OX_8hr	37.9	2.9	36	34	47

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day3to9.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day3to9.csv dataset used in CHM 135 Experiment 1.

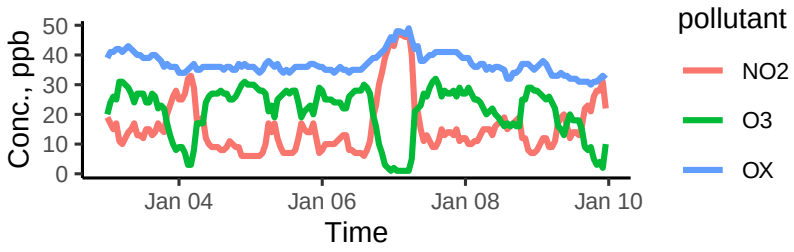

Figure 1: Time series of pollutant concentration.

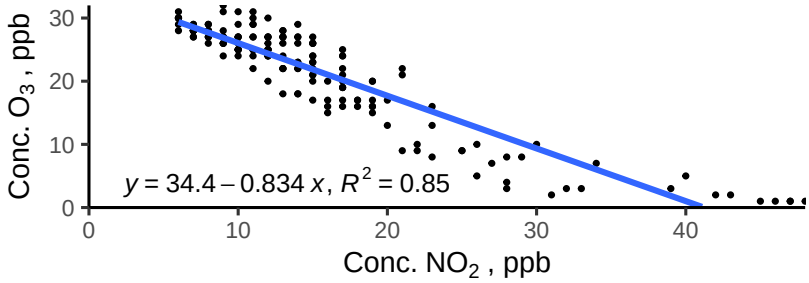

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	15.7	9.2	13	6	48
O3	21.3	8.3	24	1	32
OX	37.0	3.6	36	30	49
NO2_8hr	15.5	8.2	13	6	45
O3_8hr	21.5	7.2	24	1	30
OX_8hr	37.0	3.3	36	31	47

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day4to10.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day4to10.csv dataset used in CHM 135 Experiment 1.

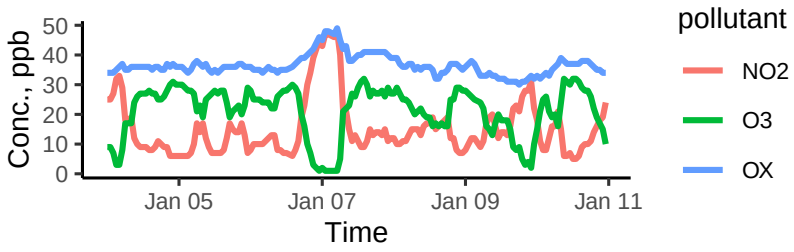

Figure 1: Time series of pollutant concentration.

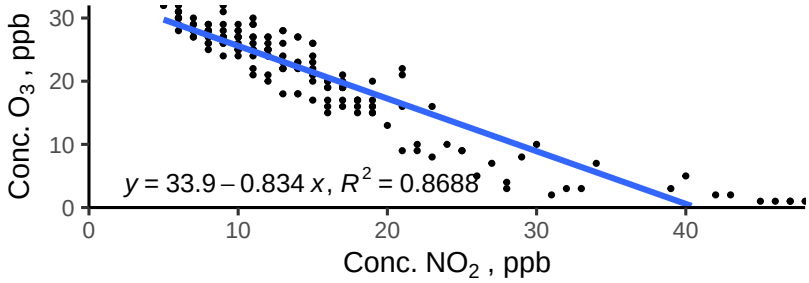

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	15.2	9.3	13	5	48
O3	21.2	8.3	24	1	32
OX	36.5	3.4	36	30	49
NO2_8hr	14.9	8.1	13	6	45
O3_8hr	21.6	7.1	24	1	31
OX_8hr	36.5	3.2	36	31	47

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day5to11.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day5to11.csv dataset used in CHM 135 Experiment 1.

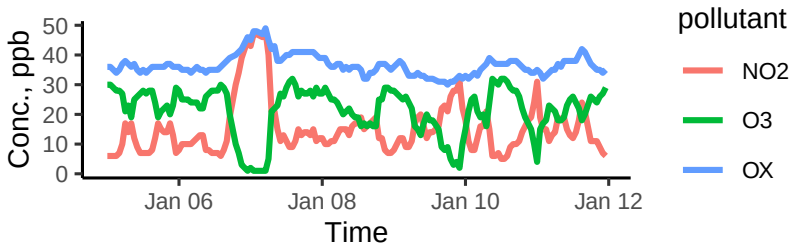

Figure 1: Time series of pollutant concentration.

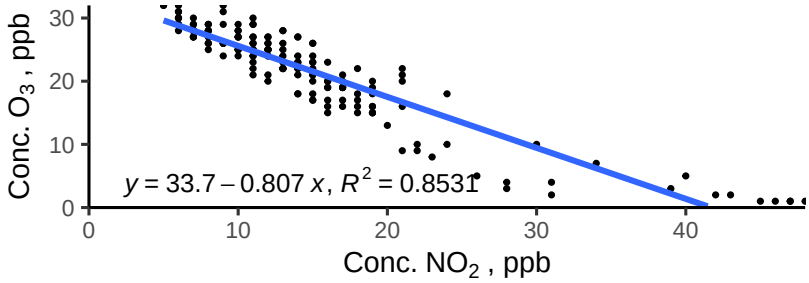

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	15.2	8.9	13	5	48
O3	21.4	7.8	24	1	32
OX	36.6	3.5	36	30	49
NO2_8hr	15.4	7.7	13	6	45
O3_8hr	21.2	6.7	23	1	31
OX_8hr	36.6	3.2	36	31	47

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day6to12.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day6to12.csv dataset used in CHM 135 Experiment 1.

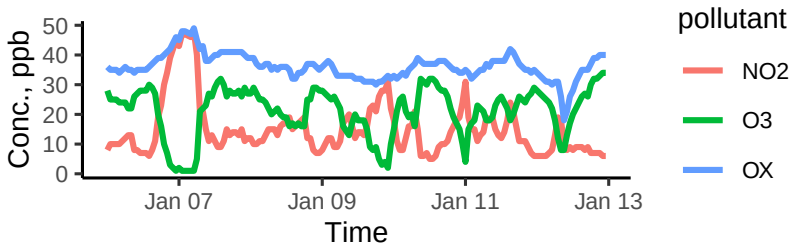

Figure 1: Time series of pollutant concentration.

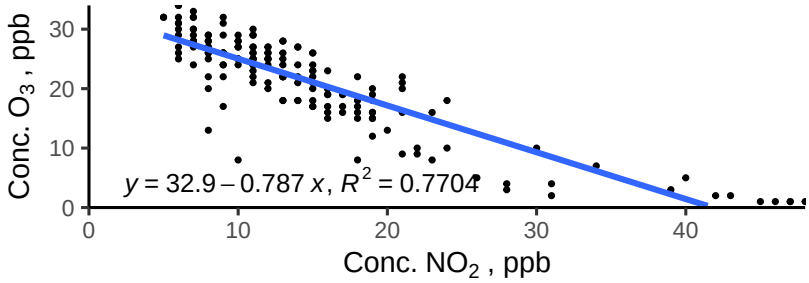

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	14.9	9.1	13	5	48
O3	21.2	8.1	23	1	34
OX	36.1	4.3	36	18	49
NO2_8hr	15.2	7.9	13	6	45
O3_8hr	20.8	6.9	22	1	32
OX_8hr	36.0	4.0	36	26	47

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day7to13.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day7to13.csv dataset used in CHM 135 Experiment 1.

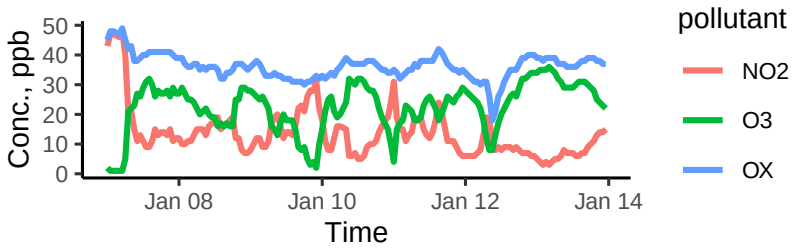

Figure 1: Time series of pollutant concentration.

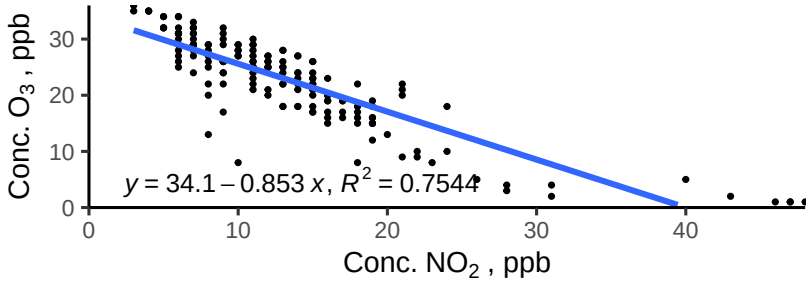

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	13.6	8.3	12	3	48
O3	22.5	8.2	24	1	36
OX	36.1	4.2	36	18	49
NO2_8hr	13.0	6.0	12	4	42
O3_8hr	22.9	6.7	23	5	35
OX_8hr	35.9	3.6	36	26	46

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day8to14.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day8to14.csv dataset used in CHM 135 Experiment 1.

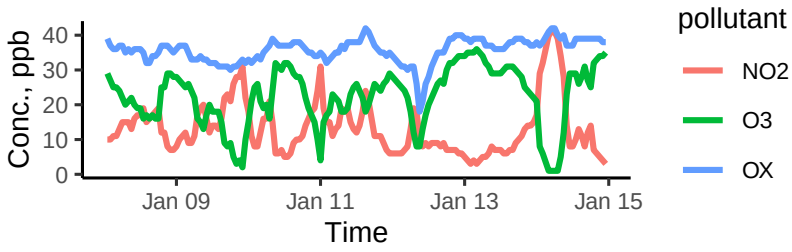

Figure 1: Time series of pollutant concentration.

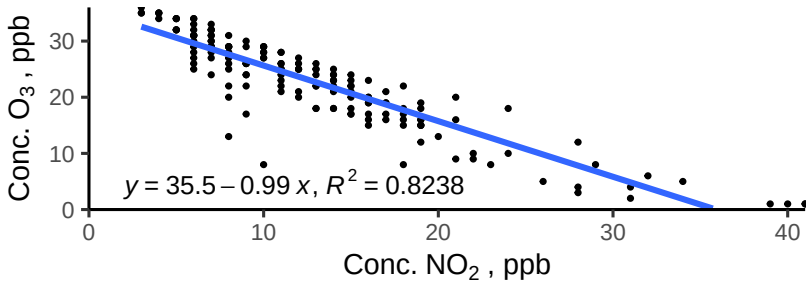

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	13.2	7.7	11	3	41
O3	22.5	8.4	24	1	36
OX	35.7	3.5	36	18	42
NO2_8hr	13.4	6.4	13	4	37
O3_8hr	22.2	7.2	23	3	35
OX_8hr	35.6	3.1	36	26	40

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day9to15.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day9to15.csv dataset used in CHM 135 Experiment 1.

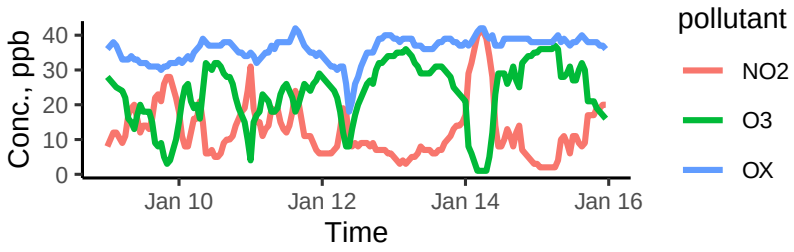

Figure 1: Time series of pollutant concentration.

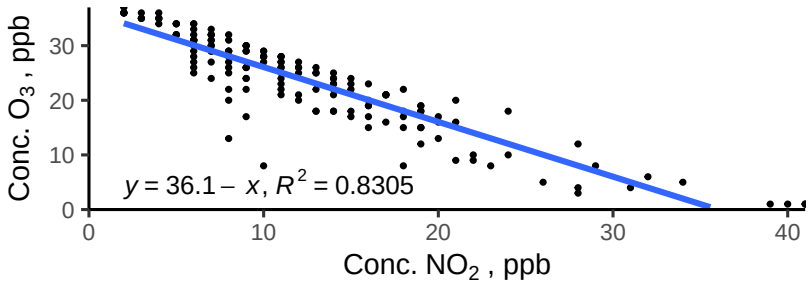

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	12.5	7.9	11	2	41
O3	23.5	8.7	25	1	37
OX	36.1	3.6	37	18	42
NO2_8hr	12.5	6.8	12	2	37
O3_8hr	23.6	7.7	24	3	36
OX_8hr	36.0	3.3	37	26	40

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day10to16.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day10to16.csv dataset used in CHM 135 Experiment 1.

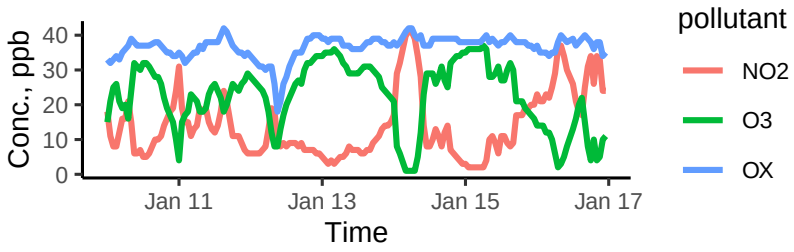

Figure 1: Time series of pollutant concentration.

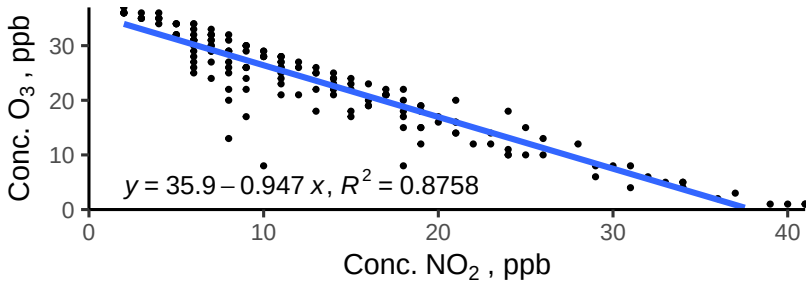

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	14.0	9.3	11	2	41
O3	22.7	9.4	24	1	37
OX	36.6	3.3	38	18	42
NO2_8hr	13.7	8.1	12	2	37
O3_8hr	23.0	8.3	24	3	36
OX_8hr	36.7	2.9	38	26	40

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day11to17.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day11to17.csv dataset used in CHM 135 Experiment 1.

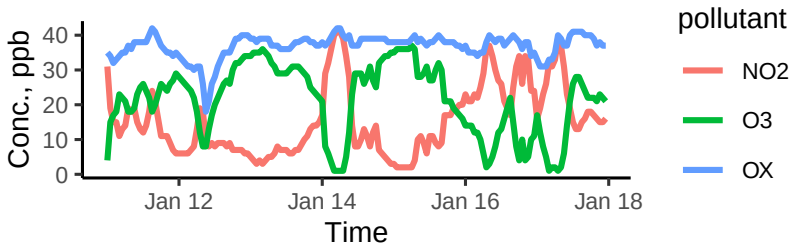

Figure 1: Time series of pollutant concentration.

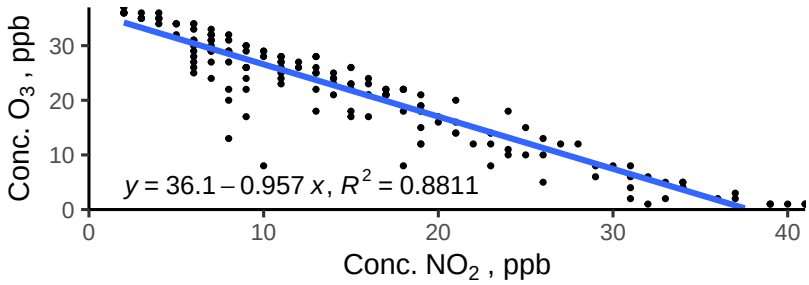

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	15.4	9.9	13	2	41
O3	21.4	10.1	23	1	37
OX	36.8	3.5	38	18	42
NO2_8hr	15.3	9.0	14	2	37
O3_8hr	21.6	9.2	23	3	36
OX_8hr	36.9	3.1	38	26	41

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day12to18.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day12to18.csv dataset used in CHM 135 Experiment 1.

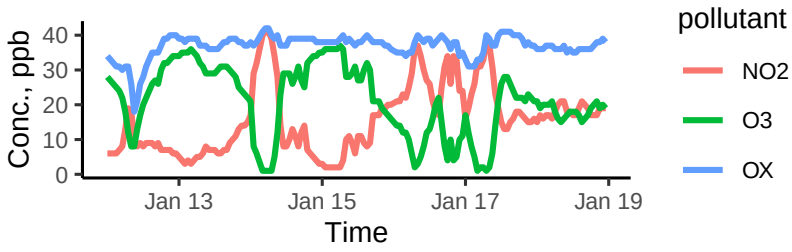

Figure 1: Time series of pollutant concentration.

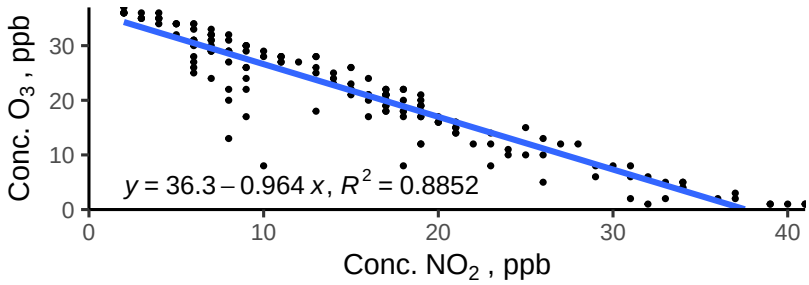

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	15.8	9.7	15	2	41
O3	21.0	10.0	21	1	37
OX	36.8	3.4	38	18	42
NO2_8hr	15.9	8.8	16	2	37
O3_8hr	21.0	9.2	21	3	36
OX_8hr	36.9	3.0	38	26	41

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day13to19.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day13to19.csv dataset used in CHM 135 Experiment 1.

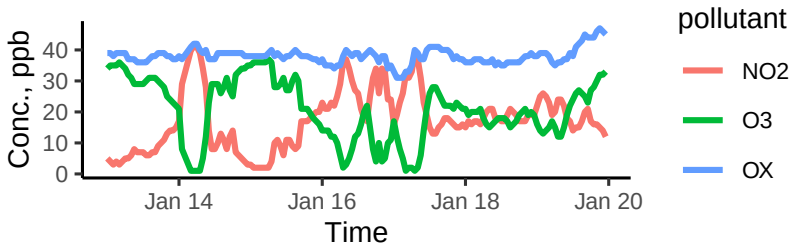

Figure 1: Time series of pollutant concentration.

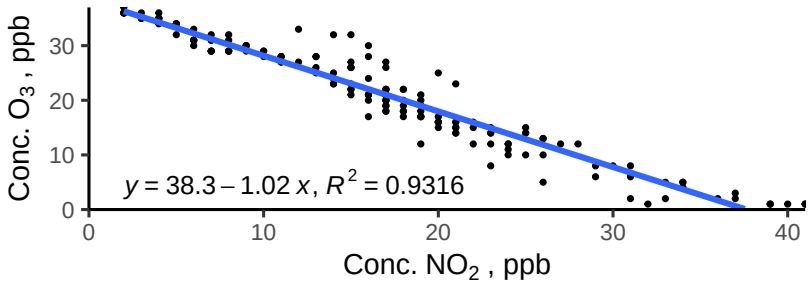

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	17.2	9.3	17	2	41
O3	20.8	9.8	21	1	37
OX	38.0	2.6	38	31	47
NO2_8hr	17.5	8.2	18	2	36
O3_8hr	20.4	8.8	19	3	36
OX_8hr	37.9	2.0	38	32	45

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day14to20.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day14to20.csv dataset used in CHM 135 Experiment 1.

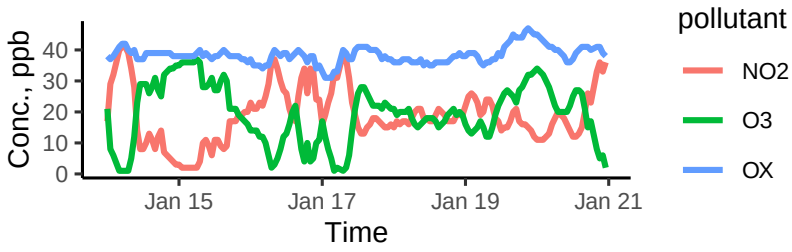

Figure 1: Time series of pollutant concentration.

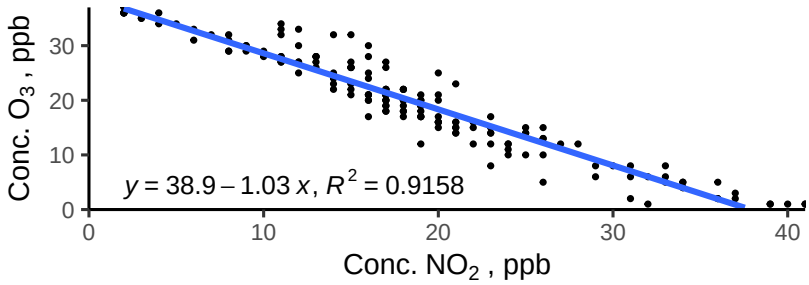

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	18.8	8.8	18	2	41
O3	19.5	9.4	20	1	37
OX	38.4	2.7	38	31	47
NO2_8hr	18.4	7.4	18	2	37
O3_8hr	20.0	8.3	19	3	36
OX_8hr	38.3	2.4	38	32	45

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day15to21.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day15to21.csv dataset used in CHM 135 Experiment 1.

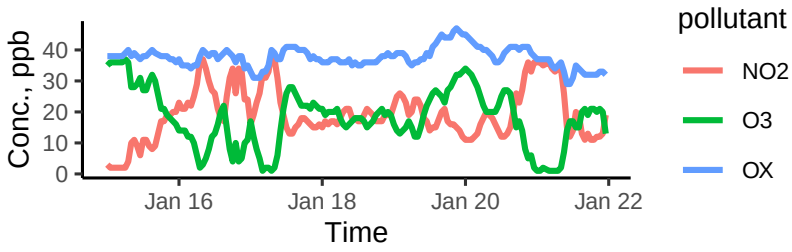

Figure 1: Time series of pollutant concentration.

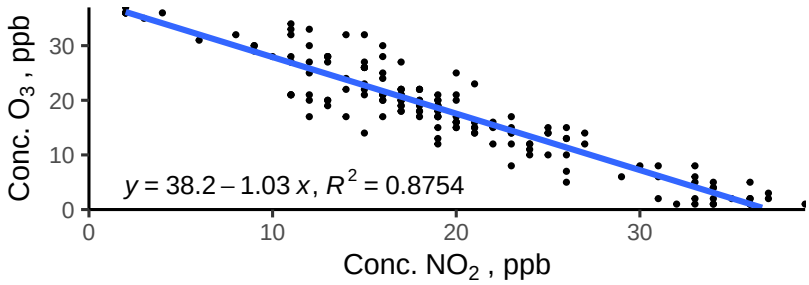

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	19.5	8.4	18	2	39
O3	18.1	9.2	19	1	37
OX	37.6	3.3	38	29	47
NO2_8hr	19.9	7.1	19	2	35
O3_8hr	17.8	8.3	18	1	36
OX_8hr	37.7	2.9	38	32	45

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day200to206.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day200to206.csv dataset used in CHM 135 Experiment 1.

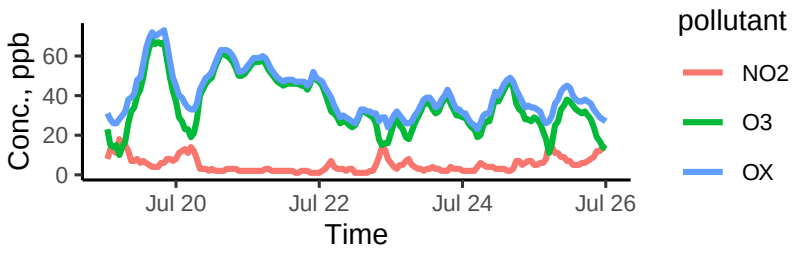

Figure 1: Time series of pollutant concentration.

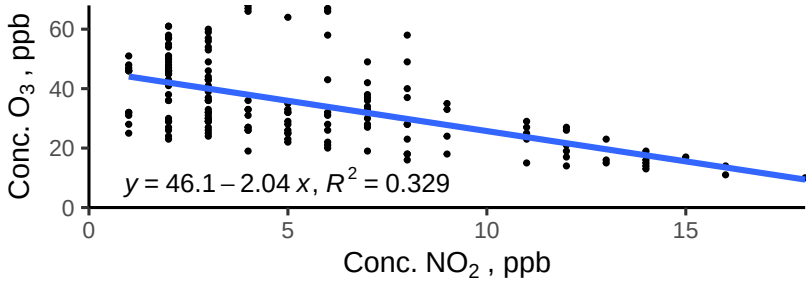

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	5.2	3.9	4	1	18
O3	35.5	13.7	32	10	68
OX	40.7	11.9	38	23	73
NO2_8hr	5.0	3.1	4	1	14
O3_8hr	36.2	12.2	33	15	65
OX_8hr	41.1	11.0	38	27	70

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day201to207.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day201to207.csv dataset used in CHM 135 Experiment 1.

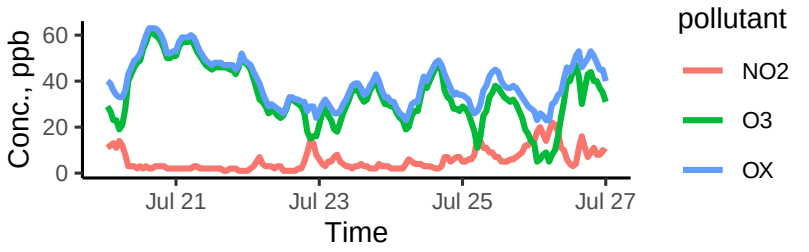

Figure 1: Time series of pollutant concentration.

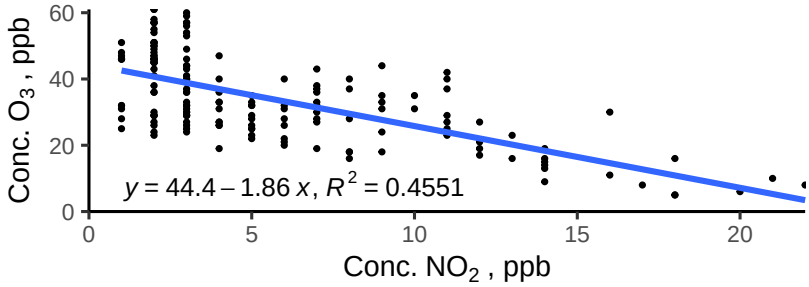

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	5.7	4.7	4	1	22
O3	33.9	12.9	32	5	61
OX	39.5	10.4	38	23	63
NO2_8hr	5.5	4.1	4	1	19
O3_8hr	34.0	12.1	33	7	58
OX_8hr	39.5	9.8	37	25	61

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day202to208.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day202to208.csv dataset used in CHM 135 Experiment 1.

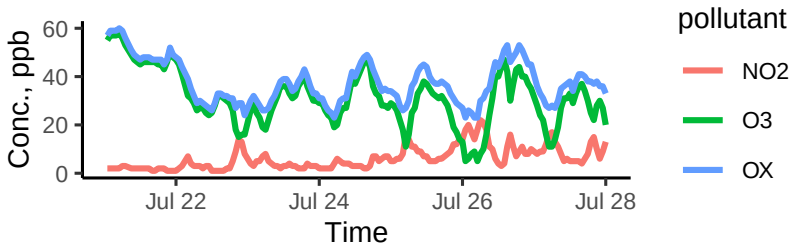

Figure 1: Time series of pollutant concentration.

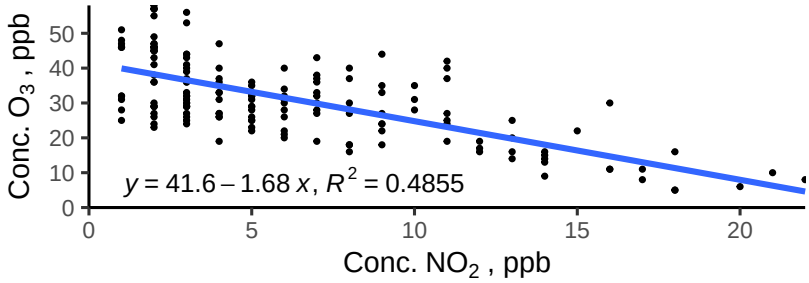

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	6.2	4.8	5	1	22
O3	31.1	11.5	30	5	58
OX	37.3	8.9	36	23	60
NO2_8hr	6.2	4.1	5	1	19
O3_8hr	30.7	9.9	30	7	56
OX_8hr	37.0	7.7	37	25	58

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day203to209.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day203to209.csv dataset used in CHM 135 Experiment 1.

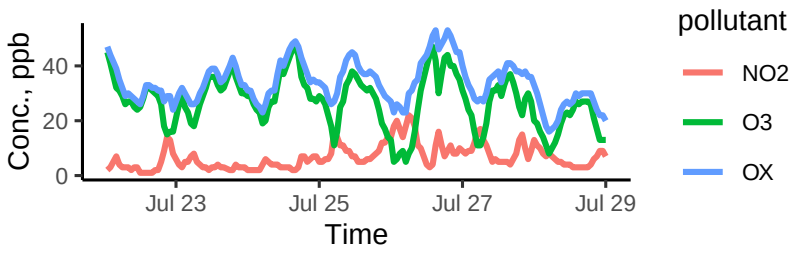

Figure 1: Time series of pollutant concentration.

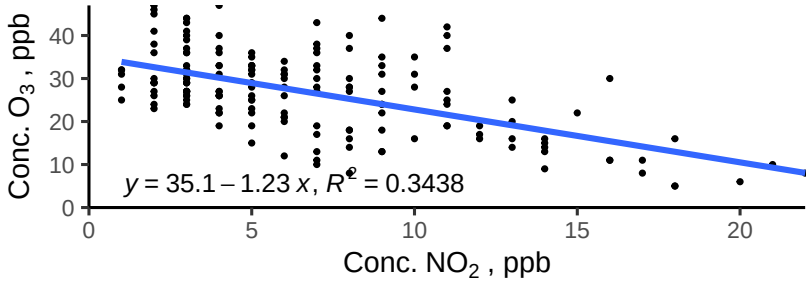

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	6.8	4.5	6	1	22
O3	26.7	9.5	27	5	47
OX	33.5	7.7	33	16	53
NO2_8hr	6.9	3.8	6	1	19
O3_8hr	26.7	7.8	26	7	42
OX_8hr	33.6	6.7	32	19	50

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day204to210.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day204to210.csv dataset used in CHM 135 Experiment 1.

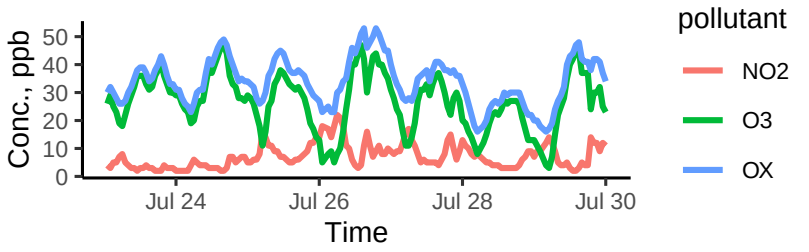

Figure 1: Time series of pollutant concentration.

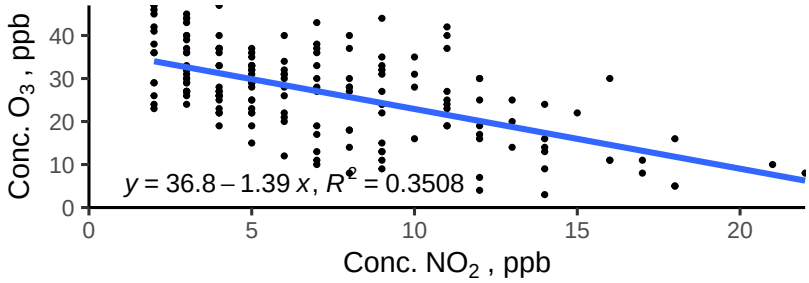

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	7.2	4.3	6	2	22
O3	26.8	10.2	27	3	47
OX	34.0	8.4	34	16	53
NO2_8hr	7.2	3.6	7	2	18
O3_8hr	26.8	8.8	27	8	42
OX_8hr	34.0	7.5	34	19	50

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day205to211.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day205to211.csv dataset used in CHM 135 Experiment 1.

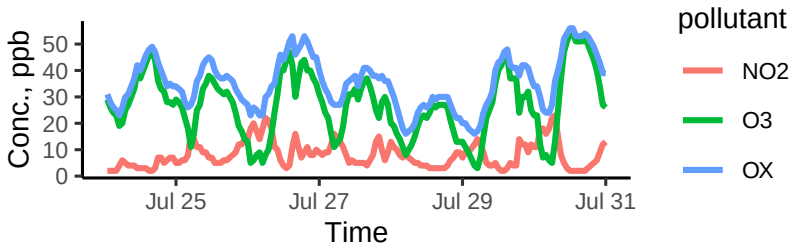

Figure 1: Time series of pollutant concentration.

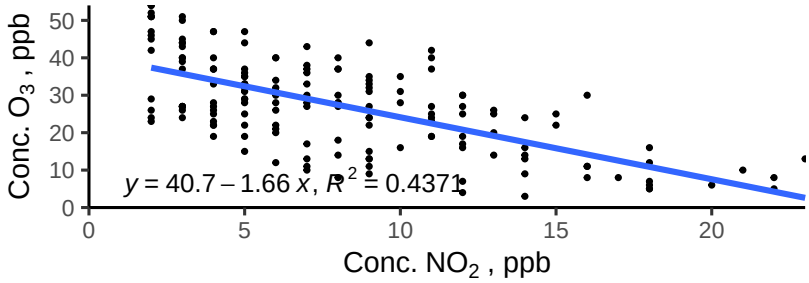

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	8.1	4.9	7	2	23
O3	27.3	12.3	27	3	54
OX	35.4	9.7	36	16	56
NO2_8hr	8.1	4.0	8	2	19
O3_8hr	27.3	10.7	26	7	52
OX_8hr	35.4	8.8	35	19	54

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day206to212.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day206to212.csv dataset used in CHM 135 Experiment 1.

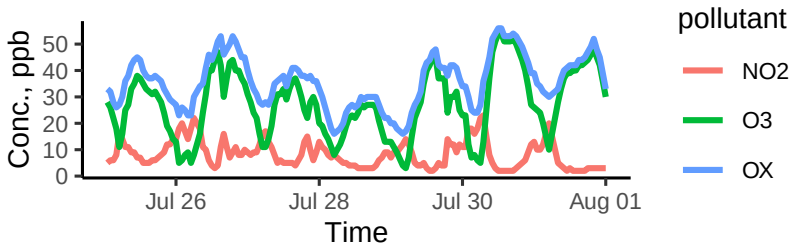

Figure 1: Time series of pollutant concentration.

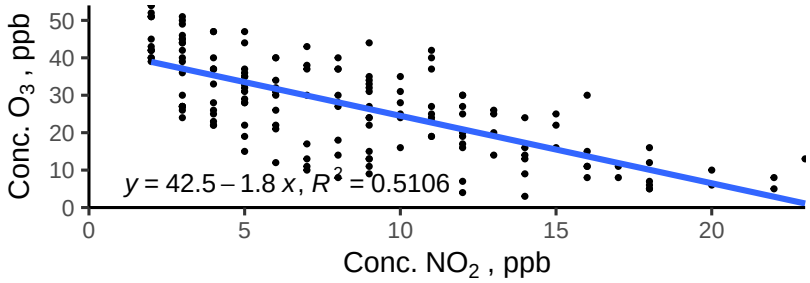

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	8.3	5.0	7	2	23
O3	27.6	12.7	27	3	54
OX	35.9	9.7	36	16	56
NO2_8hr	8.4	4.0	9	2	19
O3_8hr	27.5	11.0	26	8	52
OX_8hr	35.9	8.8	36	19	54

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day207to213.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day207to213.csv dataset used in CHM 135 Experiment 1.

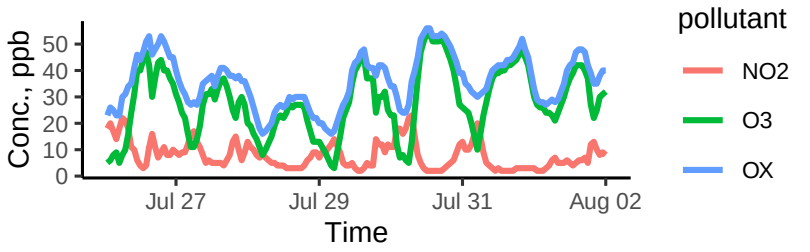

Figure 1: Time series of pollutant concentration.

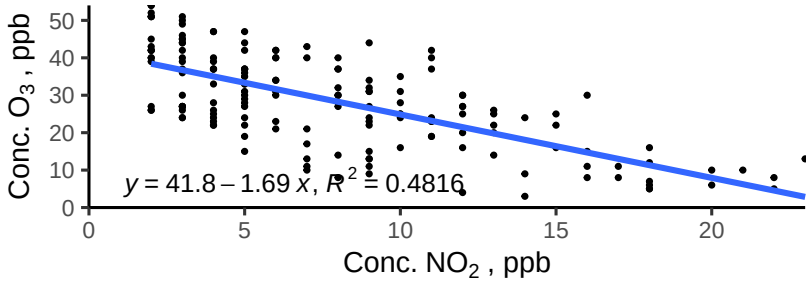

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	7.9	5.1	7	2	23
O3	28.4	12.5	27	3	54
OX	36.3	9.7	36	16	56
NO2_8hr	7.7	4.0	8	2	19
O3_8hr	28.8	10.6	29	7	52
OX_8hr	36.5	8.7	37	19	54

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day208to214.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day208to214.csv dataset used in CHM 135 Experiment 1.

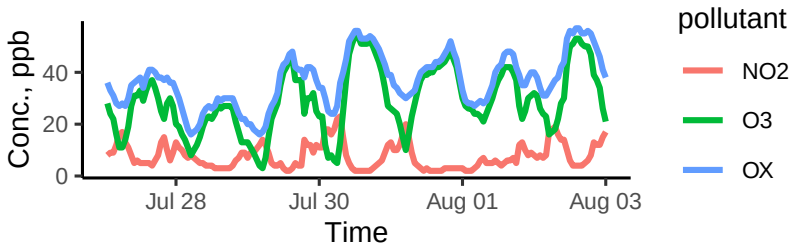

Figure 1: Time series of pollutant concentration.

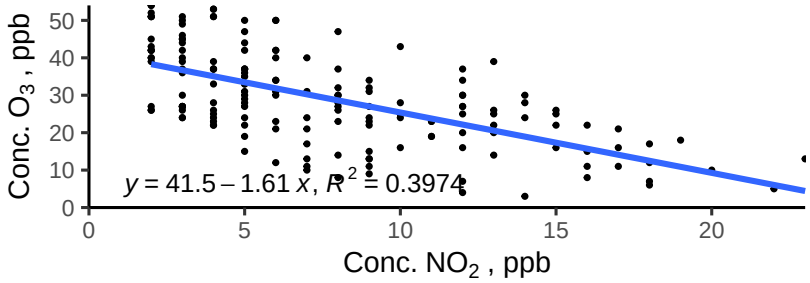

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	7.7	4.9	6	2	23
O3	29.1	12.5	27	3	54
OX	36.8	10.1	37	16	57
NO2_8hr	7.6	3.9	7	2	19
O3_8hr	29.2	10.8	28	9	52
OX_8hr	36.7	9.2	37	19	56

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day209to215.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day209to215.csv dataset used in CHM 135 Experiment 1.

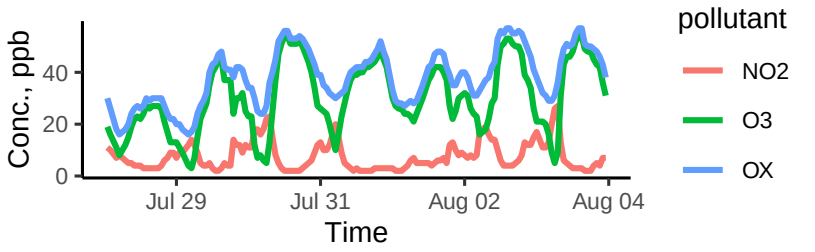

Figure 1: Time series of pollutant concentration.

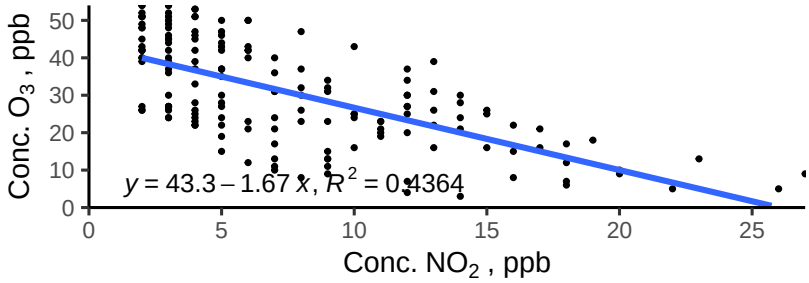

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	7.6	5.4	6	2	27
O3	30.6	13.6	29	3	54
OX	38.2	10.8	38	16	57
NO2_8hr	7.6	4.4	6	2	19
O3_8hr	30.8	11.7	29	9	52
OX_8hr	38.4	9.7	38	19	56

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day210to216.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day210to216.csv dataset used in CHM 135 Experiment 1.

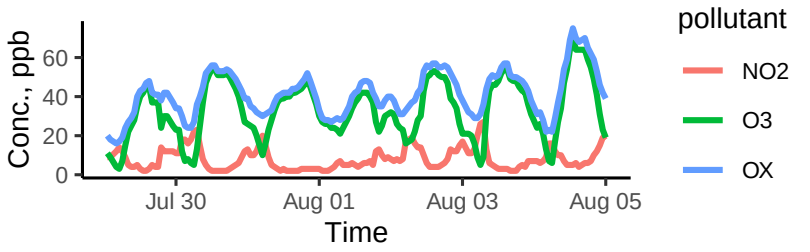

Figure 1: Time series of pollutant concentration.

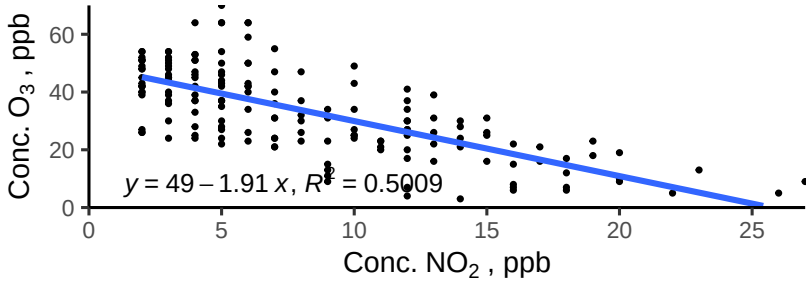

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	8.2	5.6	6	2	27
O3	33.5	15.0	34	3	70
OX	41.6	11.7	42	16	75
NO2_8hr	8.0	4.3	8	2	19
O3_8hr	34.0	12.4	34	10	64
OX_8hr	42.0	10.0	41	20	69

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day211to217.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day211to217.csv dataset used in CHM 135 Experiment 1.

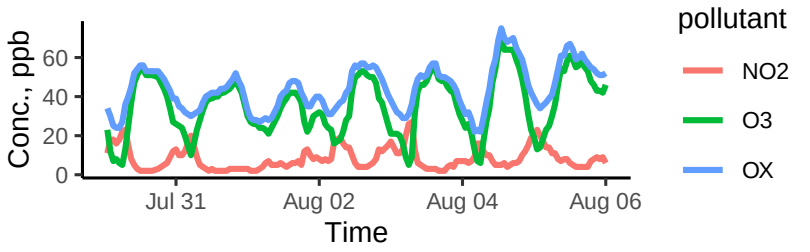

Figure 1: Time series of pollutant concentration.

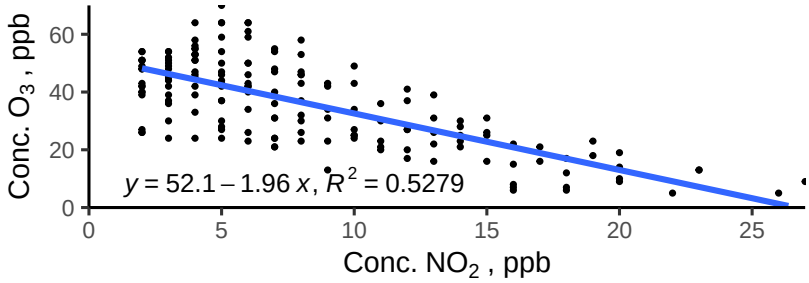

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	8.3	5.6	7	2	27
O3	35.9	15.2	37	5	70
OX	44.2	11.8	44	22	75
NO2_8hr	8.2	4.5	7	2	19
O3_8hr	36.2	12.7	36	11	64
OX_8hr	44.3	10.2	44	27	69

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day212to218.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day212to218.csv dataset used in CHM 135 Experiment 1.

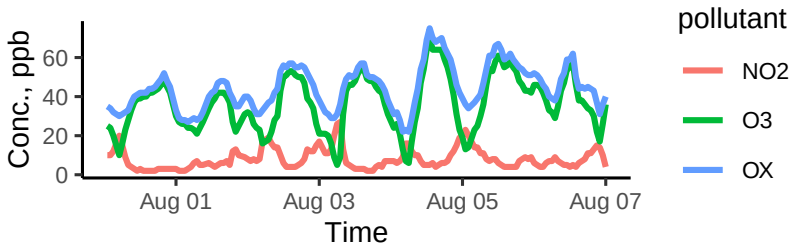

Figure 1: Time series of pollutant concentration.

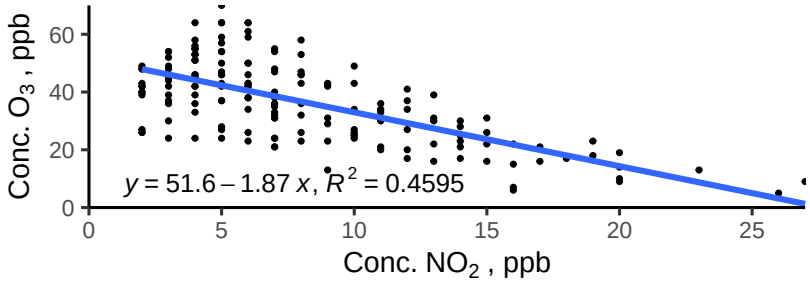

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	8.0	5.2	7	2	27
O3	36.6	14.2	37	5	70
OX	44.7	11.3	44	22	75
NO2_8hr	7.9	4.1	7	2	18
O3_8hr	37.1	11.8	38	14	64
OX_8hr	45.0	9.8	45	27	69

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day213to219.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day213to219.csv dataset used in CHM 135 Experiment 1.

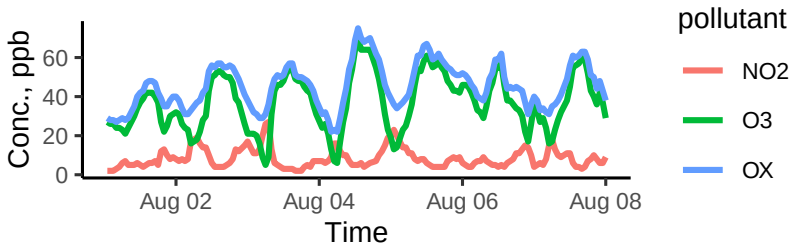

Figure 1: Time series of pollutant concentration.

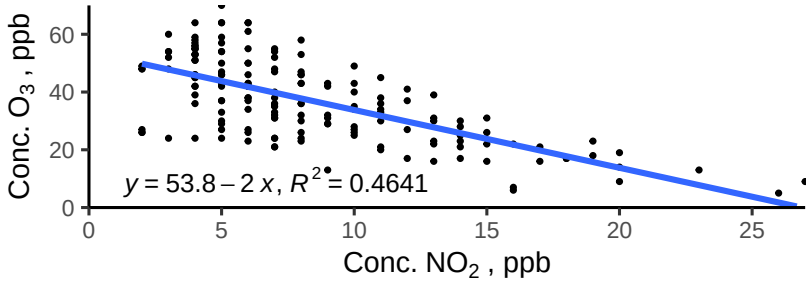

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	8.4	4.9	7	2	27
O3	37.1	14.3	37	5	70
OX	45.4	11.6	44	22	75
NO2_8hr	8.5	3.7	8	3	18
O3_8hr	37.3	12.0	37	14	64
OX_8hr	45.8	9.9	45	27	69

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.

Toronto_60410_2018_Day214to220.csv

The results below are what the student results should look like for the Toronto_60410_2018_Day214to220.csv dataset used in CHM 135 Experiment 1.

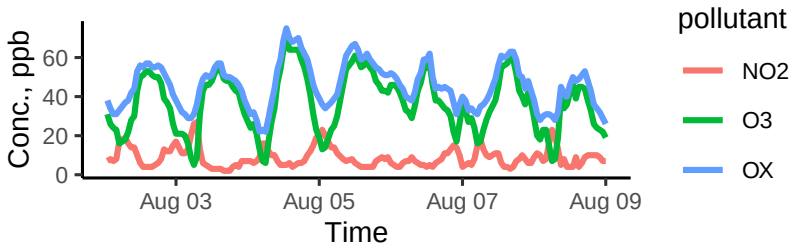

Figure 1: Time series of pollutant concentration.

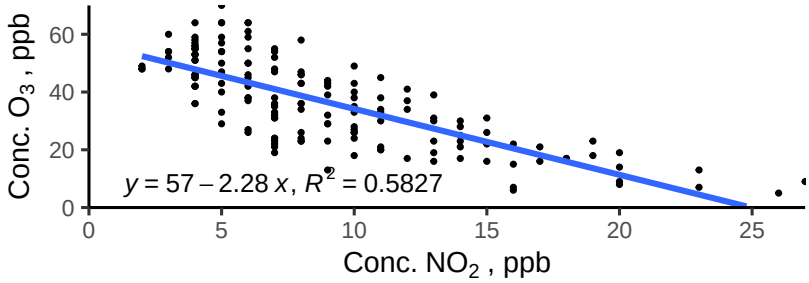

Figure 2: Correlation plot of O3 vs. NO2; the equation of the line is dislayed in the lower left corner.

pollutant	mean	sd	median	min	max
NO2	8.8	5.0	7	2	27
O3	36.8	15.0	38	5	70
OX	45.7	11.6	45	22	75
NO2_8hr	8.8	3.7	8	3	18
O3_8hr	37.3	12.3	38	14	64
OX_8hr	46.2	9.7	46	27	69

Table 1: Summary statistics for 1 hr and 8hr concentration of pollutants, all concentrations are in ppb.

Notes on results:

Students are **not** expected to calculate *mean*, *sd*, and *median* of 8 hr averages. If student *sd* values differ slightly from provided *sd* values, they may have used the *STDEV.P* funcation rather than *STDEV.S* in Excel calculations. Do not substract points, but make a note of it.