

Scatter Plots on the TI-83 Calc.

Algebra 10.S

Use each table of data to create a graph and a line of best fit on your calculator to answer the questions that follow.

Latitude and Average Daily Temperature in July for 10 world cities

Name	Latitude (°N)	July Temp. (°C)
Oslo	59	7
Berlin	52	18.5
London	51	17
Vancouver	49	17
Tunis	37	26
Tomsk	56	18
Kiev	50	20
Coppermine	67	10
Rome	41	24
Salah	27	37

1. What is the linear equation that represents the July temperature of a city based on its north latitude?
(Round decimals to the thousandth 0.001)

2. What would be the expected July temperature at each of the given latitudes below?

25°N _____°C

54°N _____°C

70°N _____°C

Latitude and Average Daily Rainfall in July for 10 world cities

Name	Latitude (°N)	July Rainfall (mm)
Oslo	59	73.6
Berlin	52	57.4
London	51	59.5
Vancouver	49	31.3
Tunis	37	3.3
Tomsk	56	73.6
Kiev	50	77.1
Coppermine	67	31.9
Rome	41	16.3
Salah	27	0.1

1. Write the equation (to the thous.):

2. What would be the expected July rainfall at each of the given latitudes below?

35°N _____mm

45°N _____mm

60°N _____mm

3. Does this graph appear to show more or less correlation than the one above? _____

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Global Temperature by Year 1900-2000

Year	Temp. (°F)
1900	57.20
1910	56.82
1920	56.97
1930	57.13
1940	57.47
1950	56.93
1960	57.16
1970	57.27
1980	57.67
1990	58.08
2000	57.92

1. Write the Linear equation (to the thous.): _____

2. According to this (very limited) data, predict the mean global temperature for the following years.
(Use TBLSET and TABLE, or change your WINDOW values and use TRACE)

2010 _____ 2025 _____ 2050 _____ 2100 _____

North American Population 1986-1995

Year	Population (millions)
1986	346
1987	350
1988	354
1989	358
1990	363
1991	369
1992	374
1993	379
1994	383
1995	388

3. Write the Linear equation (to the thous.): _____

4. Calculate and graph the **Exponential** Equation (Stat - Calc - ExpReg) AND the Linear Equation. What does each predict for the North American population for the year 1900?

Exponential _____ million **Linear** _____ million

5. What is wrong with the linear prediction? _____