Name: _____ **Grade:** _____ **(25 possible)**

Building Map and Data Skills

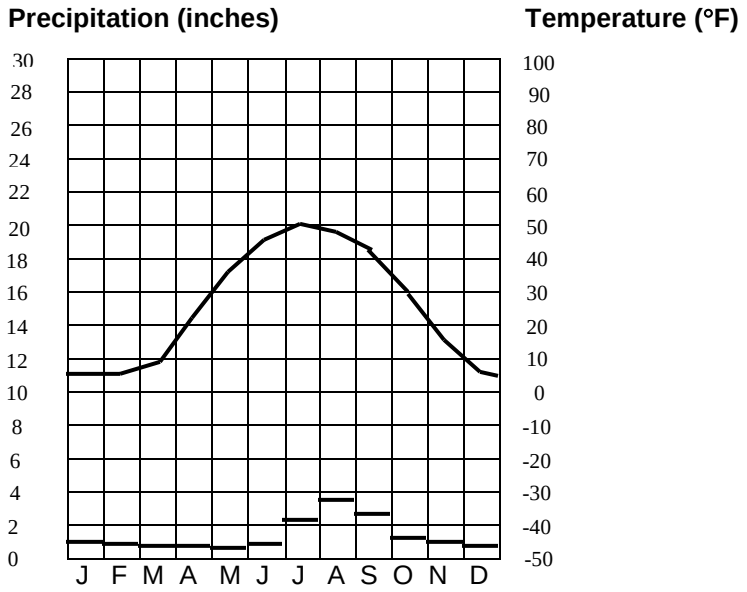
Worksheet 2: Climate and Climographs
(25 Points)

A climograph is a simple graphic representation of monthly temperature and precipitation for a specific weather station. One of the most useful tools for studying world climate classification, the climograph fulfills two basic functions: (1) it displays precise, detailed information about the climate of a specific place; and, (2) it can be used to classify the climate of that place.

The customary climograph has 12 columns, one for each month, and a scale along each of the vertical axes – one for temperature and the other for precipitation. Temperature is graphed using a line graph; precipitation is graphed using a bar graph.

To construct a **climograph**:
1. using the numbers along the **right vertical axis**, graph monthly **temperature** with a **line graph**; and,
2. using the numbers along the **left vertical axis** graph monthly **precipitation** with a **bar graph**.

The sample for Nome, Alaska has been completed as an example:



Nome	J	F	M	A	M	J	J	A	S	O	N	D
Temperature (°F)	5	5	9	21	36	46	50	48	43	30	16	7
Precipitation (inches)	1.0	.94	.86	.78	.70	.94	2.26	3.8	2.7	1.6	1.1	0.9

Construct Climographs and Determine Which City Each Represents

(15 Points)

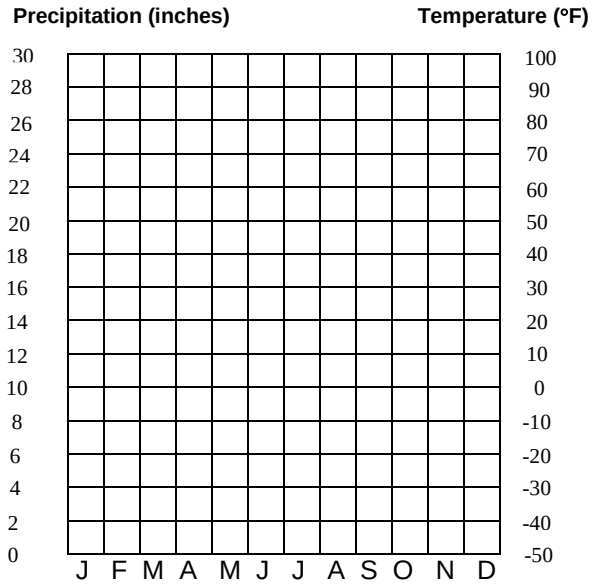
Cities Represented: The data on pages 2 and 3 represents the following cities:

Goodland, Kansas
Los Angeles, California
Montevideo, Uruguay

I. Construct a climograph:
Follow the guidelines on page 1 to construct a climograph for the three data sets on pages 2-3. Graph the average monthly temperature with a line graph and the average monthly rainfall totals with a bar graph.

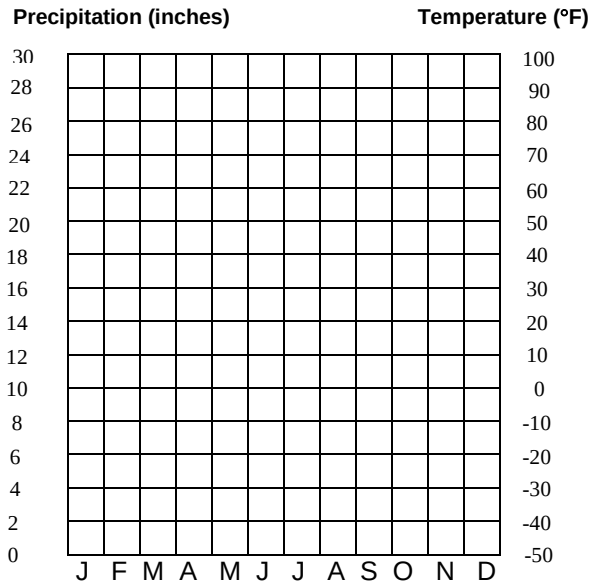
II. Determine which set of data goes with each city: Make the determination based on what you know about latitudinal and continental/marine climate differences.

- Locations in the northern hemisphere have warmer temperatures during the six months from April through September (our summer); those in the southern hemisphere have colder temperatures (their winter) during those same months.
- General temperature patterns reflect latitudinal control (a progressive decrease in temperature poleward from the equator).
- Generally, continental locations have greater annual temperature ranges than coastal locations at the same latitude.



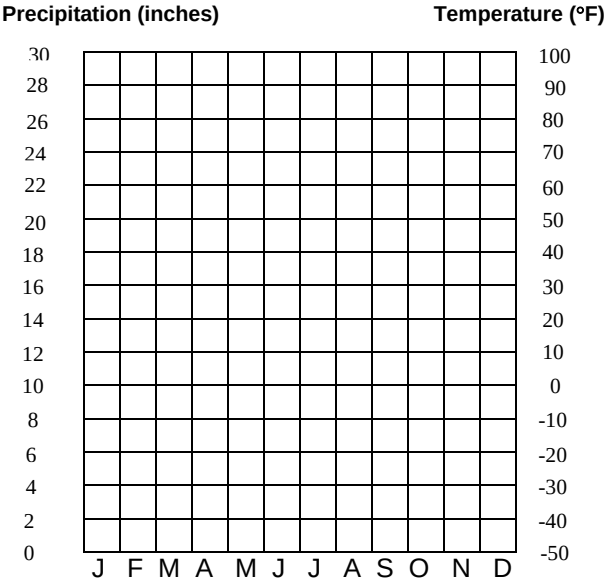
Data 1	J	F	M	A	M	J	J	A	S	O	N	D
Temperature (°F)	56	57	59	61	63	67	72	72	71	67	63	58
Precipitation (inches)	2.6	2.3	1.8	0.9	0.1	0.0	0.0	0.1	0.2	0.3	1.6	1.6

a) **Which city is represented by Data Set 1?** _____



Data 2	J	F	M	A	M	J	J	A	S	O	N	D
Temperature (°F)	74	73	69	63	58	53	52	54	57	61	66	71
Precipitation (inches)	3.9	3.8	4.4	4.2	3.6	3.4	3.4	3.5	3.8	3.9	3.5	3.6

b) **Which city is represented by Data Set 2?** _____



Data 3	J	F	M	A	M	J	J	A	S	O	N	D
Temperature (°F)	29	33	40	50	59	70	77	74	66	54	41	30
Precipitation (inches)	0.3	0.6	1.0	1.8	2.5	2.8	2.7	2.5	1.6	1.0	0.6	0.6

c) **Which city is represented by Data Set 3?** _____

Selected Climate Statistics: Russia, South America, North America

(10 Points)

Determine which set of data below goes with each station. Make the determination based on what you know about latitudinal and continental/marine climate differences.
You do not need to graph these data sets.

- Locations in the northern hemisphere have warmer temperatures during the six months from April through September (our summer); those in the southern hemisphere have colder temperatures (their winter) during those same months.
- General temperature patterns reflect latitudinal control (a progressive decrease in temperature as you move from the equator to the poles).
- Generally, continental locations have greater annual temperature ranges than coastal locations at the same latitude.

a. Antofagasta, Chile = Data Set _____
b. Colorado Springs, Colorado = Data Set _____
c. Iquitos, Peru = Data Set _____
d. Miami, Florida = Data Set _____
e. Minneapolis/St Paul, Minnesota = Data Set _____
f. Murmansk, Russia = Data Set _____
g. Yakutsk, Russia = Data Set _____
h. Yellowknife, NWT, Canada = Data Set _____

Data 1	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temperature (°F)	29	32	37	46	55	65	71	68	60	50	38	30
Precipitation (inches)	0.3	0.4	1.0	1.2	2.2	2.3	3.0	3.1	1.4	0.9	0.5	0.5

Data 2	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temperature (°F)	-49	-34	-10	17	40	58	64	57	42	17	-20	-43
Precipitation (inches)	0.2	0.2	0.1	0.1	0.4	1.1	1.8	1.6	1.0	0.4	0.3	0.2

Data 3	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temperature (°F)	12	12	20	29	39	49	55	51	44	37	23	16
Precipitation (inches)	1.3	0.9	0.8	0.8	1.3	2.2	2.5	3.2	2.2	1.8	1.7	1.5

Data 4	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temperature (°F)	67	68	72	75	79	81	83	83	82	78	73	69
Precipitation (inches)	2.1	2.1	1.9	3.1	6.5	9.2	6.0	7.0	8.1	7.1	2.7	1.9

Data 5	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temperature (°F)	68	68	66	62	59	57	56	57	58	60	63	65
Precipitation (inches)	0	0	0	0	0	.04	.03	.02	.02	.02	0	0

Data 6	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temperature (°F)	11	18	29	46	59	68	73	71	61	50	33	19
Precipitation (inches)	0.8	0.9	1.7	2.1	3.2	4.1	3.5	3.6	2.5	1.9	1.3	0.9

Data 7	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temperature (°F)	79	79	79	79	79	78	77	79	79	80	80	80
Precipitation (inches)	10.5	10.0	12.7	11.9	10.5	8.2	6.4	6.5	7.5	9.1	9.8	10.2

Data 8	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
Temperature (°F)	-18	-12	-1.3	21	41	56	62	57	44	30	5	-11
Precipitation (inches)	0.59	0.5	0.4	0.4	0.7	0.9	1.4	1.6	1.1	1.4	0.9	0.6