

# PROB STAT HONORS

 Name \_\_\_\_\_

## 1.4 – FREQUENCY POLYGONS

1. Two researchers measured the pH of water collected from rain and snow over a 6-month period in Allegheny County, PA.

4.57	5.62	4.12	5.29	4.64	4.31	4.30	4.39	4.45
5.67	4.39	4.52	4.26	4.26	4.40	5.78	4.73	4.56
5.08	4.41	4.12	5.51	4.82	4.63	4.29	4.60	

Construct a frequency polygon from these data.

2. How large is a wolf pack? The following information is from a random sample of winter wolf packs in regions of Alaska, Minnesota, Michigan, Wisconsin, Canada, and Finland.

13	10	7	5	7	7	2	4	3
2	3	15	4	4	2	8	7	8

Construct a frequency polygon from these data.

3. The *Maui News* gave the following costs in dollars per day for a random sample of condominiums located throughout the island of Maui.

89	50	68	60	375	55	500	71	40	350
60	50	250	45	45	125	235	65	60	130

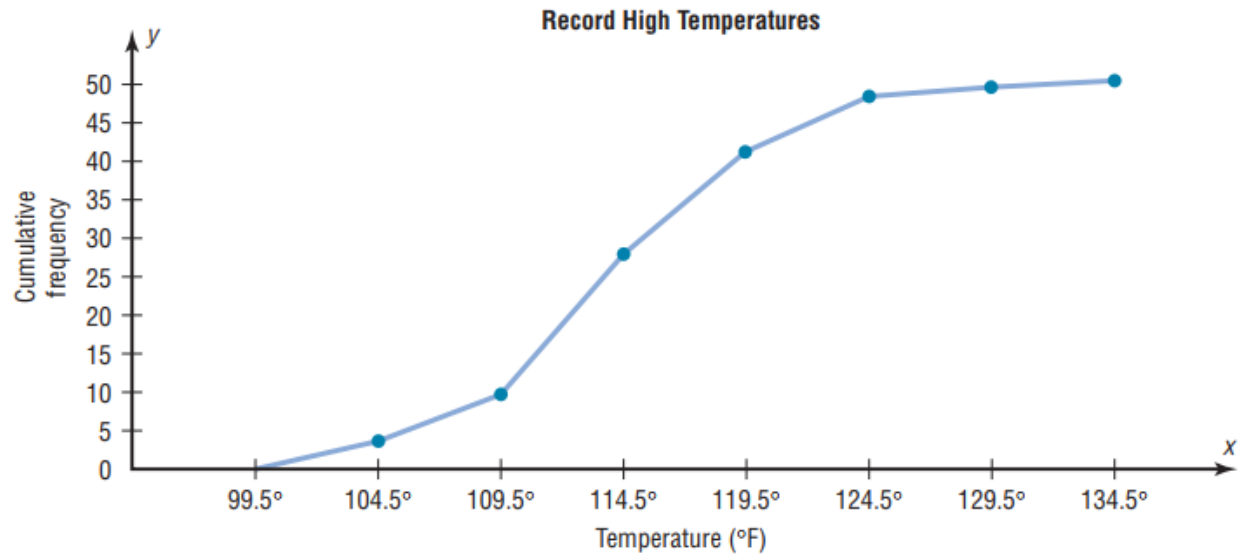
Construct a cumulative frequency polygon from these data.

4. *Consumer Reports* did a study of ice cream bars. Twenty-seven bars with taste ratings of at least “fair” were listed, and cost per bar was included in the report.

0.99	1.07	1.00	0.50	0.37	1.03	1.07	1.07
0.97	0.63	0.33	0.50	0.97	1.08	0.47	0.84
1.23	0.25	0.50	0.40	0.33	0.35	0.17	0.38
0.20	0.18	0.16					

Construct a cumulative frequency polygon from these data.

5. The figure below is a cumulative frequency polygon of the all-time record high recorded temperature for all fifty U.S. states.



- [a] How many states have an all-time record high temperature of 119.5°F or less?
- [b] What percentage of states have an all-time record high temperature of 119.5°F or less?
- [c] Ten percent of the U.S. states have an all-time record temperature of \_\_\_\_\_ °F or less.  
What value fills in the blank?
- [d] Half of the U.S. states have an all-time record temperature of \_\_\_\_\_ °F or more.  
What value fills in the blank?