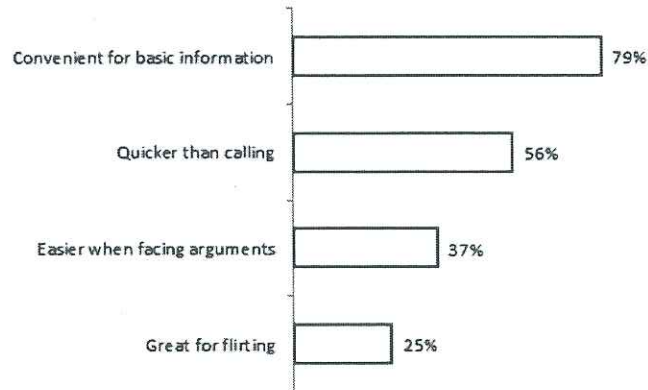


Answer all questions using complete sentences.

1. Consider the graph below of Reasons People Like Texting on Cell Phones, based on a GfK Roper survey of 1000 adults.



- a. Do you think respondents could select more than one response? Explain.

Yes, because the percentages total more than 100%

- b. Could the same information be displayed in a circle graph? Explain.

No, in a circle graph the percentages should total 100%

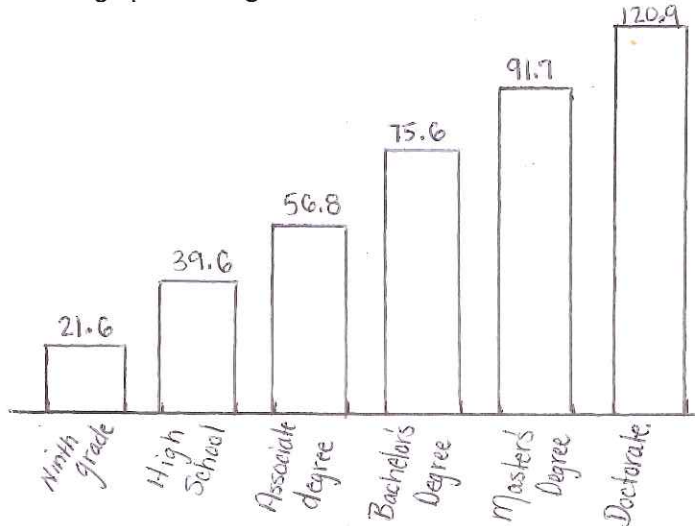
- c. Is the graph a Pareto chart?

Yes, the graph is organized in order from most frequently selected to least.

2. Your friend is thinking about buying shares of stock in a company. You have been tracking the closing prices of the stock shares for the past 90 trading days. Which type of graph for the data, histogram or time-series, would be best to show your friend? Why?

Time-series, as you are looking at data values covering an amount of time.

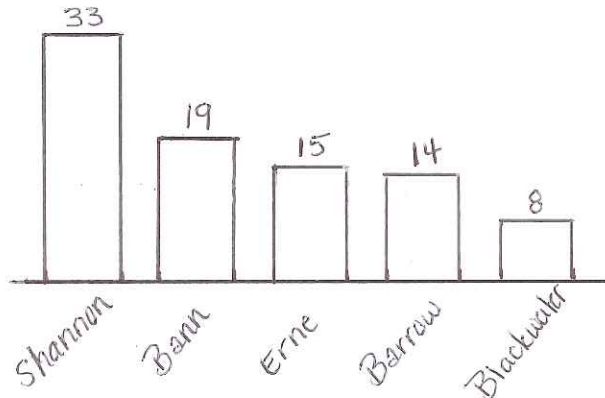
3. It is costly in both time and money to go to college. Does it pay off? According to the Bureau of the Census, the answer is yes. The average annual income (in thousands of dollars) of a *household* headed by a person with the stated education level is as follows: 21.6 if ninth grade is the highest level achieved, 39.6 for high school graduates, 56.8 for those holding associate(2-year) degrees, 75.6 for those with bachelor's degrees, 91.7 for those with master's degrees, and 120.9 for those with doctoral degrees. Make a bar graph showing household income for each education level.



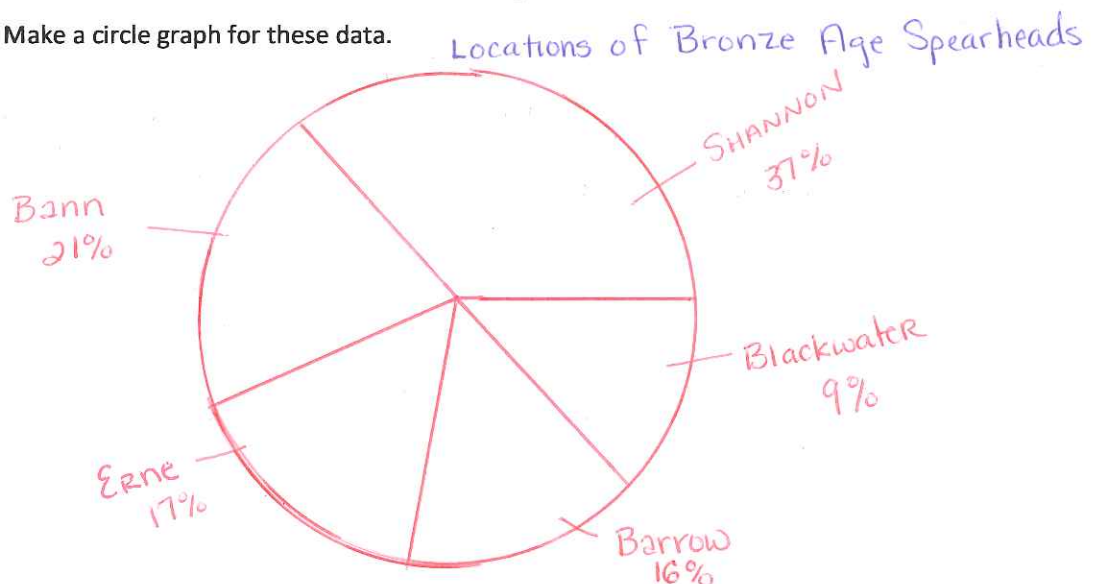
4. Commercial dredging operations in ancient rivers occasionally uncover archaeological artifacts of great importance. One such artifact is Bronze Age spearheads recovered from ancient rivers in Ireland. A recent study gave the following information regarding discoveries of ancient bronze spearhead in Irish rivers.

River	Bann	Blackwater	Erne	Shannon	Barrow
No. of spearheads	19	8	15	33	14

- a. Make a Pareto chart for these data.

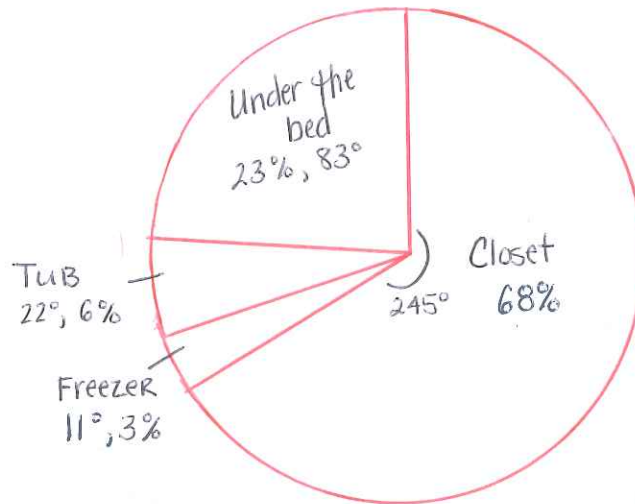


- b. Make a circle graph for these data.



5. A survey of 1000 adults (reported in *USA Today*) uncovered some interesting housekeeping secrets. When unexpected company comes, where do we hide the mess? The survey showed that 68% of the respondents toss their mess into the closet, 23% shove things under the bed, 6% put things into the bathtub, and 3% put the mess into the freezer. Make a circle graph to display this information.

Where We Hide the Mess

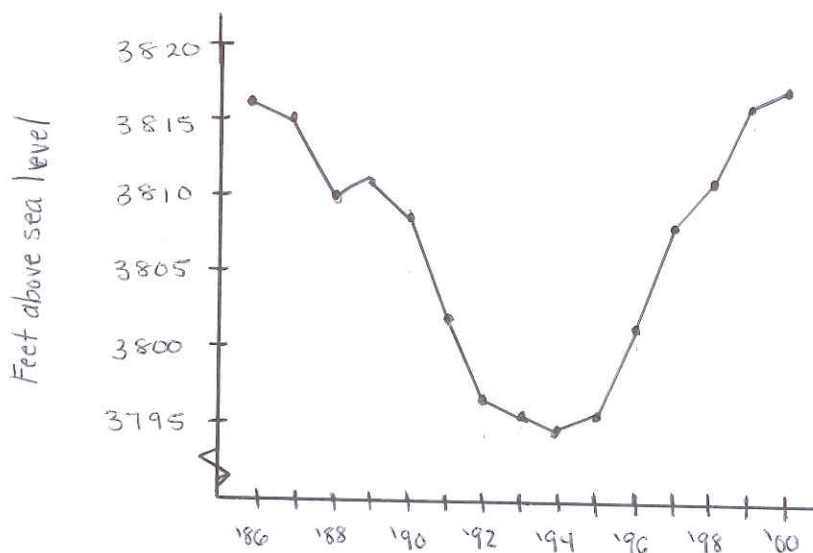


6. Pyramid Lake, Nevada, is described as the pride of the Paiute Indian Nation. It is a beautiful desert lake famous for very large trout. The elevation of the lake surface (feet above sea level) varies according to the annual flow of the Truckee River from Lake Tahoe. The U.S. Geological Survey provided the following data:

Year	Elevation	Year	Elevation	Year	Elevation
1986	3817	1992	3798	1998	3811
1987	3815	1993	3797	1999	3816
1988	3810	1994	3795	2000	3817
1989	3812	1995	3797		
1990	3808	1996	3802		
1991	3803	1997	3807		

Make a time-series graph displaying the data.

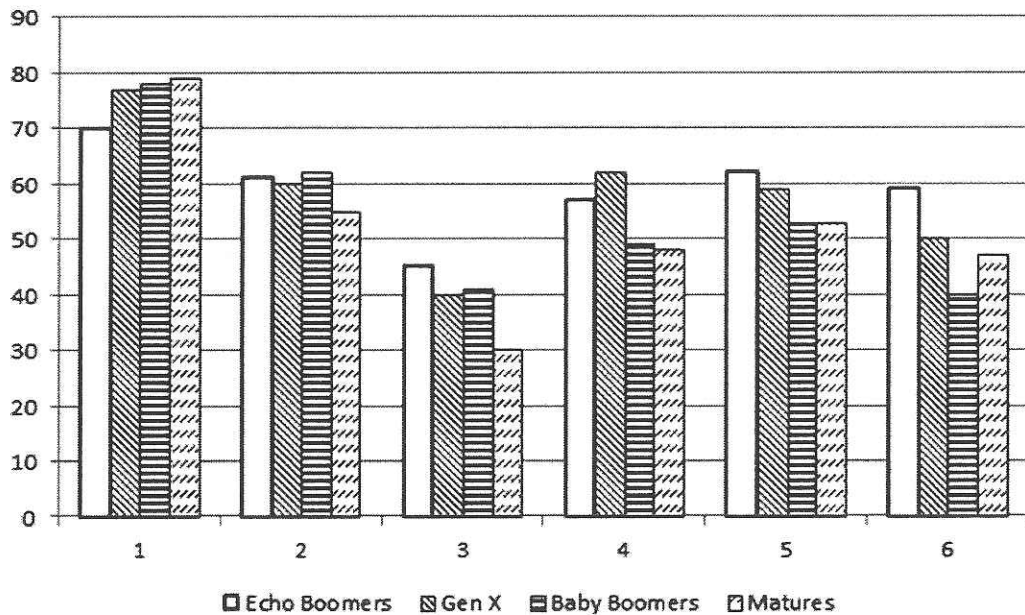
Elevation of Pyramid Lake Surface - Time Plot



7. The following cluster bar graph shows responses from different age groups to questions regarding connectivity and tracking technology found in new cars. A recent Harris Poll asked respondents how much they agreed or disagreed with statements that they

- 1) worry that the technologies cause too much distraction and are dangerous;
- 2) worry about letting companies know too much about location and driving habits;
- 3) worry that insurance rates could increase because of knowledge of driving habits;
- 4) think the technologies make driving more enjoyable;
- 5) feel safer with the technologies;
- 6) feel it is important to stay connected when in vehicle.

The graph shows the percentage of respondents in each age category who agree strongly or somewhat agree to each of the six statements.



- a. Which statement has the highest rate of agreement for all four age groups?

Statement 1 has the highest rate of agreement.

- b. Which age group expresses least worry about insurance companies raising their rates because of the driving habit information collected by the technologies?

The matures age group expresses the least worry about insurance

- c. Which age group has the highest percentage of those who find the technologies make driving more enjoyable?

Gen X believes technology makes driving more enjoyable.