



Bayonne Public Schools
667 Avenue A.
Bayonne, New Jersey 07002

Dawn Aiello
Director of Mathematics

(201) 858-5920
daiello@bboed.org

Dear Parents/Guardians of students entering AP Stats in September 2026,

This summer, your child will have the opportunity to prevent summer learning loss and to be better prepared for success in AP Stats. **The Summer Bridges assignment is the first required assignment for AP Stats. Students should also be prepared to be assessed on these skills during the first two weeks of school.**

Note: The assignment is attached to this letter. In order to receive credit, students must show ALL written work and submit it to their teacher by September 10, 2026.

Also, please do not wait until the end of summer to begin these skills.

Dawn Aiello
Director of Mathematics

Welcome to AP Statistics! This course will be unlike any other math class you have ever taken! To get the most out of this course you need to be competent in basic algebra, be familiar with basic statistical measures, understand how to use a TI graphing calculator, and most importantly, be willing to clearly and completely explain your answers in context.

Although this is a math course, AP Statistics concentrates much more heavily on thinking, reasoning, writing, and communicating rather than number-crunching. Graphing calculators and computer software programs will do most of the tedious “busy work” for you. *You will not need a graphing calculator to complete this packet, but you may want to download a free TI-84 graphing calculator app to get familiar with.*

This course is focused on four interrelated areas of concentration:

- **Exploring Data** - What patterns and trends can be identified in a set of data? What do these patterns reveal about variability, distribution, and relationships within the data?
- **Sampling and Experimentation** - How can a study be designed to collect reliable and unbiased data? How can simulations and experiments model real-world situations effectively?
- **Anticipating Patterns** - How can probability be used to predict outcomes and model random phenomena? What conclusions can be drawn from probability distributions and expected outcomes?
- **Statistical Inference** - How can sample data be used to draw conclusions about a population? How can confidence intervals and hypothesis tests determine whether results are statistically significant?

Please note: this is your first required assignment for AP Statistics. You will be assessed on these topics the first two weeks of school.

Part I : Vocabulary List - Follow the steps below to find the definition of following terms. Must be handwritten.

1. Go to www.stat Trek.com
2. Click on “AP Statistics” on the LEFT
3. Read the following subtopics to complete the vocabulary list below.
 - a. **The Basics:** Variables, Population vs. sample, Mean and median, Variability, Position
 - b. **Charts and graphs:** Patterns in data, Dotplots, Bar charts and histograms, Stemplots, Boxplots, Cumulative plots, Scatterplots, Comparing Data Sets

1. Categorical Variable: _____

2. Quantitative Variable: _____

3. Discrete Variable: _____

4. Continuous Variable: _____

5. Univariate Data: _____

6. Bivariate Data: _____

7. Population: _____

8. Sample: _____

9. Parameter: _____

10. Statistic: _____

11. Median: _____

12. Mean: _____

13. Range: _____

14. Interquartile Range: _____

15. Variance: _____

16. Standard deviation: _____

17. Quartiles: _____

18. Center: _____

19. Spread: _____

20. Unimodal: _____

Sketch Unimodal distribution:

21. Bimodal: _____

Sketch Bimodal distribution:

22. Skewness: _____

Sketch Skewed left distribution:

Sketch Skewed right distribution:

23. Uniform: _____

Sketch Uniform distribution:

24. Gaps: _____

25. Outliers: _____

26. Dotplots: _____

27. Bar charts: _____

28. Histogram: _____

29. Stemplots: _____

30. Boxplots: _____

Calculate Statistics

A statistic is a number calculator from a sample of data. Quantitative data has many different statistics that can be calculated. Determine the given statistics from the data below on the number of homeruns Mark McGuire hit in each season from 1982-2001.

70	52	22	49	3	32	58	39
39	65	42	29	9	32	9	33

Mean	
Minimum	
Maximum	
Median	
Q1	
Q3	
Range	
Interquartile Range (IQR)	

Dotplots

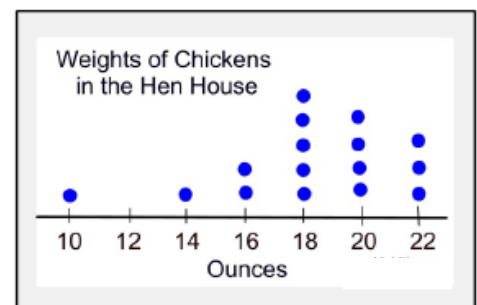
Directions: Determine each statistical measure for these dot plots.

1.



- Describe the shape of the graph.
- Mean
- Median
- Mode
- Q_1 (first quartile)
- Q_3 (third quartile)
- IQR (interquartile range)

2.



- Describe the shape of the graph.
- Mean
- Median
- Mode
- Q_1
- Q_3
- IQR

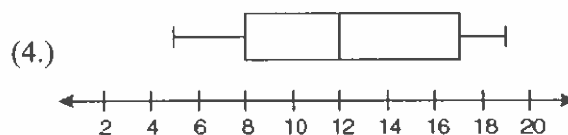
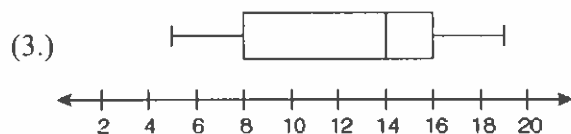
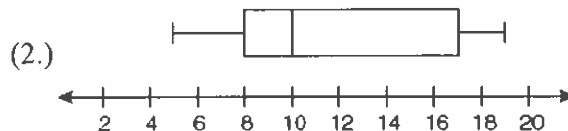
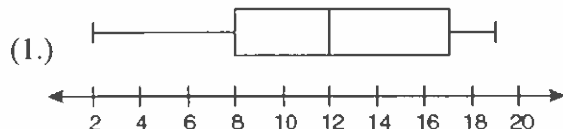
Box Plots

Directions: These questions deal with box and whisker plots.

1. Jason saves a portion of his salary from his part-time job in the hope of buying a used car. He recorded the number of dollars he was able to save over the past 15 weeks.

Dollars saved: 19, 12, 9, 7, 17, 10, 6, 18, 9, 14, 19, 8, 5, 17, 9

Which box and whisker plot represents this data?



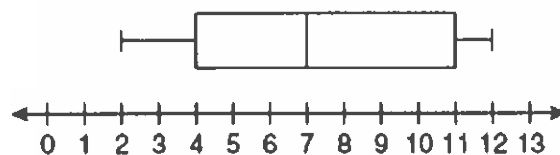
2. Examine the box plot:

(a) What is the value of the third quartile?

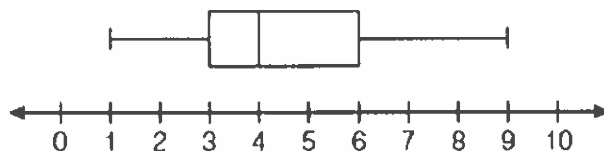
(b) What is the median score?

(c) What percent of the values are *less than 4*?

(d) What is the range of the data presented in the box plot?



3. A movie theater recorded the number of tickets sold daily for a popular vampire movie during the month of December. The box plot below shows the data for the number of tickets sold, in hundreds.



Determine whether the following statements are TRUE or FALSE regarding this box plot. Circle choice.

(a) 25% of the data is between 300 and 400. T F

(b) the second quartile is 600. T F

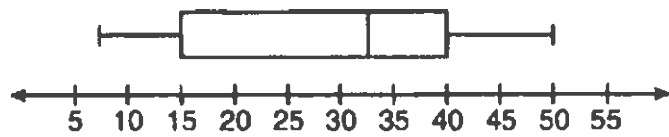
(c) the median is 400. T F

(d) the first quartile is 300. T F

(e) the range is 300. T F

(f) 50% of the data is between 300 and 600. T F

4. The box plot shows the ages of people attending a music concert.

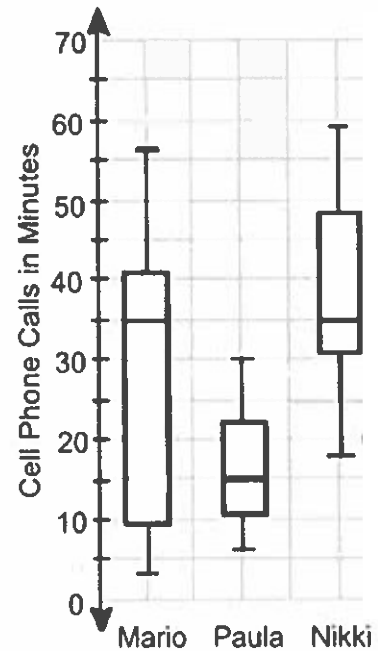


- (a) Which interval contains exactly 50% of the ages?
 (b) What percentage of the ages are 15 or older?
 (c) Which choice is the median age? (1) 25 (2) 30 (3) 33 (4) 35

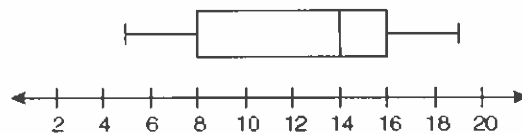
5. The box plot shows the lengths of cell phone calls made by three students in a one week period.

Which of the following statements is true?

- (1.) All of Nikki's calls were longer than all of Paula's calls.
 (2.) Paula made the fewest number of calls.
 (3.) Mario made 50% more calls than Paula.
 (4.) The median length of Mario's calls is equal to the median length of Nikki's calls.



6. Examine the box plot:



- (a) Which interval represents the interquartile range, IQR?
 (b) What percentage of the data lies in the IQR?
 (c) Which interval could be described as being the most "clustered" section of the data?
 5-8, 8-14, 14-16, 16-19

Interpreting Graphs

Name _____

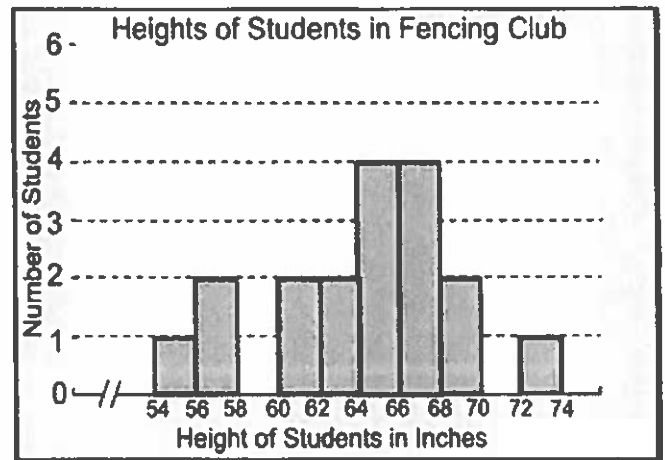
Directions: Solve the following problems dealing with statistical graphs.

1. Questions pertain to the histogram.

(a) How many students are in the Fencing Club?

(b) How many students' heights are greater than or equal to 66 inches tall?

(c) What percentage of the students have a height greater than or equal to 60 inches but less than 66 inches, to the *nearest tenth* of a percent?



(d) In which interval, will you find the median student height?

2. The box and whisker plots represent the number of points scored in each game for the 2013 fall football season for two area high school teams.

(a) In general, which team scored more points per game?

(b) Which team's data shows more variability in the points scored?

(c) What is the difference between the median points scored by these two teams?

