

# AP Statistics – Summer Review Assignment

*This summer review is meant to help you refresh important skills and gently introduce the course.  
Total: 10 questions. Due: First week of school.*

## Instructions

Complete the following problems on a separate sheet of paper. Show all your work and box your final answers. This will be collected and checked for completion and effort. Feel free to use your notes or any of the resources provided at the end.

### Part A: Prerequisite Review (6 questions)

- A1.** A data set contains the following values: 5, 8, 12, 14, 18. Find the mean, median, and mode.
- A2.** A second data set is: 10, 12, 14, 15, 18, 25. Calculate the range, interquartile range (IQR), and standard deviation.
- A3.** Given a normally distributed data set with mean  $\mu = 20$  and standard deviation  $\sigma = 4$ , what percentage of data values fall between 16 and 24?
- A4.** A bar graph shows the number of students who prefer different types of music genres. Describe what information a bar graph conveys and how it differs from a histogram.
- A5.** You draw a card from a standard 52-card deck. What is the probability of drawing either a red card or a King?
- A6.** The table below shows the frequency of shoe sizes for 20 students:

Shoe Size	Frequency
7	2
8	5
9	6
10	4
11	3

Estimate the mean shoe size.

### Part B: Chapter 1 Preview – Exploring Data (2 questions)

- B1.** Describe the shape, center, and spread of the following distribution:  
[3, 5, 7, 7, 9, 10, 10, 11, 14]
- B2.** Two classes took the same quiz. Class A scores: [70, 72, 74, 76, 78]  
Class B scores: [60, 65, 70, 85, 90]  
Which class had a more consistent performance? Support your answer using statistical reasoning.

**Part C: Optional Practice & Resources (2 items)**

- C1. (Optional Practice)** A pie chart summarizes students' favorite sports. What might be a limitation of using a pie chart when comparing groups of different sizes?
- C2. (Recommended Resources)** Review any weak areas or explore new ones using these student-friendly sites:
- Khan Academy: <https://www.khanacademy.org/math/ap-statistics>
  - Stat Trek: <https://stattrek.com>
  - Crash Course: YouTube Statistics Playlist

*Have a restful and enjoyable summer! This assignment is designed to help you start AP Statistics with confidence.*