



**Test Papers
Hub.**

AP Statistics Practice Paper 1

Full Exam Simulation — Revised Course and Exam Description (effective 2026–27)

Section I: 42 multiple-choice (A–D) · Section II: 4 free-response questions (10 marks each) · 82 marks in all · 3 hours

How to use this booklet

- Working time – 3 hours total (Section I: 1 hour 30 minutes; Section II: 1 hour 30 minutes)
- Section I is completed on a testing device; Section II is handwritten in a response booklet (matching the digital hybrid AP Statistics exam format)
- A graphing calculator (TI-84, TI-Nspire CE, or equivalent) is required and may be used throughout
- A formula reference sheet is provided at the back of this paper
- For Section II, show your method, not just a final answer — partial credit is awarded for correct reasoning
- Worked solutions follow the paper: every question has step-by-step working and a key takeaway.

SECTION I — MULTIPLE CHOICE

42 marks · about 1 hour 30 minutes · Attempt Questions 1 – 42

Choose the best answer for each question. Each question is worth 1 mark; there is no penalty for incorrect answers. A graphing calculator and the formula sheet at the back are permitted.

1. A school nurse wants to study students' sleep. Which of the following is a statistical question?

- A How many hours did Maya sleep last night?
- B How many hours do students at this school sleep on school nights?
- C Is eight hours the recommended amount of sleep for teenagers?
- D What time does school start?

2. A principal numbers the 600 students on the school roll and uses a random number generator to select 60 of them to survey. This sampling method is best described as

- A a stratified random sample.
- B a simple random sample.
- C a cluster sample.
- D a systematic sample.

3. A random sample of 500 adults is surveyed about exercise habits, and 45% say they exercise at least three times a week. A second random sample of 500 adults from the same population gives 49%. The difference between the two results is best explained by

- A undercoverage bias.
- B response bias.
- C sampling variability.
- D nonresponse bias.

4. Researchers test whether a new fertilizer increases tomato yield. Because the field has a sunny side and a shady side, they randomly assign plants to fertilizer or no fertilizer separately within each side. This technique is called

- A replication.
- B stratified sampling.
- C blinding.
- D blocking.

5. A researcher gives half of the patients in a trial a new treatment and compares the results with a group of similar patients who were treated last year. The main problem with this comparison is that

- A patients were not randomly assigned, so differences may be due to other changes over time.
- B the control group is too large.
- C the treatment group knows they were treated.
- D the study uses a placebo.

6. A random sample of 354 residents was asked whether they own a pet and whether they volunteer. Results are shown below. What proportion of those who own a pet also volunteer?

Residents: own a pet and volunteer (n = 354)

	Volunteer	Do not volunteer	Total
Own a pet	100	59	159
No pet	57	138	195
Total	157	197	354

- A 0.282
- B 0.292
- C 0.818
- D 0.629

7. A random sample of 439 workers was asked whether they cycle to work and whether they live in a city. Results are shown below. How much greater (or smaller) is the proportion who live in a city among those who cycle to work than among those who do not? (Answer as the first proportion minus the second.)

Workers: cycle to work and live in a city (n = 439)

	Live in a city	Live outside a city	Total
Cycle to work	152	38	190
Do not cycle	111	138	249
Total	263	176	439

- A 0.454
- B 0.093
- C 0.354
- D 0.460

WORKED SOLUTIONS

Answers & worked solutions

Multiple-choice answer key

1	B	2	B	3	C	4	D	5	A	6	D
7	C	8	B	9	C	10	B	11	A	12	D
13	A	14	D	15	A	16	D	17	C	18	C
19	A	20	A	21	B	22	D	23	B	24	C
25	B	26	D	27	B	28	D	29	B	30	C
31	A	32	D	33	A	34	C	35	C	36	D
37	C	38	B	39	D	40	C	41	A	42	A

SECTION I — MULTIPLE CHOICE

1. A school nurse wants to study students' sleep. Which of the following is a statistical question? [U1-INV]

Correct answer: B — How many hours do students at this school sleep on school nights?

- A statistical question anticipates variability in the data and can be answered by collecting data from many individuals. Only the first question asks about a quantity that varies from student to student.

LOS: Formulate an investigative statistical question

KEY TAKEAWAY

A statistical question is answered by data that vary from one individual to the next.

2. A principal numbers the 600 students on the school roll and uses a random number generator to select 60 of them to survey. This sampling method is best described as [U1-COLLECT]

Correct answer: B — a simple random sample.

- Every possible group of 60 students had an equal chance of being selected, which defines a simple random sample.

LOS: Sampling methods (SRS, stratified, cluster, systematic, convenience) and sources of bias

KEY TAKEAWAY

In an SRS every possible sample of size n has the same chance of selection.