

# AP Statistics Foundation Worksheet

8 original questions, working space and separate answer explanations. Version 2026-10-27.

## Scope

2026–27 statistics practice: expanded partial coverage.

This is an untimed foundation study sample, not an official examination or complete mock test. Author-reviewed learning materials; independent educator review and learner calibration remain pending.

## How to use this worksheet

Work through the questions before opening the answer section. Write your calculation or the reason for your choice. After checking the explanation, return to the linked lesson for any unfamiliar distinction.

<https://openexam.site/exams/ap-statistics/worksheets/>

### QUESTION 1 / Ask statistical questions

A study of 24 library visitors records the service-category label for each observation. How should this variable be classified?

- A. A sampling distribution
- B. Quantitative
- C. A population
- D. Categorical

Working / reasoning:

Item aps-01-1-1 | Lesson: <https://openexam.site/exams/ap-statistics/learn/questions-data/>

### QUESTION 2 / Condition on the right group

$P(A) = 2/5$ ,  $P(B) = 3/10$ , and  $P(A \text{ and } B) = 1/10$ . Find  $P(A \text{ or } B)$ .

- A.  $3/25$
- B.  $3/5$
- C.  $1/10$
- D.  $1/2$

Working / reasoning:

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Item aps-06-1-2 | Lesson: <https://openexam.site/exams/ap-statistics/learn/probability/>

QUESTION 3 / Build and interpret intervals

A proportion estimate is  $7/10$  with  $SE = 1/50$ . Using multiplier 2, what is the upper interval endpoint?

- A.  $18/25$
- B.  $33/50$
- C.  $37/50$
- D.  $1/25$

Working / reasoning:

Item aps-09-1-3 | Lesson: <https://openexam.site/exams/ap-statistics/learn/intervals/>

QUESTION 4 / Compare groups carefully

Two independent groups have sample proportions  $9/10$  and  $3/10$ . What is the estimated difference, first minus second?

- A.  $3/5$
- B.  $9/10$
- C.  $6/5$
- D.  $3/10$

Working / reasoning:

Item aps-11-1-4 | Lesson: <https://openexam.site/exams/ap-statistics/learn/group-inference/>

QUESTION 5 / Read a fitted relationship

A fitted line predicts  $\hat{y} = 11 + 2x$ . What response is predicted at  $x = 4$ ?

Your answer: \_\_\_\_\_

Working / reasoning:

Item aps-12-1-1 | Lesson: <https://openexam.site/exams/ap-statistics/learn/regression/>

QUESTION 6 / Describe center and position

Four delivery delays, in minutes, are 5, 7, 9, 11. What is their mean?

Your answer: \_\_\_\_\_

Working / reasoning:

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Item aps-02-1-3 | Lesson: <https://openexam.site/exams/ap-statistics/learn/summaries/>

QUESTION 7 / Model repeated chance outcomes

X takes values 0, 3, and 6, with probabilities  $\frac{1}{4}$ ,  $\frac{1}{2}$ , and  $\frac{1}{4}$ . What is  $E(X)$ ?

- A. 3
- B. 6
- C.  $\frac{9}{4}$
- D.  $\frac{9}{8}$

Working / reasoning:

Item aps-07-1-3 | Lesson: <https://openexam.site/exams/ap-statistics/learn/random-variables/>

QUESTION 8 / Reason from a null model

For a one-proportion test,  $p_0 = \frac{1}{2}$ , observed proportion =  $\frac{7}{10}$ , and the null standard error is  $\frac{1}{20}$ . What is  $z$ ?

- A.  $\frac{1}{5}$
- B. -4
- C. 4
- D. 80

Working / reasoning:

Item aps-10-1-4 | Lesson: <https://openexam.site/exams/ap-statistics/learn/tests/>

# AP Statistics: Answers & Explanations

Compare the method or rule as well as the final answer. These explanations are study aids, not official scoring guidance.

QUESTION 1 / aps-01-1-1

Answer: Categorical

1. Identify what is recorded for each observational unit.
2. Ask whether numerical magnitude and differences have a meaningful interpretation.
3. The recorded variable is categorical.

QUESTION 2 / aps-06-1-2

Answer: 3/5

1. Add the two event probabilities.
2. Subtract the overlap counted twice.
3.  $P(A \text{ or } B) = 3/5$ .

QUESTION 3 / aps-09-1-3

Answer: 37/50

1. Margin of error =  $2 \times 1/50 = 1/25$ .
2. Add the margin to the estimate.
3. Upper endpoint = 37/50.

QUESTION 4 / aps-11-1-4

Answer: 3/5

1. Keep the direction of subtraction fixed.
2. Subtract 3/10 from 9/10.
3. The estimated difference is 3/5.

QUESTION 5 / aps-12-1-1

Answer: 19

1. Substitute  $x = 4$  into the fitted line.
2. Compute  $11 + 2 \times 4$ .
3. The predicted response is 19.

QUESTION 6 / aps-02-1-3

Answer: 8

1. Add the four delays: 32.
2. Divide the total by 4: 8.
3. The result describes the arithmetic center in minutes.

QUESTION 7 / aps-07-1-3

Answer: 3

1. Multiply each value by its probability.
2. The weighted sum is  $0 + 3/2 + 6/4$ .
3.  $E(X) = 3$ .

QUESTION 8 / aps-10-1-4

Answer: 4

1. Subtract the null proportion from the sample proportion.
2. Divide by the null standard error.
3.  $z = 4$ .

## References and scope notes

The questions and teaching explanations are original catalog materials. References support the selected concepts; they are not endorsements or a reproduced official examination bank.

AP Statistics 2026–27 course framework

<https://apcentral.collegeboard.org/courses/ap-statistics>

Foundation pilot, not complete AP syllabus coverage or an official exam simulation.

400 variants across 96 families; not independently calibrated item designs.

Practice includes numeric responses as learning exercises; official free responses require statistical reasoning and contextual justification.

No calibrated AP score prediction; independent educator review pending.

Broader inference procedures, authentic multi-focus free responses and full shared-stimulus exam sets need further development.

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For current exam-provider requirements, follow the official references in the exam guide. This PDF does not assess certification, professional competence or readiness.