

Score	Number of Students
90	1
80	3
70	4
60	0
50	3

The table above shows the scores of a group of 11 students on a history test. What is the average (mean) score of the group to the nearest whole number?

Answer: _____

Did you use the calculator on this question?

Yes No

Scoring Guide

Solution:

69

Score & Description
Correct Correct response
Incorrect #3 69 and any decimal (e.g., 69.09 or 69.0)
Incorrect #2 70 (median and mode)
Incorrect #1 Any incorrect response other than those described above

In this question the student needed to find the average of 11 test scores. Since only 5 different scores were given, the student needed either to find a weighted average or include each score an appropriate number of times in the computation. Students were permitted to use a calculator.

*The use of more than one incorrect category in this question enabled NAEP to gather data on common student errors. Any response that fell into one of the incorrect categories earned no credit.

Correct - Student Response

- 1 The table above shows the scores of a group of 11 students on a history test. What is the average (mean) score of the group to the nearest whole number?

69

Incorrect #3 - Student Response

- 1 The table above shows the scores of a group of 11 students on a history test. What is the average (mean) score of the group to the nearest whole number?

69.1

Incorrect #2 - Student Response

- 1 The table above shows the scores of a group of 11 students on a history test. What is the average (mean) score of the group to the nearest whole number?

70

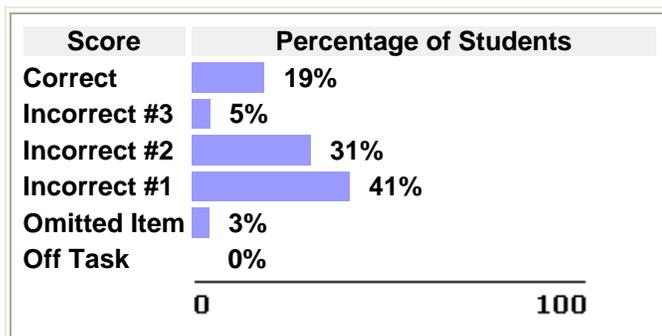
Incorrect #1 - Student Response

- 1 The table above shows the scores of a group of 11 students on a history test. What is the average

(mean) score of the group to the nearest whole number?

32

2003 National Performance Results



Note:

- These results are for public and nonpublic school students.
- Percentages may not add to 100 due to rounding.

Mathematical Content Area: *Data analysis, statistics, and probability*
Mathematical Ability: *Procedural knowledge*

Mathematical Content Area

Data analysis, statistics, and probability

This question measures data analysis, statistics, and probability. This content area focuses on the skills of collecting, organizing, reading, representing, and interpreting data. These are assessed in a variety of contexts to reflect the use of these skills in dealing with information. Students are expected to use statistics and statistical concepts to analyze and communicate interpretations of data. Students are also expected to understand the meaning of basic probability concepts and applications of these concepts in problem-solving and decision-making situations.

Mathematical Ability

Procedural knowledge

This question measures students' procedural knowledge. Students demonstrate procedural knowledge in mathematics when they select and apply appropriate procedures correctly; verify or justify the correctness of a procedure using concrete models or symbolic methods; or extend or modify procedures to deal with factors inherent in problem settings. Procedural knowledge encompasses the abilities to read and produce graphs and tables, execute geometric constructions, and perform noncomputational skills such as rounding and ordering. Procedural knowledge is often reflected in a student's ability to connect an algorithmic process with a given problem situation, to employ that algorithm correctly, and to communicate the results of the algorithm in the context of the problem setting.

	Description	Grade	Type	Difficulty
1	Find mean of data	8th	Short Constructed Response	Hard