LESSON MAKER PRO

Data Check

Read statistics and question the sample.

HIGH SCHOOL · MA.912.DP.5.11

MA.912.DP.5.11 "Evaluate reports based on data from diverse media, print and digital resources by interpreting graphs and tables; evaluating data-based arguments; determining whether a valid sampling method was used; or interpreting provided statistics."

NAME _____ DATE _____

CHECK DATA CLAIMS

To interpret a report, calculate the statistic from the displayed data, then check whether the sample can represent the whole group. For an odd number of ordered values, the median is the middle value. A random sample from the full population is more reliable than a voluntary response.

WORKED EXAMPLE

The number line shows five ordered quiz scores. Find the median.



1. There are 5 scores.
2. The middle score is the third score.
3. The third score is 35.

Answer: 35

PRACTICE 4 problems

1 Find the mean of 2, 4, 6, 8, and 10.

ANSWER _____

2 A principal randomly selects 24 names from the complete student roster. Is this a valid sample of the school? Explain.

ANSWER _____

3 A survey of 20 randomly selected seniors finds that 12 use public transit. What percent of the sample uses public transit?

ANSWER _____

4 In a random sample of 25 students, 14 prefer later school start times. Does this support the claim that most students in the sample prefer later start times?

ANSWER _____

APPLY IT Show your work

1 The student council randomly surveyed 20 students. What percent chose the gym? Does the table support the claim that most students chose the gym?

FAVORITE AFTER-SCHOOL SPACE

Space	Students
Gym	9
Library	6
Courtyard	3
Home	2

ANSWER _____

2 The number line shows five students' commute times, in minutes. Find the median. Does it support the statement that a typical commute is at least 10 minutes?



ANSWER _____

CHALLENGE One step up

A school social media account asks its followers whether homework should be reduced. Of 120 responses, 78 say yes. The account reports, "65% of all students want less homework." Is the percentage correct, and is the claim about all students justified? Explain.

WORK SPACE AND ANSWER

ANSWER KEY # Data Check

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Find the mean of 2, 4, 6, 8, and 10.	**6**
2	A principal randomly selects 24 names from the complete student roster. Is this a valid sample of the school? Explain.	**Yes. The names were randomly selected from the full student roster.**
3	A survey of 20 randomly selected seniors finds that 12 use public transit. What percent of the sample uses public transit?	**60%**
4	In a random sample of 25 students, 14 prefer later school start times. Does this support the claim that most students in the sample prefer later start times?	**Yes. 14 out of 25 is more than half.**

PART 2 · APPLY IT

1. **45%; no, because 9 of 20 is less than half.** Compute 9/20 = 45%. Since 45% is below 50%, the gym was not chosen by most students.
2. **9 minutes; no.** The middle of the five times is 9 minutes. Since 9 is less than 10, the statement is not supported.

CHALLENGE

The percentage of respondents is correct: 78/120 = 65%. The claim about all students is not justified because followers chose whether to respond and may not represent all students.

Accept equivalent fractions or decimals for percentages when correct. For sampling explanations, accept statements that identify random selection from the full population or explain voluntary-response bias.