

Two Groups, One Test

Compare life science data by using fair measures and careful evidence.

LS.1.c.iii "interpreting, analyzing, and evaluating data compare and contrast data collected by different groups and discuss similarities and differences in their findings"

NAME _____ DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline the two percentage findings that show a shared pattern. Circle two details that explain why the groups' results are not exactly the same.

Pill Bug Moisture Test

- ① Two seventh-grade groups tested whether pill bugs prefer moisture. Each group placed animals in a choice chamber with a moist side and a dry side. After ten minutes, students counted where the animals were resting. The groups used the same room and observation time, but they began with different numbers of pill bugs.

PILL BUG LOCATIONS AFTER 10 MINUTES

Group	Total Pill Bugs	Moist Side	Dry Side
A	20	16	4
B	24	18	6

- ② Group A found 16 of 20 pill bugs on the moist side. Group B found 18 of 24 there. Raw counts differ because Group B tested more animals. Comparing percentages is fairer: 80 percent for Group A and 75 percent for Group B. Both results show more pill bugs on the moist side than dry side.
- ③ The findings are similar, not identical. Group A's moist-side percentage was five points higher than Group B's. Small differences can result from chance, individual animal behavior, or details such as how evenly the moist paper was dampened. Repeating trials with equal procedures and combining results would make the conclusion stronger.

2 ANSWER WITH EVIDENCE _____ Use the passage

- 1** Compare the groups' raw counts on the moist side. Why is that comparison alone not the fairest way to compare their findings?

- 2** What percentage of each group's pill bugs was on the moist side? What similarity do the percentages show?

- 3** Name two parts of the procedure that were the same for both groups. Why do these similarities matter when comparing the findings?

- 4** What might explain the five-point difference between the groups? State one change that would make their conclusion stronger.

3 YOUR TURN _____ Your own words

Two new groups test whether earthworms settle on a dark side of a chamber. Group C finds 12 of 15 earthworms on the dark side, and Group D finds 14 of 20 there. Write exactly 3 sentences that compare the percentages, state one similarity and one difference, and name one procedure the groups should keep the same.

PART 1 • READ AND MARK

Underline the two percentage findings that show a shared pattern. Circle two details that explain why the groups' results are not exactly the same. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Compare the groups' raw counts on the moist side. Why is that comparison alone not the fairest way to compare their findings?	Group B counted 18 pill bugs on the moist side, while Group A counted 16. Raw counts alone are not fairest because Group B started with more pill bugs.
2	What percentage of each group's pill bugs was on the moist side? What similarity do the percentages show?	Group A had 80 percent on the moist side, and Group B had 75 percent. Both groups found that most pill bugs were on the moist side.
3	Name two parts of the procedure that were the same for both groups. Why do these similarities matter when comparing the findings?	Both groups used the same room and observation time. They also used a choice chamber with a moist side and a dry side. Keeping procedures alike makes the comparison fairer.
4	What might explain the five-point difference between the groups? State one change that would make their conclusion stronger.	The difference could result from chance, individual animal behavior, or unevenly dampened moist paper. Repeating trials with equal procedures and combining results would strengthen the conclusion.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Group C had 80 percent of its earthworms on the dark side, while Group D had 70 percent. Both groups found more earthworms on the dark side, but Group C's percentage was 10 points higher. Keeping the observation time the same would help make the comparison fair.

Accept equivalent percentage calculations and comparisons supported by the data. For the open response, accept any reasonable controlled procedure, such as observation time, chamber size, light conditions, or number of earthworms.