

Spot the Data Clues

Read data closely to find patterns, unusual results, and errors.

3.2.B “analyze data by identifying any significant features, patterns, or sources of error;”

NAME _____

DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline the table results that make an increasing pattern. Circle the result that does not fit that pattern, and number the sentence that tells why the result may be unfair.

Bean Seed Test

- ① Pia's class tested how many bean seeds sprouted in four cups. Each cup had 10 seeds, the same soil, and the same window light. Students added a different amount of water each day for seven days. They counted seeds with a tiny root as sprouted. Their class table shows the results.

BEAN SEED RESULTS

Water Each Day	Seeds That Sprouted
2 mL	3
4 mL	6
6 mL	9
8 mL	5

- ② Most results rose as water increased from 2 to 6 milliliters. At 8 milliliters, only 5 seeds sprouted, much lower than nearby results. The group checked its notes. A student had watered the 8-milliliter cup for only five days, not seven. This was a source of error.
- ③ To learn more, the class should repeat the test. They should water every cup for seven days and use the same number of seeds. A repeated test could show whether 8 milliliters truly gives fewer sprouts or whether the missed watering caused that result. Scientists look for patterns and check unusual results.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What pattern do the results show from 2 to 6 milliliters of water?

2 Which result stands out as unusual? Tell why it stands out.

3 What source of error did the group find?

4 How could this error change the 8-milliliter result?

3 YOUR TURN _____ Your own words

Another group found 2, 5, 7, and 3 sprouts after giving cups 2, 4, 6, and 8 milliliters of water. The 8-milliliter cup was left in a dark closet for one day. Write three sentences: describe the pattern, name the unusual result, and explain how the dark closet could be a source of error.

PART 1 • READ AND MARK

Underline the table results that make an increasing pattern. Circle the result that does not fit that pattern, and number the sentence that tells why the result may be unfair. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What pattern do the results show from 2 to 6 milliliters of water?	As water increased from 2 mL to 6 mL, the number of sprouted seeds increased from 3 to 6 to 9.
2	Which result stands out as unusual? Tell why it stands out.	The 8 mL result stands out because only 5 seeds sprouted. This is lower than the 6 mL result of 9 sprouts.
3	What source of error did the group find?	The 8 mL cup was watered for only five days instead of seven days.
4	How could this error change the 8-milliliter result?	The missed watering could have caused fewer seeds to sprout, so the result may not show the effect of 8 mL of water alone.

PART 3 • YOUR TURN (SAMPLE ANSWER)

From 2 to 6 milliliters, the number of sprouts increased from 2 to 5 to 7. The 8-milliliter cup had an unusual result because only 3 seeds sprouted. The dark closet may have given that cup less light, so its result may not show the effect of water alone.

Accept equivalent descriptions of the increasing pattern and the 8 mL result as the unusual result. For the open response, accept a reasonable explanation that less light in the dark closet could affect sprouting and make the result unfair.