

Data and its uses

Unit: Data Analysis and Representation (Google Sheets) - Student Practice Worksheet

Overview: Every Friday the canteen ran out of samosas by 11 am. Every Tuesday, forty-five cold ones went into the bin. Nobody knew why. Everybody had a theory.

Practice Questions (30 Total)

Section A - Easy

Q1. How many samosas were sold on Friday of week 2?



- ☐ A. 27
- ☐ B. 33
- ☐ C. 60
- ☐ D. 63

Q2. Anaya looked at just two numbers and said Tuesday was the biggest sales day. What was wrong with her reasoning?

- ☐ A. She read the numbers on the wrong day
- ☐ B. Two numbers are too few to show a real pattern
- ☐ C. She should have multiplied the numbers instead of comparing them
- ☐ D. Tuesday cannot ever be recorded in a spreadsheet

Q3. For how many afternoons did the class record the number of samosas sold?

- ☐ A. Ten
- ☐ B. Five
- ☐ C. Twenty
- ☐ D. Two

Q4. Which of these is really one of the five uses of data described in the concept?

decide

pattern

predict

- ☐ A. Deciding how much to cook based on the numbers
- ☐ B. Making the canteen look busier than it is
- ☐ C. Deciding who is class monitor
- ☐ D. Choosing where children sit in class

Q5. According to the canteen uncle, why was Friday different from other days?

- ☐ A. Friday is a school holiday
- ☐ B. Games period leaves children hungry with pocket money
- ☐ C. Friday is the last day of the school week
- ☐ D. The canteen closes early every Friday

Q6. After the canteen changed its plan, how many samosas did it cook on an ordinary weekday?

- ☐ A. 45
- ☐ B. 60
- ☐ C. 30
- ☐ D. 26

Q7. Where did the class type in the number of samosas sold each day?

afternoon: type into Sheet

- ☐ A. On a classroom whiteboard
- ☐ B. In a Google Sheet
- ☐ C. On a paper poster
- ☐ D. In a text message to Ms. Rao

Q8. What pattern did the ten numbers show?

- ☐ A. Tuesday is the busiest day
- ☐ B. Wednesday sells the least
- ☐ C. Friday is roughly double

☐ D. Sales fall every week

Q9. Before anything changed, how many samosas did the canteen cook every single day, no matter what?

☐ A. 30

☐ B. 60

☐ C. 26

☐ D. 45

Q10. What happened to Friday's sales in December?

☐ A. They stayed exactly the same as before

☐ B. They kept climbing higher every week

☐ C. The canteen stopped selling samosas on Fridays

☐ D. They dropped, because games period had moved to Wednesday

Section B - Medium

Q11. Add week 1's five numbers. How many samosas were sold that week?

$28+26+31+29+60$

week 1 total

☐ A. 164

☐ B. 170

☐ C. 172

☐ D. 174

Q12. Why did Ms. Rao make the class keep recording data even after the canteen fixed the Friday amount?

☐ A. To keep the children occupied after class

☐ B. To check the fix kept working, and to notice if anything changed later

☐ C. Because Google Sheets stops working if nobody types for a week

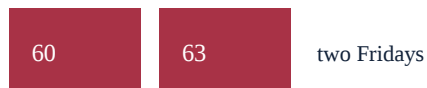
☐ D. To give the canteen uncle extra paperwork to sign

Q13. Waste fell from 45 to 6 samosas a week, at Rs. 10 each. How much was saved each week?

☐ A. Rs. 60

- ☐ B. Rs. 390
- ☐ C. Rs. 450
- ☐ D. Rs. 510

Q14. Which pair of numbers from the story is real evidence of a Friday pattern, rather than a lucky guess from one day?



- ☐ A. Monday of week 1 on its own
- ☐ B. Tuesday of week 1 on its own
- ☐ C. Any single day chosen from week 2
- ☐ D. Friday of week 1 and week 2 together, both around 60

Q15. The class recorded numbers for two full weeks before deciding anything. Why was that better than deciding after two days?

- ☐ A. Two weeks uses less paper than two days
- ☐ B. A pattern that repeats is real; a one-off is just luck
- ☐ C. The canteen is closed on some days of the week
- ☐ D. Ms. Rao's rule was always exactly fourteen days, whatever the topic

Q16. Compare the new plan to what week 2 actually sold. On which day did the new plan match sales most exactly?

- ☐ A. Monday — cooked 30, sold exactly 30
- ☐ B. Tuesday — cooked 30, sold 27
- ☐ C. Wednesday — cooked 30, sold 33
- ☐ D. Friday — cooked 60, sold 63

Q17. The old habit was to cook 45 a day. In week 2, on how many days were 45 too many?



- ☐ A. 2
- ☐ B. 3

☐ C. 4☐ D. 5

Q18. In December the canteen still cooked 60 on Friday, yet sales fell. What actually explains the fall?

☐ A. The canteen ran out of ingredients that month☐ B. Fewer children came to school in December☐ C. Games period had moved to Wednesday, so Friday was no longer the hungry day☐ D. The price of samosas went up in December

Q19. Add up week 2's five numbers. How many more samosas sold in week 2 than in week 1, which totalled 174?

☐ A. 7☐ B. 5☐ C. 10☐ D. 17

Q20. Suppose games period moves permanently to Wednesday, and Wednesday sales rise the way Friday's once did. Following the rule the canteen already learned, how many samosas should it now cook on Wednesday?

☐ A. 30☐ B. 45☐ C. 63☐ D. 60

Section C - Challenge

Q21. In December the Friday numbers fell. Which statement correctly separates what the sales data can show from what it cannot?

what: Friday fell

why: games moved

☐ A. The data can show that Friday sales dropped, but not why — that needs asking someone, like the canteen uncle☐ B. The data can explain exactly why sales dropped, because numbers always include their own reasons

- ☐ C. The data cannot show whether sales dropped at all, only people's guesses can
- ☐ D. The data shows why sales dropped, but never by how much they dropped

Q22. Anaya says the canteen should stop recording data now that the Friday problem is solved. Which is the strongest reason she is wrong?

- ☐ A. Recording data costs the canteen extra money
- ☐ B. Things change over time, like games period moving to Wednesday, and only continued recording catches that
- ☐ C. Google Sheets automatically deletes old data unless new numbers are added
- ☐ D. The canteen uncle enjoys typing numbers in every afternoon

Q23. Which of these two-week data plans would best help decide whether the library should stay open during lunch?

- ☐ A. Ask ten children on one day whether they like the library
- ☐ B. Count children entering the library at lunchtime, but only for two days
- ☐ C. Count children entering at lunchtime every school day for two weeks, with a number fixed beforehand that counts as "yes"
- ☐ D. Guess how many children would come, based on how popular the library already seems

Q24. The class only recorded "how many sold" each day, never "why". If they wanted to know why Tuesday was consistently the quietest day, what would they most likely need to do?



- ☐ A. Add a new column for a possible reason, or go and ask someone, since the sales numbers alone cannot explain it
- ☐ B. Look at the same sales numbers again, more carefully, since the reason is hidden inside them
- ☐ C. Wait for the pattern to explain itself after enough weeks
- ☐ D. Recount the same ten numbers a second time to double-check them

Q25. Anaya's very first suggestion was simply "Cook more." Why was this a weaker starting point than what the class eventually did?

- ☐ A. Because Anaya was not allowed to speak to the canteen uncle
- ☐ B. Because cooking more always costs less money than cooking the same amount
- ☐ C. Because canteens are never allowed to change how much they cook

- ☐ D. Because "cook more" does not say how much or on which day — the data later showed it should only be more on Friday

Q26. Suppose the canteen had switched to 60-on-Friday after only three days of data (Monday, Tuesday, Wednesday) instead of two full weeks. What is the biggest risk in that decision?

- ☐ A. The canteen would not have enough chalk to write the new menu
- ☐ B. Three days is still too few to be sure Friday really is different every week, not just once
- ☐ C. Three days of data is exactly as reliable as two weeks of data
- ☐ D. A Google Sheet cannot be shared until it has at least ten rows filled in

Q27. Which of these is the clearest example of using data "to predict", as the concept describes it?



- ☐ A. Writing down Friday's sales number after the day is already over
- ☐ B. Asking the canteen uncle directly why Tuesday is quiet
- ☐ C. Comparing how much was wasted before and after the change
- ☐ D. Using two high Fridays in a row to guess that next Friday will also be busy

Q28. The five uses of data are: decide, spot a pattern, predict, keep a record, and check a change worked. Which single event used data for BOTH "keep a record" AND "check a change worked" at the same time?

- ☐ A. Anaya's day-two guess that Tuesday was the busiest day
- ☐ B. The continued recording after the fix, which both stored what happened and showed waste had dropped to 6
- ☐ C. The canteen uncle's explanation about games period
- ☐ D. Ms. Rao opening a brand-new, empty Google Sheet

Q29. Ms. Rao's class kept collecting data even after they thought they had the answer. Which event from the story proves that decision was right?

- ☐ A. The class ran out of samosas to count one afternoon
- ☐ B. The canteen uncle asked the class to stop recording
- ☐ C. December's shift of games period to Wednesday was caught only because recording had continued
- ☐ D. The children wanted an extra homework assignment

Q30. A new student argues: "Tuesday's number was the smallest in the table, so the canteen should always cook the fewest samosas on Tuesday, forever." What is the flaw in this reasoning?

- ☐ **A.** It treats two weeks of data as if it will hold true forever, ignoring that patterns can change, exactly as they did in December
- ☐ **B.** 26 was actually the biggest number in the table, not the smallest
- ☐ **C.** Tuesday's sales were never recorded in the spreadsheet at all
- ☐ **D.** There is no flaw at all — the reasoning is completely correct

Answer Key

Q1: (D) (d) 63. (c) 60 is the tempting one — that is Friday of week 1, not week 2.

Q2: (B) (b) Two numbers are too few to show a real pattern — a pattern needs repeats, and Anaya had only day one and day two to go on. (a) is not true; she read the right day, she just judged too early.

Q3: (A) (a) Ten. "Ten numbers. That was the whole task," Ms. Rao said — one number recorded each afternoon for two weeks. (c) Twenty is tempting if you count both weeks separately, but it was still just ten single afternoons.

Q4: (A) (a) Deciding how much to cook — the very first use in the list, "to decide." (b), (c) and (d) are not uses mentioned anywhere in the concept.

Q5: (B) (b) Games period leaves children hungry with pocket money — exactly what the canteen uncle told Kabir, and why Friday sales were roughly double. (c) is true but is not the reason the uncle gave.

Q6: (C) (c) 30. The new plan was 60 on Friday and 30 on every other day. (a) 45 was the old, wasteful habit before the change.

Q7: (B) (b) In a Google Sheet. One child typed the number in each afternoon for two weeks. (a) sounds plausible for a quick class record, but the story is clear that the numbers went into a Sheet.

Q8: (C) (c) Friday is roughly double: 60 and 63, against about 30 on other days. (a) was Anaya's day-two guess from two numbers, and the full table shows Tuesday is actually the smallest.

Q9: (D) (d) 45. That flat, one-size-fits-all number is exactly what the data showed was wrong — too few on Friday, too many on Tuesday. (a) 30 is what the canteen switched to on ordinary days after the fix.

Q10: (D) (d) They dropped, because games period had moved to Wednesday — the sheet noticed the change before anybody had to guess. (a) is only what would happen if the school timetable never changed.

Q11: (D) (d) 174. $28 + 26 + 31 + 29 + 60 = 174$. (a) 164 is what you get if you drop ten by mistake while adding the 60.

Q12: (B) (b) To check the fix kept working, and to notice if anything changed later. "How will you know it kept working?" she asked — and this ongoing recording is exactly what caught the December shift.

Q13: (B) (b) Rs. 390. $45 - 6 = 39$ samosas saved, and $39 \times \text{Rs. } 10 = \text{Rs. } 390$. (c) Rs. 450 is the cost of all 45 old wasted samosas, forgetting that 6 are still wasted.

Q14: (D) (d) Friday of week 1 and week 2 together, both around 60. Two Fridays repeating the same high number is what makes it a pattern, unlike Anaya's single-day guess. (a), (b) and (c) are each just one number.

Q15: (B) (b) A pattern that repeats is real; a one-off is just luck — precisely why Anaya's day-two guess about Tuesday turned out wrong. (d) invents a fixed rule the story never states.

Q16: (A) (a) Monday — cooked 30, sold exactly 30. Every other day in the table was off by a few samosas either way. (d) Friday is close too, only 3 short, but not an exact match like Monday.

Q17: (C) (c) 4. Week 2 was 30, 27, 33, 28, 63, so 45 was too many on Monday, Tuesday, Wednesday and Thursday. (d) 5 is tempting, but on Friday 45 was far too few.

Q18: (C) (c) Games period had moved to Wednesday — the samosas were still there, but the hungry, pocket-money crowd had shifted to a different day. (a) and (d) are never mentioned in the story.

Q19: (A) (a) 7. Week 2 totals $30 + 27 + 33 + 28 + 63 = 181$, and $181 - 174 = 7$. (d) 17 comes from mixing up just the Friday difference ($63 - 60 = 3$) with the whole week's difference.

Q20: (D) (d) 60. The rule was never "always cook extra on Friday" — it was "cook extra on whichever day is actually busy", exactly what the December story already hinted was shifting. (b) 45 is the old, already-rejected everyday habit.

Q21: (A) (a) The data can show that Friday sales dropped, but it cannot say why. Counts are counts; the class only found the real reason — games period moving to Wednesday — by asking around. (b) gets it backwards: numbers hold no reasons at all.

Q22: (B) (b) Things change over time, and only continued recording catches that — exactly what happened when games period shifted to Wednesday. (c) is simply untrue; Sheets never deletes data on its own.

Q23: (C) (c) Counting every day for two weeks, with the "yes" number decided in advance, mirrors exactly how the canteen plan was tested and proven. (b) repeats Anaya's original mistake — two days is barely more convincing than two numbers.

Q24: (A) (a) A column of counts holds no reasons, so finding the why means recording something new or asking a person — the same move that later explained the December drop. (b) wrongly assumes a reason is buried in the counts.

Q25: (D) (d) "Cook more" gives no number and no day, while the ten-number record showed exactly where the extra was needed: Friday, and only Friday. (a) never happens in the story.

Q26: (B) (b) Three days barely improves on Anaya's original two-number mistake — one busy Friday could still be a fluke rather than a weekly pattern. (c) is the trap: more days is not automatically "enough" days.

Q27: (D) (d) Using a repeated pattern to guess what comes next is exactly what "predict" means in the concept. (a) is just keeping a record, since it happens after the fact rather than before it.

Q28: (B) (b) The same ongoing record served two jobs at once: it kept a plain history of sales, and that same history is what proved waste had fallen from 45 to 6. (a) was actually a case of too little data, not a record at all.

Q29: (C) (c) Without the ongoing record, nobody would have noticed Friday's drop or known to look for a cause. (a), (b) and (d) never happen anywhere in the story.

Q30: (A) (a) The story's own December twist shows a pattern can hold for months and then stop, so "always" is exactly what two weeks of data cannot support. (b) is simply false — Tuesday's numbers, 26 and 27, were the smallest in the table.

You've got this! Keep learning and shining! - Ruchi Math Coaching