LESSON MAKER PRO

# Questions That Vary

*Spot questions that expect different answers.*

**GRADE 6 · 6.DSP.A.22**

**6.DSP.A.22** "Write examples and non-examples of statistical questions, explaining that a statistical question anticipates variability in the data related to the question."

NAME _____ DATE _____

## THE BIG IDEA

A statistical question expects answers that may vary across people or repeated events. A question with one fixed answer is not statistical. To decide, ask yourself what could change from one answer to another.

## WORKED EXAMPLE

Is this a statistical question? How many minutes does each of 17 campers spend hiking on Saturday?

1. The question asks for a hiking time from each camper.
2. Campers may spend different amounts of time hiking.
3. The answers are expected to vary.

**Answer: Yes, it is a statistical question.**

## PRACTICE 6 problems

**1** Is this a statistical question? How many songs are on Maya's playlist right now?

**ANSWER** _____

**2** Is this a statistical question? How many songs are on each student's playlist in the music club? Explain.

**ANSWER** _____

**3** Write a statistical question about the number of pets owned by students in your class.

**ANSWER** _____

**4** Write a non-statistical question about the location of your school library.

**ANSWER** _____

**5** Is this a statistical question? How many shots does each player on a basketball team make out of 10 attempts? Explain.

**ANSWER** _____

**6** Rewrite this as a statistical question: How many minutes did Noah spend reading yesterday?

**ANSWER** _____

## APPLY IT Show your work

**1** The school dance committee wants to learn how long students wait to buy tickets after school. Write a statistical question the committee could ask. Tell what may vary.

WORK SPACE

**ANSWER** _____

**2** A game club wants to compare the points its members score in one round of a new game. Write a statistical question about scores and a non-statistical question about the club. Explain the difference.

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

Every student at a school is given a 30-minute lunch period, but students take different amounts of time to eat. A classmate asks, "How long is each student's lunch period?" The classmate says this is statistical because it asks about many students. Is the classmate correct? Rewrite the question so it is statistical, and explain.

WORK SPACE AND ANSWER

**ANSWER KEY**

# Questions That Vary

**GRADE 6 · 6.DSP.A.22**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | Is this a statistical question? How many songs are on Maya's playlist right now? | **No, it asks for one fixed count.** |
| 2 | Is this a statistical question? How many songs are on each student's playlist in the music club? Explain. | **Yes. The number of songs may vary from student to student.** |
| 3 | Write a statistical question about the number of pets owned by students in your class. | **How many pets does each student in our class own?** |
| 4 | Write a non-statistical question about the location of your school library. | **Where is our school library?** |
| 5 | Is this a statistical question? How many shots does each player on a basketball team make out of 10 attempts? Explain. | **Yes. Players may make different numbers of shots.** |
| 6 | Rewrite this as a statistical question: How many minutes did Noah spend reading yesterday? | **How many minutes did each student in Noah's class spend reading yesterday?** |

## PART 2 · APPLY IT

1. **How many minutes does each student wait to buy a dance ticket after school? Waiting time may vary from student to student.** Ask for a waiting time from each student, rather than one total. Different students may wait different amounts of time.
2. **How many points does each club member score in one round? How many members are in the club today? Scores may vary among members, but the club has one membership count today.** The score question expects a result from each member. The membership question asks for one fixed count.

## CHALLENGE

**No. Every student's lunch period is 30 minutes, so the answers are not expected to vary. A statistical question is, "How many minutes does each student take to eat lunch?" Eating times may vary.**

Accept equivalent questions that match the requested context and either expect variation or ask for one fixed answer, as directed. Explanations should identify what may vary or why the answer is fixed.