Fares and Facts

Use transit data to build and test a claim

TOT.P.3.1.B "Analyze information from visual, oral, digital, and interactive texts (e.g., maps, charts, images, political cartoons, videos, artwork) in order to draw conclusions and defend arguments."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Circle two route names in the table whose changes you will compare, underline their before-and-after numbers, and underline one sentence in the passage that could limit your conclusion.

Did Free Rides Change Bus Use?

1 In the fictional city of Larch, a transit council tested free bus rides on four routes. The table compares average weekday boardings during one school week before the test with average weekday boardings during one school week after it began. A boarding counts each time someone gets on, so one person can count more than once.

AVERAGE WEEKDAY BUS BOARDINGS IN LARCH

Route	Before free rides	After free rides
Elm	120	180
Lake	200	230
Hill	160	152
Park	100	150

2 Bus service changed during the test as well. The council added morning trips on Elm and Park, but reported no schedule change on Lake. A bridge closure forced a detour on Hill. These details matter when using the numbers to argue that free rides increased use: other changes may affect how often people board.

3 Some council members want to call the trial a success and make free rides permanent. Others ask whether more boardings mean more residents are using buses, or simply more trips by the same riders. The weeks could differ in weather or school events. A careful recommendation should connect a claim to the counts and explain what they cannot show.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which two routes had the same percentage increase in boardings? Use their numbers to support your answer.

2. Lake gained boardings without a reported schedule change. Why is that still not proof that free rides caused the gain?

3. Does Hill's change show that free rides failed to increase bus use? Defend your answer with the table and passage.

4. A council member says the table proves that more residents rode the bus. What is wrong with that conclusion?

3 YOUR TURN

Your own words

Design a follow-up test using two routes from the table. In four sentences, use at least two table values to justify your choices, say which route keeps its fare, name one condition to hold steady, and explain what result would support a fare effect.

ANSWER KEY

Fares and Facts

HIGH SCHOOL · TOT.P.3.1.B

PART 1 · READ AND MARK

Circle two route names in the table whose changes you will compare, underline their before-and-after numbers, and underline one sentence in the passage that could limit your conclusion. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which two routes had the same percentage increase in boardings? Use their numbers to support your answer.	**Elm rose from 120 to 180, and Park rose from 100 to 150. Each increased by 50 percent.**
2	Lake gained boardings without a reported schedule change. Why is that still not proof that free rides caused the gain?	**Lake rose from 200 to 230 boardings, but differences in weather, school events, or other unmeasured factors could have contributed.**
3	Does Hill's change show that free rides failed to increase bus use? Defend your answer with the table and passage.	**No. Hill fell from 160 to 152 boardings, but a bridge closure forced a detour that may have affected use.**
4	A council member says the table proves that more residents rode the bus. What is wrong with that conclusion?	**The table counts boardings, not individual riders. The same residents could have taken more trips.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would test Elm and Park because their boardings rose from 120 to 180 and from 100 to 150 in the first trial. I would make Elm free and keep Park's regular fare for four school weeks. I would keep each route's schedule unchanged and compare its boardings with four weeks before the test. If Elm's percentage gain exceeded Park's, that would support a fare effect, though other route differences could still matter.

Accept conclusions supported by accurate comparisons and a relevant limitation from the passage. For the follow-up test, accept other route pairs if the student explains a fair comparison and does not claim the result would prove causation.