LESSON MAKER PRO

Check the Claim

Use the data, not just the headline.

HIGH SCHOOL · A2.D.2.2

A2.D.2.2 "Identify and explain misleading conclusions and graphical representations of data sets."

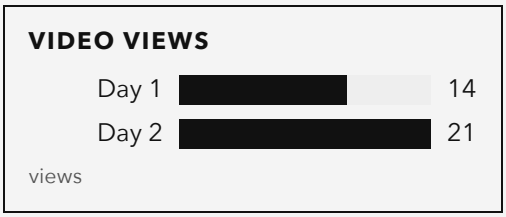
NAME _____ DATE _____

COMPARE FAIRLY

A difference is not the same as a percent increase. To check a claim about growth, divide the increase by the starting value, then multiply by 100. A graph with an axis that starts above zero can make a small change look large.

WORKED EXAMPLE

A caption says these video views tripled. Check the claim.



1. Increase: 21 - 14 = 7 views.
2. Percent increase: 7 / 14 × 100 = 50%.

Answer: The views increased by 50%, so they did not triple.

PRACTICE 4 problems

1 A club grew from 30 to 36 members. A post says it grew 36%. Find the actual percent increase.

ANSWER _____

2 A game had 80 players last week and 60 this week. A headline says the number fell 25%. Is it correct?

ANSWER _____

3 Poll support rose from 40% to 50%. A post calls this a 10% relative increase. Find the increase in percentage points and the relative percent increase.

ANSWER _____

4 Of 30 students surveyed, 18 said yes. A headline says 18% said yes. Find the correct percentage and explain the error.

ANSWER _____

APPLY IT Show your work

1 A creator says Post B got 90% more likes than Post A. Use the graph to check the claim.

POST LIKES



ANSWER _____

2 A post says Concert B filled a larger share of its seats because it sold more tickets. Check the claim.

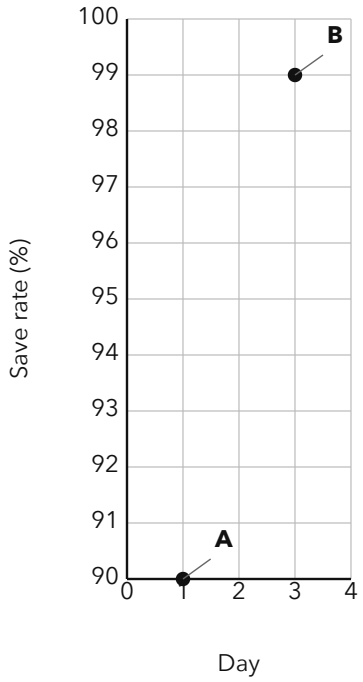
CONCERT TICKETS

Concert	Tickets sold	Seats available
A	36	60
B	42	84

ANSWER _____

CHALLENGE One step up

This graph shows a playlist's save rate. A post says the rate doubled from day 1 to day 3. Explain how the graph may mislead, and find the actual relative increase.



WORK SPACE AND ANSWER

Check the Claim

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A club grew from 30 to 36 members. A post says it grew 36%. Find the actual percent increase.	**20%**
2	A game had 80 players last week and 60 this week. A headline says the number fell 25%. Is it correct?	**Yes. The decrease is 20 players, and 20 / 80 = 25%.**
3	Poll support rose from 40% to 50%. A post calls this a 10% relative increase. Find the increase in percentage points and the relative percent increase.	**10 percentage points; 25% relative increase. The post is incorrect.**
4	Of 30 students surveyed, 18 said yes. A headline says 18% said yes. Find the correct percentage and explain the error.	**60%. The headline treats the number of students who said yes as a percentage.**

PART 2 · APPLY IT

1. **Post B got 50% more likes, not 90%.** The increase is 90 - 60 = 30 likes. Divide by Post A's 60 likes: 30 / 60 = 50%.
2. **The claim is false. Concert A filled 60% of its seats, while Concert B filled 50%.** Compare tickets sold to seats available for each concert: 36 / 60 = 60% and 42 / 84 = 50%.

CHALLENGE

The vertical axis starts at 90%, making the change look much larger. The rate rose by 9 percentage points, from 90% to 99%. Its relative increase was 9 / 90 = 10%, so it did not double.

Accept equivalent explanations that use the correct starting value as the denominator. For the challenge, distinguish a 9-percentage-point rise from a 10% relative increase.