

Quiz 3

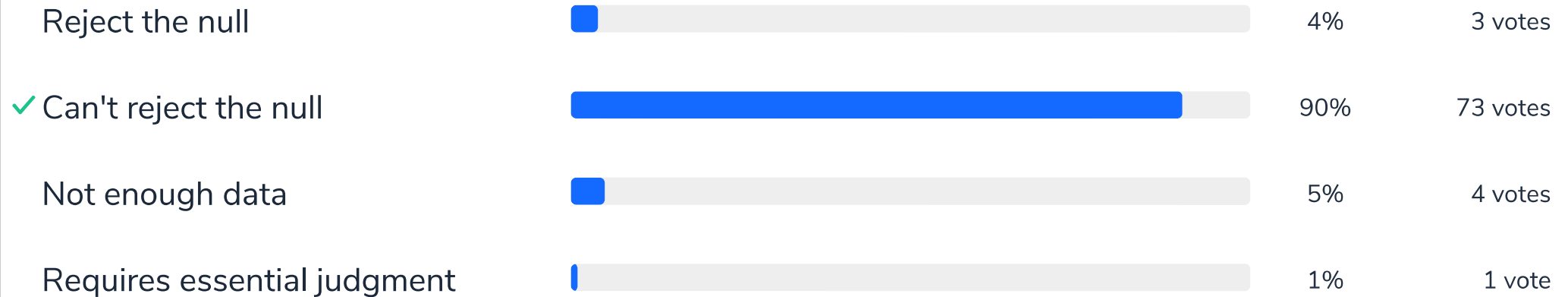
Number of participants: 82

Slide


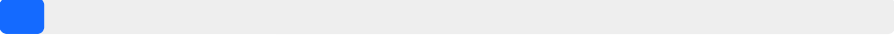
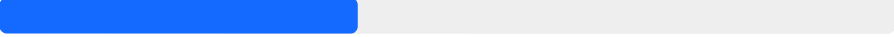
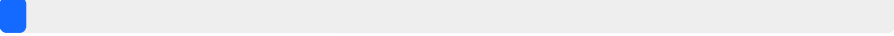
Quick Instructions

- **Remain muted** in Zoom during the whole quiz time
- If you have a **question, type it in the Zoom chat**
- The time is limited, please **follow the timer** displayed in Zoom
- Each question of the quiz has **exactly one correct answer**
- You must **press the "Submit" button** after answering every question
- **$GRADE = \min(10, \text{number of correct answers})$**

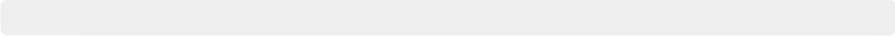
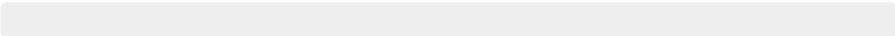

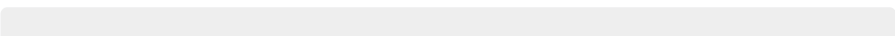
You're running some pretty usual and routine statistical test (a conventional criterion type). You got P-value about 0.845. What's your conclusion gonna be?



You're running a one-sample one-sided z-test. You got statistics value about +4,7. What's your conclusion gonna be?

Reject the null		53%	41 votes
Can't reject the null		5%	4 votes
✓ Not enough data		40%	31 votes
Requires essential judgment		3%	2 votes

You decided your TS data required formal testing for stationarity. Which would you choose?

ADF alone is enough		0%	0 votes
KPSS alone is enough		0%	0 votes
✓ Both would be good		100%	82 votes
Whatever. Just look at the graph.		0%	0 votes

6

ADF and KPSS are both unit root tests.

TRUE



9%

7 votes

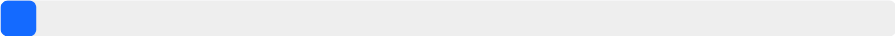
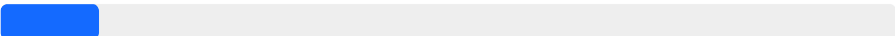

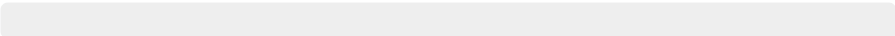
✓ FALSE




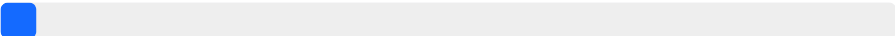
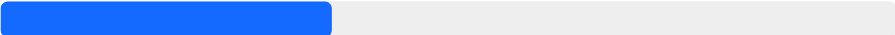
91%

75 votes

Running ADF, you got P-value 0.25. What's your next step?

Conclude that the TS is stationary.		4%	3 votes
✓ Conclude that the TS is NOT stationary.		11%	9 votes
Run KPSS to double-check.		85%	69 votes
Take the diffs and repeat.		0%	0 votes

You're sure that your TS is NOT stationary, but you run the tests anyway. You got ADF P-value 0.067, and KPSS P-value <0.01 . What's your conclusion?

✓ The TS is NOT stationary, indeed.		59%	48 votes
Tests say it is stationary. Something is wrong with my judgment.		4%	3 votes
Tests results are mixed. I have to follow intuition.		37%	30 votes

We can transform non-stationary raw data and get stationary TS to work with.

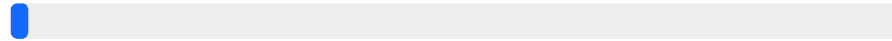
✓ TRUE



98%

80 votes

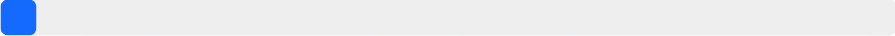

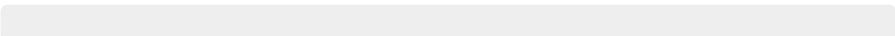
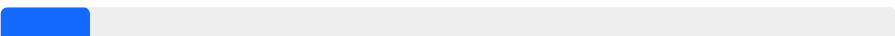
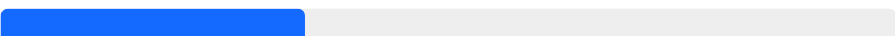
FALSE



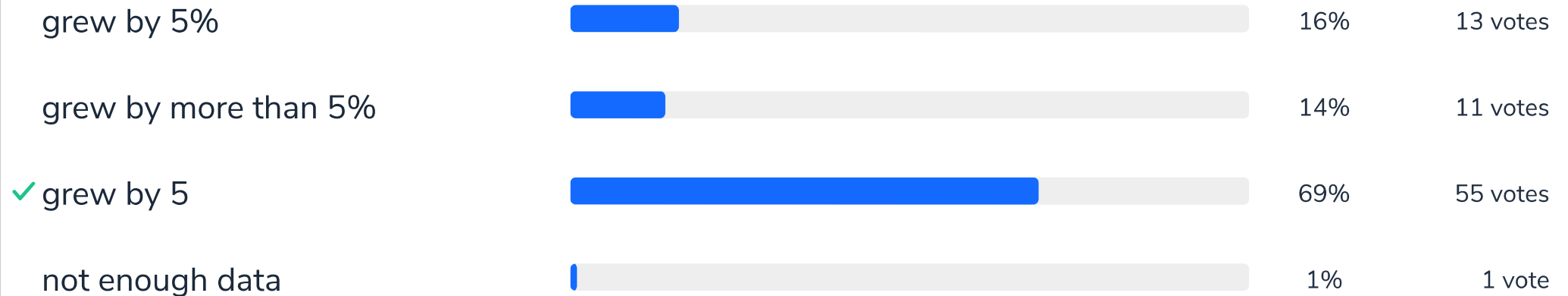
2%

2 votes

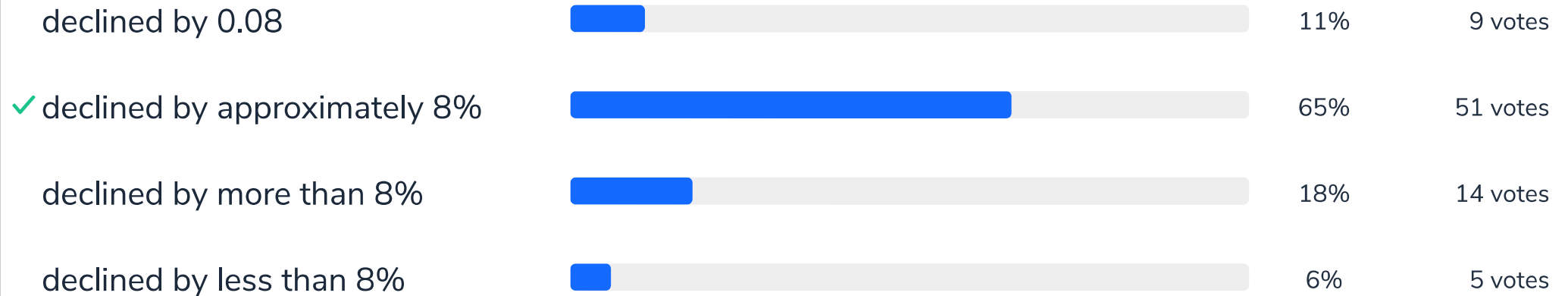
Which is an example of a transformation that preserves units of the data?

taking logs		4%	3 votes
✓ taking 1-period differences		52%	43 votes
taking 1-period growth rates		0%	0 votes
all of them		10%	8 votes
all of them, but logs		34%	28 votes

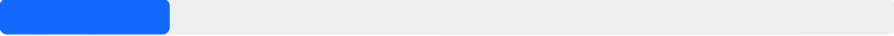
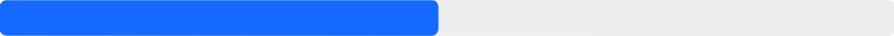
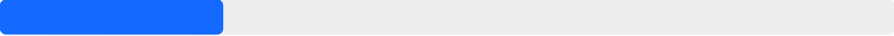
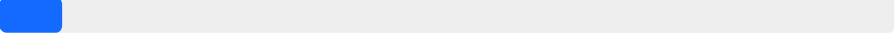
Over 20 periods, some TS first diffs are +0.25 on average. Thus, over the whole period, the initial TS ...



Over 4 periods, some TS log-diffs are -0.02 on average.
Thus, over the whole period, the initial TS ...



Over 5 periods, some TS % growth are all positive and 0.15 on average. Thus, over the whole period, the initial TS ...

grew by 60% of the initial value		19%	14 votes
grew by approximately 75% of the initial value		49%	36 votes
✓ grew all the time, but not enough data to say how much		25%	18 votes
not enough data at all to say anything		7%	5 votes