Algebra II

Three calibration cases • Observed in selected released student work

JUNE 2026 / Q36 / 5/6

Interpret a rate in context

A high-credit response still lost precision in its explanation because it omitted the physical context. The task models lung capacity.

Test this possibility. A student may calculate a rate and omit the quantities, direction or time interval it describes.

Ask: What changes, per unit of what, over which interval in this model?

Exam task · Response · PDF p. 85 · State commentary · Higher anchor

AUGUST 2026 / Q34 / 2/4

Connect a cycle to its parameter

The response gave an incorrect period and an incorrect value of the associated function parameter B.

Test this possibility. A horizontal distance between unlike points may have been read as a full cycle. A parameter slip is also possible.

Ask: Point to two consecutive matching phases. How does their separation determine B in radians?

Exam task · Response · PDF p. 64 · State commentary · Higher anchor

AUGUST 2026 / Q36 / 4/6

Separate interpretation from precision

The commentary identifies two distinct issues: an incomplete interpretation and early rounding in the final calculation.

Test this possibility. A response can have both an explanation gap and a calculator-precision issue. One does not establish the other.

Ask: Repeat the threshold calculation with stored precision. Now explain the earlier rate without changing its numerical value.

Exam task · Response · PDF p. 89 · State commentary · Higher anchor

Algebra II

Constructed practice responses • Read independently, then compare with the facilitator interpretation.

ALG2-1 / Explain an interval rate

A cooling model is T(t) = 20 + 60(0.5)^(t/10), where t is minutes and T is °C. Find average rate of change from 0 to 20 minutes. Interpret its sign and explain whether it represents the rate every minute.

Focal request

Explain what the calculated interval rate means in the cooling model.

Response A

The answer is −2.25. It goes down.

Response B

Over the first 20 minutes the temperature falls by 2.25 °C per minute on average. The model does not imply the same drop every minute.

What the pair distinguishes

A shows the sign’s direction but leaves the quantities and interval implicit. B identifies units, interval and average behavior. This is a criterion about interpretation, separate from whether the calculation is correct.

A fresh transfer check

For T(t)=20+60(0.5)^(t/10), compare the first ten minutes with the next ten. Explain why both rates differ from the overall one.

Evidence of transfer

Gives −3 and −1.5 °C/min and explains that equal time intervals produce different temperature drops.