

Grade 11 Final Chemistry Exam

Cumulative advanced chemistry synthesis

All contexts are original fictional paper models. No lab, device, collection, intervention, recommendation, or real-world decision is requested. Total points: 41.

1. Calculate mean and range for 12.1, 12.4, 12.2 units. [3 pts]

2. Explain one limitation of reporting only the mean. [3 pts]

3. Calculate density from 2.50 g and 1.00 mL. [3 pts]

4. Estimate uncertainty for ± 0.05 g and ± 0.02 mL. [3 pts]

5. Interpret $\Delta H = -40$ kJ and distinguish net energy from bond breaking. [3 pts]

6. Explain a high barrier with a lower final state. [3 pts]

7. Interpret a rate card that doubles with labeled concentration; state an exclusion. [3 pts]

8. Explain equal forward/reverse rates and whether amounts must equal. [3 pts]

9. A galvanic card has positive stated cell potential. State a bounded conclusion and one excluded product claim. [4 pts]

10. A spectrum/model card is compatible with two structures. Explain ambiguity and one next fictional evidence need. [4 pts]

11. A systems source says a pattern proves an intervention should occur. Identify two evidence/authority limits. [4 pts]

12. Write a CER synthesis with quantitative evidence, a model boundary, and explicit no recommendation. [5 pts]
