Scoring and preparation keys

Original exam keys, worked responses, retrieval-check answers and reteaching routes.

Algebra I	2 – 8
Geometry	9 – 15
Algebra II	16 – 22
English Language Arts	23 – 29
Global History and Geography II	30 – 36
U.S. History and Government	37 – 43
Life Science: Biology	44 – 50
Earth and Space Sciences	51 – 57
Physical Science: Chemistry	58 – 64
Physical Science: Physics	65 – 71
Physical Setting/Chemistry	72 – 78
Physical Setting/Physics	79 – 85

Course sections begin with the forecast and its limits. Local scoring criteria follow.

Scores on modified and shortened forms do not convert to Regents scale scores.

Algebra I

Original exam A, full-length form B and three-week preparation

Why these demands were selected

Every current Q35 asked for a two-variable system. Seven used equations and one used inequalities. Three required a graph. Four asked students to check someone's proposed prices and solve algebraically. In January 2025 students graphed and interpreted an intersection. In January 2026 they checked a claim and solved.

Only two comparable January forms. A systems-only review leaves 76 of 82 possible credits outside that single six-credit task. Rotate function interpretation, equations, statistics and number skills through the same week.

Released forecast example **State design / administration guidance**

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one local point per numbered criterion on the key. Maximum 23 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 35. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week's sheet. After testing, return to the first unsupported step in the student's reasoning.

Algebra I

Questions 1–6 • One point per selected response.

1 C • The fixed charge before any deliveries

When n = 0 the cost is $12.

2 B • 0 through 5 deliveries

$5n < 12 + 3n$ gives $n < 6$ in the nonnegative whole-number domain.

3 Written response / 3 local points

1. At n = 1 the costs are $15 and $5, a $10 difference.
2. At n = 6 both cost $30, a zero difference; other accurate contrasting examples work.
3. The per-delivery rates differ by $2, so the signed difference changes by $2 for each added delivery.

4 D • x(8 − x)

Distributing x gives $8x - x^2$.

5 D • 0 ≤ x ≤ 8

The roots are 0 and 8, and the arch lies above the ground between them.

6 Written response / 3 local points

1. Set $-x^2 + 8x = 12$ and rearrange to $(x - 2)(x - 6) = 0$.
2. The endpoints are 2 and 6 feet.
3. The parabola opens downward and reaches 16 at x = 4, so all positions from 2 through 6 inclusive work.

Algebra I

Questions 7–12 • One point per selected response.

7 B • Median

The middle observation in each ordered list is 10.

8 A • 15 minutes

The original sum of 50 becomes 90 across six observations.

9 Written response / 3 local points

1. Both original means are 10 minutes.
2. A’s range is 4 and B’s range is 12 minutes; another correct spread comparison works.
3. Equal averages can conceal different variability. These observations show more spread at B.

10 A • Number of student tickets

Saturday's second purchase includes five student admissions.

11 C • Friday total and both Friday quantities

Subtract the revenue for student tickets from Friday's total, then divide by the adult quantity.

12 Written response / 6 local points

1. Define a and s as the adult and student prices in dollars.
2. Write 3a + 2s = 58 and 2a + 5s = 79.
3. The proposed pair gives 58 and 90. Its failure on Saturday rules it out.
4. Show an algebraic solution, for example 15a + 10s = 290 minus 4a + 10s = 158 gives 11a = 132.
5. Then a = 12 and s = 11.
6. Substitution gives both required totals. Accept a combined check that explicitly verifies both.

Algebra I

Replacement scoring and retrieval-check keys

Form B replacement / 35 / 6 credits maximum

1. Define L and S as the two prices.
2. Write 4L + 3S = 89 and 2L + 5S = 83.
3. The proposed prices yield 89 and 69, so the pair fails.
4. Double the second equation and subtract the first to obtain 7S = 77.
5. S = 11 and L = 14.
6. Checking gives 56 + 33 = 89 and 28 + 55 = 83.

Public scoring materials for base form

Week 1 / retrieval check

A gym charges $9 plus $2 per visit. What does the intercept mean, and what is the cost at five visits?
The intercept is the $9 fixed cost; five visits cost $19.

Week 2 / retrieval check

For a(t)=t(10−t), find the zeros and explain what limits a physical time interval between them.
Zeros 0 and 10. If height cannot be negative and the object starts at 0, use 0 through 10.

Week 3 / retrieval check

A pair (4,3) is proposed for x+y=7 and 2x+y=12. Decide and justify.
The first works; 2(4)+3=11, so the pair fails the system.

Department follow-up

ALG1-C1 Check both constraints
If one receipt works and the second fails, what can you conclude about the proposed prices?

ALG1-C2 Translate a boundary
Would spending exactly the budget work? What about one dollar more?

ALG1-C3 Restrict a graph to its context
What would a point in the extension mean in the story? Could that event happen?

Algebra I

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · Two delivery plans / Studio session(s) 2,6

A2 · An arch in the courtyard / Studio session(s) 5

A3 · Two sets of repair times / Studio session(s) 4

A4 · Admission at the winter show / Studio session(s) 1,3,6

Likely reading of a partial response to investigate

A student uses the Saturday pair to check both bills. Ask them to label each receipt before substituting.

Bridge rehearsal / worked feedback

A van rental charges $16 plus $3 per hour. Compare its cost with $5 per hour and identify when the first is cheaper.

Equal at 8 hours. The fixed-fee plan is cheaper beyond 8 hours. The intercept matters for short rentals.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Algebra I

Released form evidence

Every current Q35 asked for a two-variable system. Seven used equations and one used inequalities. Three required a graph. Four asked students to check someone's proposed prices and solve algebraically. In January 2025 students graphed and interpreted an intersection. In January 2026 they checked a claim and solved.

Only two comparable January forms. A systems-only review leaves 76 of 82 possible credits outside that single six-credit task. Rotate function interpretation, equations, statistics and number skills through the same week.

Eligible public forms • January 2 / June 3 / August 3

Worked responses and follow-up questions

1 Two receipts

3c + 2t = 12 and 2c + 4t = 16. The claim gives $12.50 on receipt one. Double the first equation, subtract the second, and get 4c = 8. Coffee is $2 and tea $3. Both receipts check.

If a total replaces a coefficient, have the student label each term in dollars.

2 Read a function across representations

The rate is (20 − 14)/4 = $1.50 per cup. C = 14 + 1.5n. Equating costs gives n = 28. The point (28,56) means both charge $56 for 28 cups.

If the student chooses 14 as the rate, ask what changes between two rows.

3 Make the boundary count

4n + 2p ≤ 48 and n + p ≥ 15, for whole n,p ≥ 0. (8,7) costs $46 for 15 items. (10,5) costs $50 for 15 items and exceeds budget.

If both pass, ask the student to show a cost and item count for each pair.

Average mapped multiple-choice slots per released form

Feature	January	June	August
Function notation and evaluation	2.50	3.67	2.33
Solve one-variable equations and inequalities	2.00	2.33	2.00
Build equations and constraints	1.50	1.33	1.33

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Algebra I

4 Summarize a distribution

First mean 5 and median 4. New mean 48/6 = 8 and median 4.5. Median better reflects the cluster because the long delivery pulls the mean up.

If the new median is 4, have the student locate positions 3 and 4.

5 Find what a zero means

h = t(6 − t). Launch and landing are at 0 and 6 seconds. Symmetry gives t = 3 and h(3) = 9 meters. The zeros mean ground level.

If the student reports 3 meters, ask for both coordinates of the vertex and their units.

6 Choose and check a model

At 40 flyers costs are $34 and $30. Equality gives 12 = 0.20n, so 60 flyers and $42. The first is cheaper above 60 because its per-flyer price is lower.

If equality is the entire answer, ask for one example on each side of 60.

Released practice for each week

Week 1 2026-01 • Q35 • Check and solve a system
Question booklet **Official mapping / guide**

Week 2 2025-01 • Q35 • Graph and interpret a system
Question booklet **Official mapping / guide**

Week 3 2026-08 • Q35 • Model another system
Question booklet **Official mapping / guide**

Geometry

Original exam A, full-length form B and three-week preparation

Why these demands were selected

All five current final problems required proof. The first two used a geometric diagram. The three 2026 forms used coordinates. January required proving a trapezoid, then establishing parallelism and checking a length relationship.

One comparable January. Coordinate proof deserves rehearsal, along with a diagram-only route. The five problems cannot fix the theorem, figure or location of a future proof.

Released forecast example **State design / administration guidance**

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one local point per numbered criterion on the key. Maximum 22 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 35. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Geometry

Questions 1–6 • One point per selected response.

1 C • MN is parallel to QR

Joining the midpoints of two triangle sides gives a segment parallel to the third side.

2 A • 1/2

Both rays from P are scaled by one-half.

3 Written response / 3 local points

1. MN = 9 cm.
2. The small-to-large area ratio is 1:4.
3. Similar figures scale both base and height by one-half, so area scales by one-quarter.

4 A • 24 tan 35°

The known 24 m side is adjacent to the ground angle and height is opposite.

5 B • 24 / cos 35°

Cosine equals adjacent side divided by hypotenuse.

6 Written response / 3 local points

1. The cable shortens because the hypotenuse is $\sqrt{(h^2 + d^2)}$ and d decreases.
2. The ground angle increases.
3. For fixed positive height, h/d increases, so the angle whose tangent is h/d increases.

Geometry

Questions 7–12 • One point per selected response.

7 D • 2/9
80/360 reduces to 2/9.

8 B • 18π in²
Multiply π(9²) by 2/9.

9 Written response / 3 local points
1. First arc = (2/9)(18π) = 4π inches; second arc = 8π inches.
2. The ratio of larger to smaller arc is 2.
3. The area ratio is 4 because area scales with the square of the linear factor.

10 C • 1/2
Rise 2 divided by run 4 is 1/2.

11 D • (1.5, 2)
Average the endpoint coordinates separately.

12 Written response / 5 local points
1. KL and NM have slope 1/2.
2. LM and KN have slope −2, so both pairs of opposite sides are parallel.
3. Adjacent slopes are negative reciprocals, establishing a right angle and therefore a rectangle.
4. KL² = 20 while LM² = 5.
5. Adjacent sides are unequal, ruling out a square. Accept an equivalent complete proof.

Geometry

Replacement scoring and retrieval-check keys

Form B replacement / 35 / 6 credits maximum

1. Use the coordinates to calculate squared lengths for one pair of sides.
2. Show the remaining squared lengths consistently.
3. All four squared lengths are 17.
4. Conclude the simple quadrilateral has four congruent sides, hence is a rhombus.
5. Adjacent slopes are 1/4 and 4, so those sides are not perpendicular.
6. Conclude it is not a square. Accept a valid alternative proof with equivalent evidence.

Public scoring materials for base form

Week 1 / retrieval check

Two sides of a triangle are bisected. The third side is 14. Find the midsegment and justify.
7 units; the triangle midsegment is half the parallel side.

Week 2 / retrieval check

A 6 m pole casts an 8 m shadow. Under matching conditions a tree casts a 20 m shadow. Justify its height.
AA gives similar triangles; 6/8 = h/20, so 15 m.

Week 3 / retrieval check

A quadrilateral has four equal sides. Which extra property makes it a square? Defend.
One interior right angle suffices in a rhombus; consecutive angles in a parallelogram are supplementary and opposite angles equal.

Department follow-up

GEO-C1 Finish a coordinate proof
Which sides do the slopes tell you are parallel, and which definition does that establish here?

GEO-C2 Match a reason to a proof step
What must already be true to use the reason you wrote at this line?

GEO-C3 Support each classification separately
What fact would exclude a rectangle after you have established a parallelogram?

Geometry

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · From a drawing to a theorem / Studio session(s) 1,3

A2 · A cable and a tower / Studio session(s) 3

A3 · Circular window / Studio session(s) 4,5

A4 · A classification that needs proof / Studio session(s) 2,6

Likely reading of a partial response to investigate

A slope or side length is correct but the figure is unnamed. Ask which geometric condition the calculation establishes.

Bridge rehearsal / worked feedback

Two similar sectors have radii 4 and 12. A student claims area and arc length both triple. Decide and justify.

Arc length triples because angle is fixed; area grows by nine because it scales with the square of radius.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Geometry

Released form evidence

All five current final problems required proof. The first two used a geometric diagram. The three 2026 forms used coordinates. January required proving a trapezoid, then establishing parallelism and checking a length relationship.

One comparable January. Coordinate proof deserves rehearsal, along with a diagram-only route. The five problems cannot fix the theorem, figure or location of a future proof.

Eligible public forms • January 1 / June 2 / August 2

Worked responses and follow-up questions

1 A diagonal that proves something

AC = CA. Angles BAC and DCA are congruent by alternate interior angles. SAS proves triangle BAC congruent to DCA. Corresponding angles BCA and DAC are congruent, so BC is parallel to AD by the converse alternate interior angle theorem.

If parallel lines are claimed from appearance, request the pair of congruent angles that warrants the claim.

2 From coordinates to a proof

AB and CD are horizontal. Slopes of BC and AD both equal 3/2. Both pairs of opposite sides are parallel. Adjacent sides AB and BC are not perpendicular, so the parallelogram is not a rectangle.

If equal slopes are reported without a conclusion, ask what two pairs of parallel sides establish.

3 Why the shadows tell us height

Equal sun angles and right angles give AA similarity. h/8 = 1.5/2, so h = 6 m. A sloping surface or observations at very different times can change the angle relationships.

If the student adds 6 m, have them compare corresponding side ratios.

Average mapped multiple-choice slots per released form

Feature	January	June	August
Prove geometric theorems	4.00	4.50	4.00
Right-triangle trigonometry	2.00	3.00	2.50
Transformations in the plane	2.00	2.00	2.00

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Geometry

4 Turn an arc into a length

150/360 = 5/12. Length = (5/12)(24π) = 10π m, below the semicircle length 12π. The chord is shorter than the curved arc; it connects the endpoints directly.

If area is used, ask whether the requested quantity covers a surface or follows a path.

5 Which measures scale?

Original 20π cm³. New radius 6 and height 15 give 540π cm³. Volume increases by 27 because all three linear dimensions scale by 3.

If the answer is 60π, expand the square of the new radius before multiplying by height.

6 Prove or disprove a classification

Successive slopes are 1/3, −3, 1/3, −3. All squared side lengths are 10. Four equal sides and a right angle establish a square. Equal diagonals alone could also describe a nonsquare rectangle.

If “looks square” appears, require one calculation for perpendicularity and one for length.

Released practice for each week

Week 1 2026-01 • Q35 • Coordinate proof
Question booklet **Official mapping / guide**

Week 2 2025-06 • Q35 • Diagram-based proof
Question booklet **Official mapping / guide**

Week 3 2026-08 • Q35 • New coordinate proof
Question booklet **Official mapping / guide**

Algebra II

Original exam A, full-length form B and three-week preparation

Why these demands were selected

June and August 2026 had exactly the same broad distribution of credits. Each final task used an applied function, asked for average rate of change with interpretation and included a threshold. The models differed: lung capacity was periodic; tea temperature decayed exponentially.

January 2027 is the first January under this design. Two repeated response demands warrant practice; they provide little information about the next specific function family.

Released forecast example **State design / administration guidance**

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one local point per numbered criterion on the key. Maximum 23 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 36. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Algebra II

Questions 1–6 • One point per selected response.

1 B • 2

The original denominator vanishes at 2.

2 D • (2,4)

The canceled factor leaves a hole at the input 2.

3 Written response / 3 local points

1. The numerator factors as $(x - 2)(x + 2)$.
2. Only -2 gives a zero in the domain.
3. The candidate 2 makes the original denominator zero, so it cannot be a solution.

4 B • 0.9^4

All four runs must succeed, so multiply their success probabilities.

5 A • Failures cluster immediately after a preceding failure

A preceding outcome predicting the next one challenges independence.

6 Written response / 3 local points

1. One particular ordering has probability $0.1(0.9)^3$.
2. There are four mutually exclusive choices for the position of the failure.
3. The probability is $4(0.1)(0.9)^3 = 0.2916$.

Algebra II

Questions 7–12 • One point per selected response.

7 C • 12 hours
A full phase change of 2π takes 12 hours.

8 A • 6 hours
Cosine first reaches −1 at phase π.

9 Written response / 3 local points
1. cos(πt/6)=0 at t = 3 and 9 hours in the first cycle.
2. The temperature is decreasing through the midline at t = 3.
3. At t = 9 the temperature is increasing through the same value.

10 C • 18 °C
The exponential term approaches zero while the offset remains 18.

11 D • The difference between sample and ambient temperature
The exponential multiplier acts on temperature above the 18 °C baseline.

12 Written response / 6 local points
1. C(0) = 90 and C(16) = 36.
2. The average is (36 − 90)/16 = −3.375 °C/min.
3. The sample lost an average of 3.375 °C per minute over that interval.
4. Solve (1/2)
5. (t/8) ≤ 1/6, obtaining t ≥ 8 ln(6)/ln(2) ≈ 20.68.
6. The first eligible whole minute is 21; rounding down to 20 leaves the sample above 30 °C.

Algebra II

Replacement scoring and retrieval-check keys

Form B replacement / 36 / 6 credits maximum

1. V(0)=72 and V(2)=44.
2. The average rate is −14 L/h.
3. The volume decreases by 14 liters per hour on average over those two hours.
4. Solve 0.75
5. t ≤ 17/64 or compare successive values.
6. V(4)=28.25 and V(5)=23.1875, so hour 5 is first.
7. The 8-liter offset is the limiting volume as the exponential term approaches zero.

Public scoring materials for base form

Week 1 / retrieval check

For q(t)=10+40(1/2)^t, interpret the 10 and calculate q(2).
10 is the asymptotic baseline; q(2)=20.

Week 2 / retrieval check

Independent trials have success probability 0.8. Find the chance of exactly one success in two trials.
Two orders yield 2(0.8)(0.2)=0.32.

Week 3 / retrieval check

A sinusoid reaches the same maximum at 2 h and 10 h with no intervening maximum. Find period and angular frequency.
Period 8 h; angular frequency 2π/8 = π/4 radians/h.

Department follow-up

ALG2-C1 Interpret a rate in context
What changes, per unit of what, over which interval in this model?

ALG2-C2 Connect a cycle to its parameter
Point to two consecutive matching phases. How does their separation determine B in radians?

ALG2-C3 Separate interpretation from precision
Repeat the threshold calculation with stored precision. Now explain the earlier rate without changing its numerical value.

Algebra II

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · Which expressions share a graph? / Studio session(s) 4

A2 · Trial runs at a station / Studio session(s) 5

A3 · Two representations of a cycle / Studio session(s) 2,6

A4 · Cooling between readings / Studio session(s) 1,3

Likely reading of a partial response to investigate

A correct decimal does not settle a whole-hour threshold. Ask the student to test each neighboring recorded time.

Bridge rehearsal / worked feedback

A 0.2-probability event is checked on two independent days. Compare exactly one occurrence with at least one.

Exactly one gives 0.32; at least one gives 0.36. The difference is the two-occurrence case, 0.04.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Algebra II

Released form evidence

June and August 2026 had exactly the same broad distribution of credits. Each final task used an applied function, asked for average rate of change with interpretation and included a threshold. The models differed: lung capacity was periodic; tea temperature decayed exponentially.

January 2027 is the first January under this design. Two repeated response demands warrant practice; they provide little information about the next specific function family.

Eligible public forms • January 0 / June 1 / August 1

Worked responses and follow-up questions

1 Explain an interval rate

T(0)=80 and T(20)=35. The average rate is −45/20 = −2.25 °C/min. The exponential term shrinks by a constant factor, so instantaneous cooling is not constant.

If the numerator is 45, ask which temperature is the later value.

2 Read a periodic pattern

Midline 10, amplitude 8, period 12. One model is h = 10 − 8 cos(πt/6) with radian argument. At 15 s the height is 10 m, repeating the 3 s value.

If amplitude is 16, draw the change from the midline to one extreme.

3 Solve an exponential threshold

100(0.9)^t < 50. The real crossing is ln(0.5)/ln(0.9) ≈ 6.58. Hour 6 gives 53.14 and hour 7 gives 47.83, so the first whole hour is 7.

If the inequality reverses incorrectly, test values 6 and 7 directly.

Average mapped multiple-choice slots per released form

Feature	January	June	August
Transform or combine familiar functions	—	4.00	1.00
Rational exponents	—	2.00	1.00
Connect zeros and factors	—	1.00	1.00

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Algebra II

4 Keep the domain after canceling

For $x \neq 3$, $f(x) = x + 3$. Original denominator is zero at $x = 3$. Domain excludes 3; the graph has a hole at (3,6).

If 6 is given as f(3), substitute 3 in the original denominator.

5 What a simulation supports

4/200 = 0.02. Such an outcome was unusual under the fair model, evidence against fairness in the heads-heavy direction. One small observed run and finite simulation leave uncertainty.

If 16/20 is called the tail probability, distinguish the observed proportion from the proportion of simulations as extreme.

6 Transfer the rate to a new family

Depth rises from 5 to 7, averaging 2/3 m per hour. $\sin(\pi t/6)=1/2$ first at $t=1$. Depth returns to 5 at $t=6$, so zero average rate conceals a rise and fall.

If first time is 5 h, locate the earlier angle with the same sine.

Released practice for each week

Week 1 2026-06 • Q36 • Periodic function in context

Question booklet **Official mapping / guide**

Week 2 2026-06 • Q33 • Interpret a survey

Question booklet **Official mapping / guide**

Week 3 2026-08 • Q36 • Exponential model in context

Question booklet **Official mapping / guide**

English Language Arts

Original exam A, full-length form B and three-week preparation

Why these demands were selected

The two current reading maps assign six questions each to R.4. R.3 accounts for six in June and seven in August; R.2 for five and four. The two argument issues were horse racing and invasive species. Both require a claim, engagement with another position and evidence from at least three sources.

January 2026 used the prior standards. Its debate about employer screening of social media offers a historical task comparison. Its reading codes and content are outside the current probability model.

Released forecast example **State design / administration guidance**

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 75–100 min; divide across two periods if needed. Each selected response earns one local point. Each written response earns one local point per numbered criterion on the key. Maximum 24 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except Part 3. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

English Language Arts

Questions 1–6 • One point per selected response.

1 A • The label “things to try”
The label defines a category by possibility instead of by the parts’ apparent usefulness.

2 B • The shop seems marked by its closure like a person in changed clothing.
The personifying verb gives an ordinary sign of closure emotional force.

3 Written response / 3 local points
1. She initially protects the drawer as a possession linked to her father.
2. Taking the bent key outside turns preservation into an attempt to help someone.
3. The gesture carries forward her father’s willingness to experiment even though success is uncertain.
Credit another interpretation grounded in both moments.

4 C • To show that a new measure can reveal missing demand yet still omit some readers
The box adds previously invisible requests while excluding people who never visit.

5 D • An experience the method cannot register
The collection method cannot capture the absent commuter’s request.

6 Written response / 3 local points
1. The empty drawer can signal continued possibility after the loss of the shop.
2. The missing booking record exposes an evidence gap in a public decision.
3. The fiction develops character or theme while the informational passage develops an argument about measurement.

English Language Arts

Questions 7–12 • One point per selected response.

7 B • Lena can continue a practice even without certainty about the outcome.
The narrator explicitly leaves success uncertain and shows Lena acting anyway.

8 C • It gives an ordinary object an ongoing role beyond storing the past.
The waiting drawer links the father’s former practice to what Lena might do next.

9 Written response / 4 local points
1. Establish a defensible central idea, such as inheriting a way of responding to problems.
2. Identify a specific strategy, such as repeated drawer imagery or personification.
3. Analyze an early detail such as the handwritten category.
4. Analyze a later detail such as the emptied drawer waiting while Lena acts, linking it to the same central idea. Accept other supported readings.

10 A • Did the pilot reach households new to the collection?
The pilot records a count of first-time donor households.

11 D • Its recruitment was limited to archive website users.
Website-only recruitment can underrepresent residents who do not use the site.

12 Written response / 6 local points
1. Take a specific position consistent with the funding limit.
2. Use at least three relevant sources accurately and identify them.
3. Explain how the evidence supports the recommendation rather than listing it.
4. Give a plausible counterclaim and a reasoned response.
5. Account for a genuine evidence limitation or consent issue.
6. Organize a coherent argument. Example: pilot scanning days to broaden participation, seek separate display consent, and acknowledge survey support for searchability.

English Language Arts

Replacement scoring and retrieval-check keys

Form B replacement / Part 3 / 4 credits maximum

Use the linked public Part 3 holistic rubric with the new text. A well-developed reading might trace a shift from searching for a physical mark of belonging to creating recognition through a shared sound. Evidence can contrast the old hollow and identical keys with the answered scale. Judge precision, analysis, evidence, organization and conventions holistically. Other well-supported readings are valid.

Public scoring materials for base form

Official holistic scoring guide

Week 1 / retrieval check

“The lock swallowed the last click.” What does the verb add beyond “made a click”?
It gives the lock agency and can suggest finality or silence; other supported readings work.

Week 2 / retrieval check

A survey of bus riders supports a bus extension. What can it establish and who might be missing?
It can show views of surveyed riders. People lacking bus access may be missing.

Week 3 / retrieval check

Write a counterclaim about extending a library day when staffing is limited, then answer it with a conditional proposal.
Longer opening could spread staffing too thin; trial one extra evening and check staffing and use before expanding.

Department follow-up

ELA-C1 Choose evidence that supports the claim
If a reader accepted your evidence, why would that make your particular recommendation more persuasive?

ELA-C2 Make the reader’s inference explicit
Which few words from the quotation do the most work, and what do they make the reader understand?

ELA-C3 Move from defining craft to analyzing it
Change the highlighted words to plain language. What does the reader lose?

English Language Arts

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · The drawers • original fiction / Studio session(s) 1,2

A2 · The absent number • original informational text / Studio session(s) 5

A3 · Text analysis • return to the fiction / Studio session(s) 4

A4 · Source-based argument • a town archive / Studio session(s) 3,6

Likely reading of a partial response to investigate

A quotation fits the topic but its function is unclear. Ask the student to replace one phrase with neutral wording and describe what changes.

Bridge rehearsal / worked feedback

A reporter counts sold tickets and claims everyone who wanted to attend was admitted. Identify the missing perspective and propose evidence.

Sold tickets omit unsuccessful buyers. Track sold-out inquiries or a waitlist while acknowledging people who never registered.

Local holistic descriptors for the Form B replacement

0 • Blank, unrelated or wholly copied.

1 • An unclear idea or confused reading with minimal relevant support.

2 • A general idea and surface treatment of a writing choice. Some support is present, with limited links to the idea.

3 • Defensible idea, sufficient analysis of a specific writing choice, appropriate evidence and an organized explanation.

4 • Well-developed idea, thorough analysis of how a writing choice develops it, precise evidence and coherent language that sustains meaning.

English Language Arts

Released form evidence

The two current reading maps assign six questions each to R.4. R.3 accounts for six in June and seven in August; R.2 for five and four. The two argument issues were horse racing and invasive species. Both require a claim, engagement with another position and evidence from at least three sources.

January 2026 used the prior standards. Its debate about employer screening of social media offers a historical task comparison. Its reading codes and content are outside the current probability model.

Eligible public forms • January 0 / June 1 / August 1

Worked responses and follow-up questions

1 When a word changes sides

“Had teeth” gives silence a threatening quality. Switching the radio off and listening for a key suggest anxious anticipation. Fear of a particular person would require additional evidence.

If the response only says “scared,” ask which two actions or words produced that inference.

2 Find the turn

The directions suggest faith in inherited knowledge. The missing bridge makes it insufficient, and asking someone nearby opens another way of learning. The shift complicates reliance without dismissing the father.

If the answer retells events, ask what changes in the narrator's understanding.

3 Write a counterclaim that matters

A defensible position is a limited pilot: A shows demand, C shows use, and B gives a concrete cost. A counterclaim about cost can be met by testing the busiest evenings. The survey's selection method or visits by repeat users limits inference.

If sources are merely listed, ask what each fact does for the claim or objection.

Average mapped multiple-choice slots per released form

Feature	January	June	August
Word choice, meaning and tone	—	6.00	6.00
Development and interaction of ideas, people or events	—	6.00	7.00
Central ideas and themes	—	5.00	4.00

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

English Language Arts

4 Analyze a craft choice

The pale rectangle and the final gesture turn absence into a visible image. Concrete imagery makes the continued presence of a lost neighborhood place perceptible. An alternative interpretation needs support from both details.

If the response only identifies imagery, ask how it changes the reader's understanding of loss.

5 Evaluate the reach of a claim

The claim assumes opening-day demand will persist. Free rides and concentrated recruitment weaken that inference. A justified claim is that initial interest warrants tracking paid ridership over several ordinary weeks.

If students call the numbers false, distinguish accurate data from an unsupported generalization.

6 Build an argument across four voices

One defensible recommendation is a longer two-night-per-week pilot. A and C show a need and observed uptake; B weighs against a permanent daily commitment. D gives context but modest reach. Count unique riders and nights with typical attendance.

If all sources are treated as interchangeable, ask which measures demand, which observes use, and which estimates cost.

Released practice for each week

Week 1 2026-06 • Part 3 • Text analysis and craft
Question booklet **Official mapping / guide**

Week 2 2026-06 • Part 2 • Develop a source-based argument
Question booklet **Official mapping / guide**

Week 3 2026-08 • Part 2 • Transfer to a new argument issue
Question booklet **Official mapping / guide**

Global History and Geography II

Original exam A, full-length form B and three-week preparation

Why these demands were selected

Cartoons appeared on 4/4 January, 5/5 June and 5/5 August forms. Mean cartoon sets per form were 3.75, 1.80 and 2.00. The four January counts were 1, 3, 6 and 5. Decolonization and nationalism (10.7) averaged 4.00, 2.25 and 3.00 MC slots on the smaller topic-mapped sample.

All 14 booklets support stimulus counts. Only 11 have a topic map in the Atlas. A set can serve several questions. The cartoon count increase is exploratory and varies strongly by year.

Released forecast example

State design / administration guidance

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 75–100 min; divide across two periods if needed. Each selected response earns one local point. Each written response earns one local point per numbered criterion on the key. Maximum 23 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 29. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Global History and Geography II

Questions 1–6 • One point per selected response.

1 C • Control of production can also give employers power over workers’ time.
The key is assigned to the owner and the workers are placed under the shift notice.

2 C • Dated time books and worker testimony from that mill
Time records and testimony address both rules and the experience of following them.

3 Written response / 3 local points
1. The viewpoint questions unequal control over time.
2. Explain how the owner’s key and workers under the shift notice support that reading.
3. This is a present-day constructed cartoon; independent period evidence is needed to establish actual experience.

4 A • Government assumed a larger role in conditions within covered factories.
Legal limits and inspectors show intervention in working conditions.

5 B • Comparisons of inspection findings and hours actually worked over time
Implementation concerns what happened under the law, which inspections and time records can document.

6 Written response / 3 local points
1. Factory industrialization concentrated wage labor and made working time a public concern.
2. Identify the tension over who set conditions inside the workplace.
3. The law imposed limits and oversight on employer authority. The invented cartoon illustrates the issue and could not itself have caused the 1833 law.

Global History and Geography II

Questions 7–12 • One point per selected response.

7 B • It linked an ordinary necessity to colonial authority.
A widely used commodity gave political rule an everyday consequence.

8 D • A dispute over salt could also be a dispute over political authority.
The drawing pairs a material object with authority to decide who sets rules.

9 Written response / 3 local points
1. The march and deliberate challenge document resistance to the salt rules.
2. A protest alone cannot establish transfer of political authority.
3. A later independence law, governing agreement, or evidence that an elected government controlled policy could establish a change in formal power.

10 A • The timeline of formal independence varied across places.
The two dates establish different timing; the other claims require additional evidence.

11 D • Export destinations before and after independence in the same country
Trade records across the transition allow comparison of actual economic ties.

12 Written response / 6 local points
1. Identify and explain a defensible enduring issue, such as control over decisions that shape daily life.
2. Use accurate evidence from at least three documents.
3. Explain an effect on identifiable people, for example factory children or salt consumers.
4. Develop a comparison over time or place rather than listing examples.
5. Apply a relevant outside detail, such as how apartheid pass laws constrained movement and how organized resistance challenged that authority.
6. Sustain a historically accurate, organized argument. Other issues and outside examples can earn full local credit.

Global History and Geography II

Replacement scoring and retrieval-check keys

Form B replacement / 29 / 1 credits maximum

Award one local point for a historically accurate circumstance and connection, such as colonial authority over a widely used necessity making salt a means of challenging British rule. Restating that a march occurred does not establish its context.

Public scoring materials for base form

Week 1 / retrieval check

Invent a caption that criticizes control of factory time. Explain which symbol would make your meaning clear.

Example: “A borrowed hour” beneath a factory clock whose key is held by the owner. Explain the relation of control to workers.

Week 2 / retrieval check

Why might a statute and an inspection report answer different historical questions?

The statute establishes intended rules; the report may show observed implementation at particular sites.

Week 3 / retrieval check

Which archives would help test whether independence changed trade dependence? Give a reason.

Compare trade records by product and buyer across the transition; political dates alone cannot establish an economic change.

Department follow-up

GLOBAL2-C1 Substantiate an analytical conclusion

Which group, action or consequence would let another reader test this conclusion?

GLOBAL2-C2 Demonstrate endurance across contexts

Where else can you show this issue, who experienced it, and what persisted or changed?

GLOBAL2-C3 Integrate outside knowledge with sources

Which outside fact would make this particular document interpretation more convincing?

Global History and Geography II

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · Document 1 • the factory clock / Studio session(s) 1,3

A2 · Document 2 • law and enforcement / Studio session(s) 3,6

A3 · Documents 3 and 4 • a commodity and a campaign / Studio session(s) 2

A4 · Document 5 • formal independence / Studio session(s) 5,6

Likely reading of a partial response to investigate

A response names power in both cases without showing its effects. Ask who could make a decision and whose choices were limited.

Bridge rehearsal / worked feedback

A colonial freight line links mines to one port. What would show whose interests it served beyond the route itself?

Compare cargo, destinations, revenues and ownership; route geometry supports a hypothesis but cannot establish motive alone.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Global History and Geography II

Released form evidence

Cartoons appeared on 4/4 January, 5/5 June and 5/5 August forms. Mean cartoon sets per form were 3.75, 1.80 and 2.00. The four January counts were 1, 3, 6 and 5. Decolonization and nationalism (10.7) averaged 4.00, 2.25 and 3.00 MC slots on the smaller topic-mapped sample.

All 14 booklets support stimulus counts. Only 11 have a topic map in the Atlas. A set can serve several questions. The cartoon count increase is exploratory and varies strongly by year.

Eligible public forms • January 4 / June 5 / August 5

Worked responses and follow-up questions

1 Read the object in the cartoon

The key and gate depict imperial control over access to trade. The excluded trader bears the consequences. The creator's audience, location or date would help establish whose perspective the image expresses.

If the student simply lists objects, ask who controls an action and who cannot act.

2 Turn a timeline into context

Salt was widely used. Challenging control of it made colonial power visible in an ordinary purchase. A participation register or local accounts from multiple regions would help assess reach. The summary alone cannot establish universal support.

If a response only repeats the march date, ask why this product was strategically useful.

3 Compare voices on industrialization

Both describe factory time discipline. The owner emphasizes production and cost while the worker stresses control of daily life. A informs us about managerial justification; B about a worker's perceived experience. Neither establishes typical conditions by itself.

If students label one voice reliable and one unreliable, ask “reliable for answering which question?”

Average printed stimulus sets per released form

Feature	January	June	August
cartoon	3.75	1.80	2.00
map	1.25	1.40	0.60
printed text	9.75	9.20	9.20

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Global History and Geography II

4 Read a map claim critically

The network could favor exporting minerals over trade between districts. Terrain or existing settlements could also explain the route. Freight records by cargo and destination, or topographic maps, would help test the inference.

If the rails alone “prove” motive, ask for an observation that could fit two motives.

5 Explain continuity across independence

Independence transfers political authority. Reliance on a buyer or commodity can constrain revenue and policy. Use export shares or budgets over time to test the claim. The scenario alone establishes no such pattern for either country.

If the student applies the invented figures as fact, return to the source labels.

6 Build an enduring-issue paragraph

Unequal power is defensible. Control over trade or salt shaped people's options, while protest shows agency. An outside example such as resistance to apartheid in South Africa extends the analysis across place and time. This short paragraph rehearses part of the full essay.

If the writing names a theme without consequences, ask who could make a decision and whose choices narrowed.

Released practice for each week

Week 1 2026-01 • Q4 • Cartoon set, Q4–5

Question booklet **Official mapping / guide**

Week 2 2026-06 • Q22 • Timeline set, Q22–23

Question booklet **Official mapping / guide**

Week 3 2026-08 • Q1 • Passage set, Q1–1

Question booklet **Official mapping / guide**

U.S. History and Government

Original exam A, full-length form B and three-week preparation

Why these demands were selected

The January civic issues were Black voting rights (2024), Treaty of Versailles ratification (2025) and Prohibition (2026). January Part I included a photo on 3/3 forms, June on 3/4, August on 1/4. Constitutional foundations appeared across all months.

Three Januaries span different historical periods and kinds of civic conflict. A rotation rule would mistake 11 distinct essay labels for a predictable sequence.

Released forecast example

State design / administration guidance

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 75–100 min; divide across two periods if needed. Each selected response earns one local point. Each written response earns one local point per numbered criterion on the key. Maximum 22 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 29. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

U.S. History and Government

Questions 1–6 • One point per selected response.

1 D • The New Deal expanded federal involvement in economic recovery.
The TVA was a federal New Deal response during the Depression.

2 A • Changes over time in households connected to electric power in the region
Connections over time directly bear on access to power.

3 Written response / 3 local points
1. Situate the documents in the Depression and government responses to regional economic distress.
2. Use a condition from A, such as limited electricity or repeated erosion.
3. Explain how a specific TVA authority in B addressed that condition, distinguishing intended response from measured success.

4 B • How a newspaper represented the marchers' public message
The described photograph provides evidence about a public depiction, not a population-wide belief.

5 A • The editor's correspondence comparing candidate photographs
Correspondence about selection bears directly on editorial purpose.

6 Written response / 3 local points
1. Describe persistent barriers facing Black voters despite constitutional protections.
2. Explain the editor's purpose of communicating the marchers' goal to newspaper readers.
3. Identify a well-defined inquiry the image supports and a limitation arising from selection. Accept alternative supported evaluations.

U.S. History and Government

Questions 7–12 • One point per selected response.

7 D • A formal constitutional protection coexisted with barriers in practice.
The legal rule and practical access did not always coincide.

8 C • Organizing a march to press for reform
Public collective advocacy can influence policy without holding office.

9 Written response / 2 local points
1. Identify discriminatory barriers to registration despite formal voting protections.
2. Explain how organizing or public marches exposed the barriers or mobilized public support for enforcement.

10 C • The federal response added enforcement mechanisms.
The law expanded federal means to address practices that interfered with voting.

11 B • Comparable registration rates and accounts from affected voters over time
Rates with suitable denominators and firsthand accounts test different aspects of access.

12 Written response / 6 local points
1. Explain the tension between constitutional protection and practical exclusion.
2. Develop at least one organizing action and one government action.
3. Use at least four dossier sources accurately, identifying them.
4. Apply relevant outside knowledge, such as the federal examiners authorized to assist registration in covered areas.
5. Judge the extent of success with a reason and distinguish legal capacity from proof of universal access.
6. Organize a coherent argument. Accept other supported historical judgments.

U.S. History and Government

Replacement scoring and retrieval-check keys

Form B replacement / 29 / 5 credits maximum

Use the linked state short-essay Set 1 holistic criteria with this new pair. A strong account connects national market expansion and dependence on rail transport to pressure for federal oversight. Explain how rate grievances motivated intervention and distinguish the creation of a commission from proof of success. Other historically defensible accounts earn credit.

Public scoring materials for base form **Official holistic scoring guide**

Week 1 / retrieval check

How does evidence of low household electricity access help contextualize a public power proposal?
It identifies an existing access problem that public generation and distribution could address.

Week 2 / retrieval check

An organizer wrote a flyer about a march. State one inquiry for which it is useful and one needing corroboration.
It shows intended aims or appeals; independent evidence is needed to determine attendance or policy impact.

Week 3 / retrieval check

A law grants federal oversight. Name one practical outcome measure and one limit.
Compare registration rates among eligible voters across time and place; simultaneous changes limit attribution.

Department follow-up

USHG-C1 Distinguish context from relationship
What was already happening before these documents, and why did it matter to their creation?

USHG-C2 Evaluate reliability for a specific purpose
What would Nixon’s veto message be especially useful evidence for? What claim would need corroboration?

USHG-C3 Apply outside information to civic outcomes
Which fact changes your judgment about what the policy accomplished or whom it affected?

U.S. History and Government

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · Set 1 • the Tennessee Valley / Studio session(s) 1

A2 · Set 2 • what does a photograph establish? / Studio session(s) 2,4

A3 · Civic dossier • legal protection and access / Studio session(s) 3,5

A4 · Civic dossier • enforcement and evaluation / Studio session(s) 5,6

Likely reading of a partial response to investigate

A response substitutes a source summary for context. Ask what condition existed before the source was created.

Bridge rehearsal / worked feedback

A law promises equal access to a service. Choose one record proving authorization and another helping evaluate actual access.

Use the enacted statute for authority and participation rates or implementation records for access, with relevant denominators.

Local holistic descriptors for the Form B replacement

0 • Blank, unrelated or inaccurate throughout.

1 • Minimally addresses context or relationship with isolated relevant information.

2 • Develops one aspect or treats both minimally, with limited detail.

3 • Addresses context and relationship with some development or develops one more fully, using relevant evidence.

4 • Develops both aspects with accurate evidence from both documents and some analysis of how the developments connect.

5 • Thoroughly develops both aspects with accurate document evidence and relevant historical detail, explaining how the circumstances contributed to regulatory action.

U.S. History and Government

Released form evidence

The January civic issues were Black voting rights (2024), Treaty of Versailles ratification (2025) and Prohibition (2026). January Part I included a photo on 3/3 forms, June on 3/4, August on 1/4. Constitutional foundations appeared across all months.

Three Januaries span different historical periods and kinds of civic conflict. A rotation rule would mistake 11 distinct essay labels for a predictable sequence.

Eligible public forms • January 3 / June 4 / August 4

Worked responses and follow-up questions

1 What did the law respond to?

Rail expansion and dependence on freight created pressure over rates. Complaints like the one illustrated could motivate regulation. The statute establishes federal action; this invented petition illustrates a grievance and cannot document actual lobbying.

If causation rests on the invented petition, ask which evidence could establish historical influence.

2 Read a photograph as evidence

The scene shows organized public advocacy. It cannot establish the percentage of Americans who supported suffrage. Editorial selection affects which participants or moments reached readers. Other photographs and polling or local records could broaden the account.

If the crowd is treated as representative, ask who could be outside the frame.

3 Compare two responses to voting barriers

Both address racial exclusion. The later law strengthened enforcement where formal protection had failed. Registration barriers and the civil rights movement provide relevant context. A response should connect mechanisms to the obstacle being addressed.

If “everyone voted after 1870” appears, ask why enforcement later became a civic issue.

Average printed stimulus sets per released form

Feature	January	June	August
photo	1.33	1.75	0.25
cartoon	2.33	2.75	1.75
printed text	10.33	9.00	10.00

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

U.S. History and Government

4 Source purpose and reliability

The leaflet shows how a campaign might frame the issue through family welfare. A promise does not establish social outcomes. Compare records before and after, considering other causes. An actual period leaflet would be required to document a specific campaign.

If a source's bias is used to dismiss it, ask what question its purpose makes it useful for answering.

5 Follow a civic issue through time

Voting exclusion motivated organizing. Petitions or marches helped press for constitutional change. The amendment removed a sex-based legal barrier, but racial discrimination and registration barriers continued. The Seneca Falls Convention is one relevant outside detail if explained.

If “full equality” is the outcome, ask which legal change occurred and which barriers could remain.

6 Write a document-based civic judgment

The ICC created sustained federal oversight. Later expansion suggests the original powers had limits. The Hepburn Act of 1906 strengthened authority to set maximum rates. Before-and-after rate data could help assess benefits to shippers. Accept another defensible judgment with evidence.

If enactment is equated with success, ask what observable result would show fairer treatment.

Released practice for each week

Week 1 2026-01 • Q37 • Civic literacy: Prohibition
Question booklet **Official mapping / guide**

Week 2 2026-06 • Q37 • Civic literacy: stronger national government
Question booklet **Official mapping / guide**

Week 3 2026-08 • Q37 • Civic literacy: Chinese immigration
Question booklet **Official mapping / guide**

Life Science: Biology

Original exam A, full-length form B and three-week preparation

Why these demands were selected

January 2026 moved through twins, an invasive aquatic plant, pest management and honeybees. Seven of ten clusters contained the word model or models. June averaged seven model-cued clusters; August averaged 7.5. Graph cues varied more across these small groups.

One January and five total forms. Two June 2026 items received universal credit and are excluded from topic occurrence counts. They remain visible as printed records. Cluster word cues include directions and questions.

Released forecast example

State design / administration guidance

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one point when the required components are present. Maximum 12 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-08 official booklet except 18. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Life Science: Biology

Questions 1–6 • One point per selected response.

1 D • Oxygen change in bright versus dim jars with equal plant mass
The bright and dim setups differ in light while plant mass and starting conditions match.

2 B • Respiration can consume oxygen in darkness.
Plants can continue cellular respiration when light-dependent photosynthesis stops.

3 Written response / 1 local point
• Bright jars gained 2.4 mg/L while dark jars lost 0.8 mg/L.
• The measurements show net oxygen change. Oxygen production can exceed consumption in light even while respiration continues, so these data do not establish the claim.

4 D • The two root groups produced different numbers of surviving seeds.
Surviving offspring per plant is evidence about reproductive success.

5 C • Many deep-rooted seeds were carried into the population from another site.
Migration can shift frequencies independently of selection within the site.

6 Written response / 1 local point
• Deep-rooted plants left more surviving offspring on average, 8 compared with 3.
• Because root-depth differences are heritable, more descendants may carry the deep-root trait over generations; individual plants do not need to transform their inherited traits.

Life Science: Biology

Questions 7–12 • One point per selected response.

7 A • 1/2

Two of four equally likely allele combinations are Pp.

8 A • The purple parent contributed p and is Pp.

A pp offspring must receive p from both parents. A purple carrier has Pp.

9 Written response / 1 local point

• The expected phenotype ratio is 3 purple to 1 nonpurple, or P(purple) = 3/4 per offspring.
• Six purple offspring are possible in a small sample; for independent offspring the probability is $(3/4)^6$, about 0.178.

10 B • A five-species larger average gain in planted sections

The planted gain is 6 and the comparison gain is 1; their difference is 5.

11 C • Manipulate shading across similar sections and measure both temperature and species richness.

Manipulating shade and tracking the proposed intermediate variable helps distinguish mechanisms.

12 Written response / 1 local point

• Planting was associated with a larger average gain, 12 to 18 versus 12 to 13.
• Cooler water is consistent with a shade pathway, but planting could also change food or habitat. A controlled follow-up would distinguish those effects.

Life Science: Biology

Replacement scoring and retrieval-check keys

Form B replacement / 18 / 1 credits maximum

Award one local point when differential reproduction and inheritance are connected to increased frequency of tolerance across generations. A statement that each plant learned to survive flooding misses the population mechanism.

Public scoring materials for base form

Week 1 / retrieval check

In light, dissolved oxygen rises from 4 to 6 units. What can and cannot be inferred about plant activity?
There was net oxygen gain. This cannot establish that respiration stopped.

Week 2 / retrieval check

A purple carrier Pp is crossed with pp. Predict the phenotype ratio under complete dominance and explain.
Half Pp and half pp are expected, hence 1:1 purple to nonpurple across many offspring.

Week 3 / retrieval check

A trait is inherited but has no measured effect on offspring number. Which extra evidence would support selection?
Compare survival and actual reproductive output by trait under relevant conditions, allowing for migration or chance.

Department follow-up

BIO-C1 Connect ecosystem evidence to an outcome
What happens to oxygen as algae increase, and why does that matter to consumers?

BIO-C2 Explain population change over generations
Did one deer change during its life, or did a trait become more frequent across generations? What would distinguish these accounts?

BIO-C3 Defend a design judgment with its trade-off
Which benefit or cost mattered most to your decision? What change would reverse it?

Life Science: Biology

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · Sunlight at the marsh / Studio session(s) 1,2

A2 · Seeds after a dry season / Studio session(s) 4

A3 · An inherited seed pattern / Studio session(s) 3

A4 · Restoring a stream bank / Studio session(s) 5,6

Likely reading of a partial response to investigate

A response uses a population trend to explain a change within individuals. Ask where inheritance enters the explanation.

Bridge rehearsal / worked feedback

A closed light jar gains 2 mg/L oxygen while a dark jar loses 1 mg/L. Does the dark jar alone determine respiration in light?

No. It estimates net change under dark conditions. Light measurements combine processes and their rates may differ by condition.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Life Science: Biology

Released form evidence

January 2026 moved through twins, an invasive aquatic plant, pest management and honeybees. Seven of ten clusters contained the word model or models. June averaged seven model-cued clusters; August averaged 7.5. Graph cues varied more across these small groups.

One January and five total forms. Two June 2026 items received universal credit and are excluded from topic occurrence counts. They remain visible as printed records. Cluster word cues include directions and questions.

Eligible public forms • January 1 / June 2 / August 2

Worked responses and follow-up questions

1 Which way did carbon move?

Net uptake is consistent with photosynthesis exceeding respiration. CO_2 fell 80 ppm in the plant chamber while the comparison stayed constant. Some carbon could enter sugars and then plant tissue. The data measure net exchange.

If the student says respiration stopped, ask whether both processes could occur during a net decrease.

2 A model with a missing arrow

Decomposers obtain matter and energy from dead organisms. Respiration releases CO_2, which plants can incorporate. Energy enters as light and leaves as heat. Carbon atoms can cycle among organisms, air and soil.

If energy is drawn from decomposers back to the Sun, ask what leaves as thermal energy.

3 Trace an inherited difference

AA, Aa, Aa, aa. Probability of aa is 1/4 per seed. Four independent offspring can yield other counts. The probability describes many events and does not set a four-seed quota.

If two symbols are assigned from one parent, trace one allele from each.

Average clusters with an explicit word cue per released form

Feature	January	June	August
model	7.00	7.00	7.50
graph	6.00	5.50	2.00
diagram	3.00	4.50	2.50

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Life Science: Biology

4 Explain selection with a counterexample

If dark insects are less visible on dark bark, they may leave more surviving offspring, increasing the trait frequency. Compare predation or reproductive success by color in both settings. Frequency data alone cannot rule out migration or chance.

If individuals change color because they need to, ask whose offspring become more common.

5 Test a feedback model

Higher temperature triggers increased heat loss, reducing temperature and reducing the original stimulus. The downward trend is consistent with negative feedback, although exercise stopping also matters. The response should weaken near baseline.

If the loop keeps increasing heat loss forever, ask how the signal changes as temperature returns.

6 Separate association and mechanism

Reduced light could limit photosynthesis and growth. The lower-light pools also had less growth. Compare similar plants under controlled light levels while keeping nutrients and temperature constant. The pond comparison alone cannot isolate the mechanism.

If “floating plants kill everything” appears, ask which organisms and outcomes were actually measured.

Released practice for each week

Week 1 2026-01 • Q1 • Two Kinds of Twins (Q1–5)
Question booklet **Official mapping / guide**

Week 2 2026-06 • Q10 • Green and Black Frogs (Q10–14)
Question booklet **Official mapping / guide**

Week 3 2026-08 • Q45 • The Permafrost Problem (Q45–48)
Question booklet **Official mapping / guide**

Earth and Space Sciences

Original exam A, full-length form B and three-week preparation

Why these demands were selected

All five released forms contained 50 slots. January 2026 included a drifting cargo spill, glacial ice and Mount Morris Dam. Ten January clusters included a model word cue, six a graph cue and five a map cue. The June mean graph count was 5.5; August was 7.

One January. A named New York location is a useful practice setting, with little basis for predicting which place will anchor the exam. Distinguish information in a reference table from information in a supplied map.

Released forecast example

State design / administration guidance

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one point when the required components are present. Maximum 12 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 30. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Earth and Space Sciences

Questions 1–6 • One point per selected response.

1 D • 2 h
The highest measured value occurs at 3 p.m., two hours after 1 p.m.

2 D • Replacing permeable soil with connected paved drains
Connected pavement and drains rapidly route surface water into channels.

3 Written response / 1 local point
• Water takes time to travel across or through the watershed to the gauge.
• Temporary storage spreads delivery over time, tending to reduce or delay the peak. Accept either defensible effect with a mechanism.

4 A • 2 cm/year
40 km per 2 million years is 20 km per million years, or 2 cm/year.

5 A • Crust becomes older away from the ridge on both sides.
The symmetric age pattern fits creation at the ridge followed by outward movement.

6 Written response / 1 local point
• Each side moves about 160 km in 8 million years.
• The pieces would be 320 km apart because the two outward motions add.

Earth and Space Sciences

Questions 7–12 • One point per selected response.

7 B • 6 days
Successive start times differ by six days; three hours is the duration.

8 B • It predicts dips at times with no observed dips.
Continuous coverage allows a test of the additional predicted dips.

9 Written response / 1 local point
• The next dip is predicted near day 26.
• A body passing between star and observer blocks a fraction of its light periodically; observe near day 26 for a dip of comparable timing and shape.

10 C • Deposition of H
D cuts H, so H had to exist before intrusion.

11 C • Marine deposition occurred at that site when L formed.
The fossils support interpretation of that layer’s environment without fixing every other layer’s age.

12 Written response / 1 local point
• S deposition, H deposition, D intrusion, erosion, then L deposition.
• Truncated units beneath L show erosion and a gap in preserved deposition; the duration of that gap is unknown.

Earth and Space Sciences

Replacement scoring and retrieval-check keys

Form B replacement / 30 / 1 credits maximum

Award one local point for two defensible system-change pairs, such as geosphere: less infiltration into soil; hydrosphere: faster delivery of runoff to the stream. Other accurate system names and distinct changes are acceptable.

Public scoring materials for base form

Week 1 / retrieval check

A stream peaks two hours after rain stops. Explain one plausible transport delay.
Water takes time to move from hillslopes or tributaries to the gauge.

Week 2 / retrieval check

A dike cuts a lava flow but ends at an erosion surface below a sediment bed. Order the events.
Flow, dike intrusion, erosion, then sediment deposition.

Week 3 / retrieval check

Dips occur on days 1, 6 and 11 and last 2 h. Predict the next dip and distinguish period from duration.
Day 16; period is five days, duration is two hours per dip.

Department follow-up

ESS-C1 Link a circulation change to weather
Trace the air movement toward the region. How does that change local conditions?

ESS-C2 Track two Earth systems
Where did the water go? Which second system gained or lost water, and by what process?

ESS-C3 Connect transit duration to a model
Point to each dip and read its duration. Which object is crossing which disk?

Earth and Space Sciences

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · Tracing a storm through a basin / Studio session(s) 1,6

A2 · An ocean-floor transect / Studio session(s) 5

A3 · The star’s missing light / Studio session(s) 4

A4 · Reading a rock record / Studio session(s) 3

Likely reading of a partial response to investigate

The response gives a duration as the orbital period. Ask for the beginning of two successive events and compare it with the width of one event.

Bridge rehearsal / worked feedback

A ridge spreads 1.5 cm/year on each side for 2 million years. How far apart are the two matching rocks?

Each moves 30 km, giving 60 km total separation. Specify whether distance is from the ridge or across it.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Earth and Space Sciences

Released form evidence

All five released forms contained 50 slots. January 2026 included a drifting cargo spill, glacial ice and Mount Morris Dam. Ten January clusters included a model word cue, six a graph cue and five a map cue. The June mean graph count was 5.5; August was 7.

One January. A named New York location is a useful practice setting, with little basis for predicting which place will anchor the exam. Distinguish information in a reference table from information in a supplied map.

Eligible public forms • January 1 / June 2 / August 2

Worked responses and follow-up questions

1 Read a stream record

Peak recorded discharge was 12 m^3/s at 10. Water takes time to reach the channel and gauge. More pavement can reduce infiltration and speed runoff, producing an earlier or higher peak under otherwise similar conditions.

If rain and peak discharge are treated as simultaneous, trace a drop's route to the gauge.

2 Decode a contour crossing

A rise from the west and a descent to the east fit the data. The west flank is steeper because equal elevation changes occur over shorter distances. These crossings alone do not establish an exact summit elevation.

If higher is confused with steeper, compare equal elevation changes over the two distances.

3 Use relative time evidence

A deposited, B deposited, dike intruded, erosion truncated B and dike, C deposited. Superposition orders A and B. Cross-cutting and truncation place the dike after B and before the surface beneath C.

If the dike is youngest, ask whether it cuts C or ends below it.

Average clusters with an explicit word cue per released form

Feature	January	June	August
map	5.00	3.00	5.00
graph	6.00	5.50	7.00
model	10.00	9.00	8.50

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Earth and Space Sciences

4 Explain a seasonal difference

As Earth orbits with a relatively fixed axis direction, the Northern Hemisphere is tilted toward the Sun in June and has a longer illuminated path. At 43°S it is winter and daylight is shorter. Changing Earth-Sun distance cannot explain opposite seasons.

If distance is central, ask why both hemispheres experience the same distance on a given date.

5 Infer motion from paired locations

60 km / 2 million years = 30 km per million years, or 3 cm/year. New crust forms near the ridge and moves outward. Total separation of both plates would be about 6 cm/year.

If 6 cm/year is reported for one plate, distinguish one-sided travel from widening of the whole basin.

6 Make a watershed decision

A permeable surface or retention area could slow runoff and increase storage, lowering peak flow. The model connects more rapid runoff with higher peak. Soil saturation, slope or storm intensity could alter the result.

If a student promises flooding will stop, ask which outcome the model measured and under what storm.

Released practice for each week

Week 1 2026-01 • Q1 • Evidence for the Big Bang Theory (Q1–5)
Question booklet **Official mapping / guide**

Week 2 2026-06 • Q9 • The Slow Carbon Cycle (Q9–13)
Question booklet **Official mapping / guide**

Week 3 2026-08 • Q47 • Stars and Elements in the Universe (Q47–50)
Question booklet **Official mapping / guide**

Physical Science: Chemistry

Original exam A, full-length form B and three-week preparation

Why these demands were selected

The two available forms had 11 clusters each. June contexts included beverages, blood equilibria and fabric. August included semiconductors, pool water and catalytic converters. Practice relating a macroscopic observation to a particle model and a data trend.

First January for the new exam. The 14 legacy chemistry forms measure a different design; older reference-table frequency cannot estimate the new cluster mix.

Released forecast example **State design / administration guidance**

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one point when the required components are present. Maximum 12 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 28. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Physical Science: Chemistry

Questions 1–6 • One point per selected response.

1 B • CO
Six CO require three O_2, leaving one O_2.

2 D • Number of oxygen atoms
Chemical rearrangement preserves atoms by element but can change the total number of molecules.

3 Written response / 1 local point
• The final model contains six CO_2 and one O_2 with no CO remaining.
• Initially there are 6 + 8 = 14 O atoms. Finally there are 12 + 2 = 14.

4 A • Energy moved from surrounding water into the pack.
The surrounding water cooled, consistent with supplying energy to the process.

5 D • Temperature readings at regular intervals for 45 minutes
A time series measures how long cooling is sustained.

6 Written response / 1 local point
• X produces a 7 °C drop compared with 3 °C for Y under matched conditions.
• These endpoint data support X for this criterion but cannot establish duration, cost or performance at another pack mass.

Physical Science: Chemistry

Questions 7–12 • One point per selected response.

7 B • 310 K
The same progress takes the least time at 310 K.

8 C • It makes elapsed times comparable for the same amount of progress.
Time is a valid rate proxy here only because the progress criterion is held fixed.

9 Written response / 1 local point
• Refute: the time decreases, for example from 140 s at 290 K to 65 s at 310 K for the same endpoint.
• At higher temperature a larger fraction of collisions can overcome the activation-energy barrier, consistent with a faster process.

10 C • Ions fixed in a solid lattice that become mobile when molten
Conductivity turning on upon melting is consistent with mobile ions in the liquid phase.

11 A • Its solid state conducts.
The wire must carry current in the intended solid state.

12 Written response / 1 local point
• Choose N because its solid conducts and it can change shape without the stated loss of integrity.
• A metallic model has mobile electrons and layers of positive cores that can shift while metallic attraction persists.

Physical Science: Chemistry

Replacement scoring and retrieval-check keys

Form B replacement / 28 / 1 credits maximum

Award one local point for refuting with appropriate comparative evidence: the same progress took 62 rather than 104 seconds at the higher temperature, indicating a faster average rate.

Public scoring materials for base form

Week 1 / retrieval check

In a closed model, $2H_2$ combines with $1O_2$. How many H and O atoms must appear among the products?
Four H atoms and two O atoms, rearranged into two water molecules if reaction is complete.

Week 2 / retrieval check

Equal amounts react in 80 s or 50 s to the same endpoint. Why does the shorter time indicate a higher average rate?
Same progress per smaller time gives greater average progress per second.

Week 3 / retrieval check

A solid conducts and bends easily. Give a particle model consistent with each observation.
Mobile electrons account for current; layers of positive cores can shift while attraction persists.

Department follow-up

CHEM_NEW-C1 Conserve atoms using coefficients
Count atoms on both sides. Which change alters the number of particles without changing their identities?

CHEM_NEW-C2 Use comparative evidence for a rate claim
At the higher temperature, what happened to the time for the same endpoint? Which numbers show it?

CHEM_NEW-C3 Compare measured values with a threshold
What limit did the prompt give, and on which side of it does each sample fall?

Physical Science: Chemistry

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · What the particles can make / Studio session(s) 1

A2 · Two cooling sleeves / Studio session(s) 2

A3 · Reaction time across temperatures / Studio session(s) 4

A4 · Identifying a material / Studio session(s) 3

Likely reading of a partial response to investigate

A trend is correct but the student compares different endpoints. Ask which quantities were held fixed.

Bridge rehearsal / worked feedback

Two materials each absorb 100 J but provide different temperature drops in different water masses. Can drop alone reveal the better material?

No. Control water mass, starting conditions and exposure time before comparing cooling performance.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Physical Science: Chemistry

Released form evidence

The two available forms had 11 clusters each. June contexts included beverages, blood equilibria and fabric. August included semiconductors, pool water and catalytic converters. Practice relating a macroscopic observation to a particle model and a data trend.

First January for the new exam. The 14 legacy chemistry forms measure a different design; older reference-table frequency cannot estimate the new cluster mix.

Eligible public forms • January 0 / June 1 / August 1

Worked responses and follow-up questions

1 Follow atoms through a model

Four water molecules form. Before and after there are eight H atoms and four O atoms. Mass and atom counts are conserved in the closed system. Molecule count changes from six to four.

If six product molecules appear, count atoms by element rather than comparing total molecules.

2 Temperature and the system boundary

The temperature rise supports energy transfer from the reaction to the solution and cup, consistent with an exothermic process. The comparison helps distinguish the rise from stirring or mixing water. It does not identify products.

If “heat entered because temperature rose” appears, ask whose temperature the thermometer measures.

3 Link a model to conductivity

X may consist of ions locked in a solid lattice that move in solution. Y may dissolve as neutral molecules. Identifying ions in X solution would strengthen the account. Conductivity alone does not uniquely identify a substance.

If all dissolved substances are said to conduct, compare the two solutions directly.

Average clusters with an explicit word cue per released form

Feature	January	June	August
model	—	3.00	6.00
diagram	—	1.00	1.00
table	—	1.00	0.00

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Physical Science: Chemistry

4 Interpret a reaction-rate curve

Rates are 0.70 and 1.25 mL/s from the shared zero baseline. Higher temperature increases the fraction of collisions energetic enough to react. Equal final volumes indicate comparable final gas yields under the stated comparison.

If final yield is called reaction rate, ask how much gas appeared in the first interval.

5 Read a reversible change

The reverse direction is favored immediately, consuming some added NO_2 and producing N_2O_4. At the new equilibrium the two rates are equal. Equal rates do not require equal concentrations.

If both rates are said to stop, explain how constant concentrations can coexist with particle-level changes.

6 Choose a model with evidence

Melting fits the change in order and mobility. During the plateau energy changes intermolecular arrangement and potential energy as solid becomes liquid. Evidence of new chemical species would challenge a phase-change-only model.

If chemical bonds inside molecules are said to break, distinguish particle identity from attractions between particles.

Released practice for each week

Week 1 2026-06 • Q1 • How Glow Became Gloom (Q1–5)
Question booklet **Official mapping / guide**

Week 2 2026-08 • Q10 • The Great American Solar Eclipse (Q10–13)
Question booklet **Official mapping / guide**

Week 3 2026-06 • Q46 • Indoor Air Pollution (Q46–50)
Question booklet **Official mapping / guide**

Physical Science: Physics

Original exam A, full-length form B and three-week preparation

Why these demands were selected

The single public form included pendulum motion, heat exchange, helmet design, cell-phone optics and voice recognition. It had ten clusters, 31 selected responses and 19 constructed responses. Nine clusters contained an explicit diagram cue.

Only June 2026 is available in the corpus. The August schedule supplied no same-design form. January will be the first winter test, so all month comparisons are unestimated.

Released forecast example **State design / administration guidance**

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one point when the required components are present. Maximum 12 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 20. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Physical Science: Physics

Questions 1–6 • One point per selected response.

1 B • Impulse
Force integrated over time gives impulse in N·s.

2 A • X only
X peaks at 150 N and Y peaks at 300 N.

3 Written response / 1 local point
• Each triangular area is ½ × peak × duration = 9 N·s.
• The longer contact spreads the same impulse over more time. Equal impulse gives equal momentum change even with different peaks.

4 C • 1.50 W
6.0 × 0.25 = 1.50 W.

5 D • Time switched on
Energy equals input power multiplied by operating time.

6 Written response / 1 local point
• A is 0.48/2.40 = 20%; B is 0.45/1.50 = 30%.
• B converts a larger fraction of input to useful light even though A emits slightly more light power.

Physical Science: Physics

Questions 7–12 • One point per selected response.

7 C • 4 m
λ = 24/6 = 4 m.

8 A • Increase the driver’s displacement per oscillation
Larger driving displacement can produce a larger disturbance at the same cycle rate.

9 Written response / 1 local point
• At 8 Hz, λ = 24/8 = 3 m.
• Crests are generated more frequently and travel the same speed, so consecutive crests are closer together.

10 B • 18 cm from the lens on the opposite side
$1/d_i = 1/12 - 1/36 = 1/18$.

11 D • A screen placed at its location captures a focused image.
Converging rays can form the image on a screen.

12 Written response / 1 local point
• The magnitude of magnification is 18/36 = 0.5, giving a 1.5 cm inverted image.
• One parallel ray refracts through the far focus and a central ray travels approximately straight; their intersection below the axis locates the image tip.

Physical Science: Physics

Replacement scoring and retrieval-check keys

Form B replacement / 20 / 1 credits maximum

Award one local point for P with supporting evidence: F = ma yields 45 N in P and 65 N in Q, so only P is below 55 N. Accept an equivalent comparison to the acceleration threshold of 110 m/s².

Public scoring materials for base form

Week 1 / retrieval check

Compare a 4 N rectangular pulse lasting 3 s with a 6 N pulse lasting 2 s.
Both deliver 12 N·s despite different peak forces.

Week 2 / retrieval check

A wave travels at 30 m/s with a frequency of 10 Hz. Predict wavelength if frequency doubles at the same speed.
It decreases from 3 m to 1.5 m because v=fλ.

Week 3 / retrieval check

Two devices have the same output of 0.6 W but inputs of 2 W and 3 W. Compare efficiencies.
30% and 20%; the 2 W device is more efficient at that output.

Department follow-up

PHYS_NEW-C1 Represent a force with direction and magnitude
If the object is moving one way, must its acceleration point that way? Which direction does the net force indicate here?

PHYS_NEW-C2 Select the design using the relevant peak
Which table entry establishes the smallest maximum acceleration? How does that relate to force for the same mass?

PHYS_NEW-C3 Construct the image with rays
Which two rays determine the tip of the image? Where should they cross?

Physical Science: Physics

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · Protecting a sensor / Studio session(s) 1,6

A2 · Powering the light / Studio session(s) 5

A3 · Signals on a string / Studio session(s) 3

A4 · Lens on an inspection stand / Studio session(s) 4

Likely reading of a partial response to investigate

A design is chosen by peak without checking duration. Ask which quantity the area measures and which the height measures.

Bridge rehearsal / worked feedback

An ideal 4 W device is used for 15 s. Only 12 J becomes useful light. Find input energy and efficiency.

60 J input; efficiency 12/60 = 20%. Power and energy require different units.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Physical Science: Physics

Released form evidence

The single public form included pendulum motion, heat exchange, helmet design, cell-phone optics and voice recognition. It had ten clusters, 31 selected responses and 19 constructed responses. Nine clusters contained an explicit diagram cue.

Only June 2026 is available in the corpus. The August schedule supplied no same-design form. January will be the first winter test, so all month comparisons are unestimated.

Eligible public forms • January 0 / June 1 / August 0

Worked responses and follow-up questions

1 Two force curves, one change in motion

Both impulses are 7.2 N·s. The longer pulse has half the force for twice the time. Equal impulses imply equal magnitudes of momentum change; the simplified result supports reducing peak force by extending contact time.

If the taller pulse is assigned greater impulse, draw both rectangles and label width and height.

2 Where the energy went

0.8 J is outside the listed mechanical-energy terms. Thermal energy in wheels or track, sound, or unmeasured rotation could contribute. Measure rotational speed or compare runs with changed friction before assigning the difference to a single mechanism.

If “energy disappeared” appears, expand the system and ask what was measured.

3 Use evidence from a wave

Wavelengths are 0.68 m and 0.34 m. Doubling frequency halves wavelength. Measure sound-pressure amplitude or intensity under comparable conditions to investigate loudness; frequency alone does not establish it.

If “higher pitch means louder” appears, ask which quantity determines cycles per second.

Average clusters with an explicit word cue per released form

Feature	January	June	August
diagram	—	9.00	—
model	—	7.00	—
graph	—	5.00	—

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Physical Science: Physics

4 Test a lens claim

Magnitude 15/30 = 0.5. Image height 2 cm and inverted. A real image can be projected onto a screen without a second imaging device.

If magnification is 2, compare whether the image distance is larger or smaller than the object distance.

5 Read electrical power as evidence

Inputs are 60 J and 42 J. The revision draws less energy, but efficiency requires useful output relative to input. Measure the same intended output, such as delivered light energy, for both trials.

If lower input is called higher efficiency, ask whether the second device could simply do less useful work.

6 Choose a design under two constraints

A and B both give 7.2 N·s. A meets both limits, including the 0.08 s maximum. B exceeds the force limit. Repeat A at varied incoming speeds or with measurement uncertainty near the time boundary.

If both are accepted solely on impulse, mark each design against each separate constraint.

Released practice for each week

Week 1 2026-06 • Q1 • Pendulum Motion (Q1–5)
Question booklet **Official mapping / guide**

Week 2 2026-06 • Q11 • Heat Exchange (Q11–14)
Question booklet **Official mapping / guide**

Week 3 2026-06 • Q46 • Charged Drops (Q46–50)
Question booklet **Official mapping / guide**

Physical Setting/Chemistry

Original exam A, full-length form B and three-week preparation

Why these demands were selected

MC slots explicitly mapped to the 2011 reference tables averaged 20.5 in January, 22.4 in June and 19.8 in August. In January 2026, students worked with a gas sample, a cooling investigation, electrochemistry and neutralization in written-response sets.

The reference-table tag can accompany a content or process tag. Adding percentages across these tags double counts items. The new chemistry exam uses a different reference resource.

Released forecast example **State design / administration guidance**

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one local point per numbered criterion on the key. Maximum 16 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 80. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Physical Setting/Chemistry

Questions 1–6 • One point per selected response.

1 A • X only
Both are liquid at 20 °C but only X is above its normal boiling point at 80 °C.

2 C • Solid
Zero is below Y’s 5 °C melting point.

3 Written response / 2 local points
1. Y boils at 105 °C versus 65 °C for X.
2. The higher boiling temperature is consistent with stronger attractions between Y molecules and more energy required to separate them.

4 D • 14
Neutrons = 26 − 12.

5 C • Loss of two electrons
Removing negative charge produces a positive ion while keeping the same nucleus.

6 Written response / 2 local points
1. 0.75(24) + 0.25(26) = 24.5 u.
2. Z-24 is more abundant, so it contributes more heavily to the average.

Physical Setting/Chemistry

Questions 7–12 • One point per selected response.

7 B • Ag^+
Silver ions gain electrons to form silver atoms.

8 A • Mg(s)
Magnesium supplies electrons to the silver ions.

9 Written response / 2 local points
1. Oxidation: $Mg \rightarrow Mg^{2+} + 2e^-$.
2. Reduction: $2Ag^+ + 2e^- \rightarrow 2Ag$. Both involve two electrons, which cancel when the equations are added.

10 B • 72 g
48(150/100) = 72 g.

11 D • Unsaturated
The 60 g present is below the 72 g maximum.

12 Written response / 2 local points
1. At 20 °C up to 36 g remains dissolved, so 60 − 36 = 24 g crystallizes.
2. At dynamic equilibrium dissolution and crystallization continue at equal rates; equal rates do not imply equal amounts in each phase.

Physical Setting/Chemistry

Replacement scoring and retrieval-check keys

Form B replacement / 80 / 1 credits maximum

Award one local point for equal, ongoing forward and reverse reaction rates. Equal concentrations or stopped reactions alone are insufficient.

Public scoring materials for base form

Week 1 / retrieval check

Element Q has 15 protons and mass number 31. Give neutrons and electrons for Q^{3-}.
16 neutrons and 18 electrons.

Week 2 / retrieval check

If 40 g dissolves per 100 g water, how much dissolves at saturation in 75 g water?
30 g, proportional to solvent mass.

Week 3 / retrieval check

Why do concentrations stay constant at dynamic equilibrium even with unequal amounts of reactant and product?
Equal forward and reverse rates offset changes; amounts need not be equal.

Department follow-up

CHEM_LEG-C1 Account for transferred electrons
Count electrons lost and gained for the whole reaction. How can the totals be checked?

CHEM_LEG-C2 Separate element identity from isotope mass
What must stay fixed for both atoms to be europium? What can change?

CHEM_LEG-C3 Explain dynamic equilibrium
Can two containers have different numbers of particles while particles transfer at equal rates?

Physical Setting/Chemistry

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · A miniature reference table / Studio session(s) 1

A2 · Atoms in a labeled sample / Studio session(s) 2

A3 · An aqueous redox reaction / Studio session(s) 3

A4 · A dissolving and cooling sample / Studio session(s) 6

Likely reading of a partial response to investigate

A crystal mass is calculated from the change in maximum capacity even though the starting solution was unsaturated. Ask for actual dissolved mass at the start.

Bridge rehearsal / worked feedback

A salt dissolves to 30 g per 100 g water at room temperature. A warm solution contains 43 g in 100 g water. Find what crystallizes on cooling to room temperature.

13 g crystallizes if equilibrium is reached without evaporation. Start from 43 g actually present.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Physical Setting/Chemistry

Released form evidence

MC slots explicitly mapped to the 2011 reference tables averaged 20.5 in January, 22.4 in June and 19.8 in August. In January 2026, students worked with a gas sample, a cooling investigation, electrochemistry and neutralization in written-response sets.

The reference-table tag can accompany a content or process tag. Adding percentages across these tags double counts items. The new chemistry exam uses a different reference resource.

Eligible public forms • January 4 / June 5 / August 5

Worked responses and follow-up questions

1 Use a small reference table

At 85 °C ethanol is gas and water is liquid at equilibrium. Water's higher boiling point is consistent with stronger net intermolecular attractions. The supplied miniature table is an original practice aid.

If either is called solid, compare 85 with both melting temperatures.

2 Use electron accounting

Both have 17 protons and 18 neutrons. Electrons change from 17 to 18. An extra negative charge gives Cl^-. Its nucleus and isotope remain unchanged.

If mass number becomes 36, ask whether an electron changes the nuclear particle count.

3 Track a redox change

$Zn \rightarrow Zn^{2+} + 2e^-$ is oxidation. $Cu^{2+} + 2e^- \rightarrow Cu$ is reduction. Two electrons cancel. Zn is the reducing agent because it supplies the electrons that reduce copper ions.

If the oxidized species is called the oxidizing agent, ask which species supplied electrons to the other.

Average mapped multiple-choice slots per released form

Feature	January	June	August
Reference Tables / 2011 Edition	20.50	22.40	19.80
Standard 4 / Key Idea 3	37.00	36.20	39.20
Standard 4 / Key Idea 5	8.25	7.60	7.60

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Physical Setting/Chemistry

4 Check a mole ratio

3.0 mol H_2 needs 1.5 mol O_2, so H_2 limits. It produces 3.0 mol H_2O. Remaining O_2 is 0.5 mol. Coefficients compare amounts in moles.

If fewer moles automatically means limiting, calculate the amount needed for each partner.

5 Connect neutralization to quantity

$0.0250 \times 0.100 = 0.00250$ mol H^+. Equal moles OH^- are needed, giving $0.00250/0.0200 = 0.125$ mol/L. $H^+ + OH^- \rightarrow H_2O$.

If equal molarities are assumed, ask whether the reacting volumes are equal.

6 Read data before applying a rule

At 60 °C capacity is 100 g, so 90 g is unsaturated. At 20 °C capacity is 64 g. The excess $90 - 64 = 26$ g crystallizes. Quantities refer to mass of water, not total solution mass.

If the answer is 36 g, distinguish maximum initial capacity from the actual 90 g present.

Released practice for each week

Week 1 2026-06 • Q74 • Atoms and ions

Question booklet Official mapping / guide

Week 2 2026-08 • Q79 • Write a half-reaction

Question booklet Official mapping / guide

Week 3 2026-06 • Q79 • Solution concentration setup

Question booklet Official mapping / guide

Physical Setting/Physics

Original exam A, full-length form B and three-week preparation

Why these demands were selected

The five public June forms each have 85 scoring slots. June 2026 includes a spring graph, point charges, photon emission, a roller-coaster energy situation, a circuit and a light ray crossing an interface. Several numbered slots share one underlying prompt.

No public January or August form in this series in the five-year window. The engine supplies June descriptions and abstains from a seasonal estimate. A restricted administration is never treated as a zero.

Released forecast example **State design / administration guidance**

Original exam A

Four sets, 8 multiple-choice and 4 written responses. Suggested time: 35–50 min; adjust to local conditions. Each selected response earns one local point. Each written response earns one local point per numbered criterion on the key. Maximum 17 local points. Accept defensible alternative reasoning. Allow consistent follow-through where the local criterion assesses a new operation; annotate the originating error.

Full-length form B

Use the intact linked 2026-06 official booklet except 79. The insert preserves one response position and its maximum credit. Report the original-component subtotal and replacement result separately. State conversion charts are specific to the unmodified state form. Record prior exposure if students have used the released booklet in preparation.

Preparation and feedback

Use the six Studio sessions, then one new retrieval check per week. Use Form A as an independent transfer check after preparation. Form B is optional for full-length rehearsal. On return after absence, students can start with the re-entry line on the current week’s sheet. After testing, return to the first unsupported step in the student’s reasoning.

Physical Setting/Physics

Questions 1–6 • One point per selected response.

1 A • −2.0 m/s²
The change in velocity divided by time is (2 − 8)/3 = −2.

2 C • −4.0 N
F = ma = 2(−2) = −4 N.

3 Written response / 2 local points
1. Displacement = (8 + 2)/2 × 3 = +15 m because velocity remains positive.
2. ΔK = ½(2)(2² − 8²) = −60 J because the cart slows. Accept an equivalent calculation from work.

4 D • 2 A
The branch has 18 V across it, giving 18/9 = 2 A.

5 C • It stays the same.
The intact branch still has the full ideal battery voltage.

6 Written response / 3 local points
1. The 6 Ω branch carries 3 A and total current is 2 + 3 = 5 A.
2. R equivalent = 18/5 = 3.6 Ω.
3. Power = 18 × 5 = 90 W. When reviewing, record a consistent downstream use of an earlier value separately.

Physical Setting/Physics

Questions 7–12 • One point per selected response.

7 B • 27°
arcsin(sin 40°/1.40) ≈ 27°.

8 A • Frequency
The frequency is set by the source and remains continuous at the boundary.

9 Written response / 2 local points
1. $v = c/n = 2.14 \times 10^{8}$ m/s.
2. Show rays on opposite sides of the boundary, incident at 40° and refracted at about 27° to the same perpendicular normal, bent toward that normal.

10 D • 5.0 eV
The atom loses 5 eV; the emitted photon carries positive energy.

11 B • −1.0 → −3.0 → −6.0 eV
Two downward transitions can emit two photons, one at each step.

12 Written response / 2 local points
1. $E = 5(1.60 \times 10^{-19}) = 8.00 \times 10^{-19}$ J and $f = E/h \approx 1.21 \times 10^{15}$ Hz.
2. The two-step route emits 2 eV and 3 eV, totaling the direct photon's 5 eV; the individual photons have different frequencies.

Physical Setting/Physics

Replacement scoring and retrieval-check keys

Form B replacement / 79 / 1 credits maximum

Award one local point for a transmitted ray continuing downward and right, closer to the normal, with the 31° angle shown against the normal. A clearly labeled schematic is acceptable on this teacher-authored insert.

Public scoring materials for base form

Week 1 / retrieval check

Velocity changes from +4 to +10 m/s in 2 s. Compare acceleration and displacement for uniform acceleration.

+3 m/s² and +14 m, from slope and signed area respectively.

Week 2 / retrieval check

Across 12 V a branch draws 0.50 A. Find branch resistance and power.

24 Ω and 6 W.

Week 3 / retrieval check

A photon carries 3.0 eV. Is that photon energy positive or negative when emitted? Explain.

Photon energy is positive; the emitting atom undergoes a negative energy change.

Department follow-up

PHYS_LEG-C1 Recognize equivalent energy methods

What quantity does the area represent? How do N·m and joules relate?

PHYS_LEG-C2 Trace a carried-forward circuit result

Using your own resistance, show how you would calculate current. What changes if the resistance value is supplied?

PHYS_LEG-C3 Measure refraction from the normal

Mark zero on the protractor where it meets the normal. Which line is the reference for this angle?

Physical Setting/Physics

Use the independent exam only after practice, or document the order if using it diagnostically.

Which preparation sessions lead into each exam set?

A1 · Braking on a level track / Studio session(s) 1,2

A2 · A circuit on the bench / Studio session(s) 3

A3 · Refraction at a flat surface / Studio session(s) 4

A4 · Excited atoms and emitted light / Studio session(s) 5,6

Likely reading of a partial response to investigate

A ray angle is measured from the surface. Have the student draw the normal and label the reference angle before using a formula.

Bridge rehearsal / worked feedback

A cart slows uniformly from 5 to 1 m/s in 2 s. Does negative acceleration imply negative displacement?

No. Acceleration is -2 m/s² but mean velocity is $+3$ m/s and displacement is $+6$ m.

How to choose the next round

If the model or source was misread, return to the matching prep set and ask for a new representation. If the computation or claim is correct but support is missing, request one neutral explanation and give a parallel independent check. Keep the independent result separate from prompted work.

Physical Setting/Physics

Released form evidence

The five public June forms each have 85 scoring slots. June 2026 includes a spring graph, point charges, photon emission, a roller-coaster energy situation, a circuit and a light ray crossing an interface. Several numbered slots share one underlying prompt.

No public January or August form in this series in the five-year window. The engine supplies June descriptions and abstains from a seasonal estimate. A restricted administration is never treated as a zero.

Eligible public forms • January 0 / June 5 / August 0

Worked responses and follow-up questions

1 Get the slope and the area

Slope = 6/3 = 2 m/s². Area = average velocity times time = (2+8)/2 × 3 = 15 m. Acceleration is slope and displacement is signed area.

If 6 m is reported as displacement, ask what quantity has units of m/s before multiplying by time.

2 Compare net and individual forces

Weight downward and normal upward balance. Initial horizontal net 15 N gives +3.0 m/s². With pull removed, net −9 N gives −1.8 m/s² until conditions change. Negative acceleration need not mean negative velocity.

If friction is omitted after release, ask what still touches the sled.

3 Use a parallel-circuit check

Currents are 2 A and 4 A. Total 6 A. Equivalent resistance 12/6 = 2 Ω, less than either branch. The additional path increases conductance.

If resistances are added directly, label voltage across each individual branch.

Average mapped multiple-choice slots per released form

Feature	January	June	August
Standard 4 / 5.1	—	23.00	—
Standard 4 / 4.1	—	11.40	—
Standard 4 / 4.3	—	10.80	—

A dash marks an unavailable month. Rows can overlap. See seasonal_evidence.csv for counts, uncertainty and the full feature set.

Official design or administration guidance

Physical Setting/Physics

4 Follow light at a boundary

sin $\theta_2 = 0.5/1.5 = 1/3$, so $\theta_2 \approx 19.5°$. It bends toward the normal as its speed decreases in higher-index glass. Angles are measured to the normal.

If the result exceeds 30°, check which material light enters and the ratio in Snell's law.

5 Translate an energy-level change

The atom loses 3.0 eV, so a photon is emitted with positive energy 4.8×10^{-19} J. Frequency E/h ≈ 7.2×10^{14} Hz. Distinguish the atom's negative change from photon energy.

If the photon energy is negative, write the energy lost by the atom and gained by radiation separately.

6 Link graph, work and speed

Stored energy = ½(12)(0.20) = 1.2 J. Ideal speed = √(2 × 1.2/0.40) ≈ 2.45 m/s. Measured translational energy is 0.80 J; friction, wheel rotation or other transfers could account for the 0.40 J difference.

If the student uses 12 × 0.20, compare the varying force with a rectangular constant-force graph.

Released practice for each week

Week 1 2025-06 • Q69 • Momentum plotted over time

Question booklet **Official mapping / guide**

Week 2 2025-06 • Q63 • Refraction and angle measurement

Question booklet **Official mapping / guide**

Week 3 2024-06 • Q78 • Wave frequency

Question booklet **Official mapping / guide**