Physical Setting/Physics

Three calibration cases • Official criteria with hypotheses for anonymous local work

JUNE 2026 / Q55 / 1 credit criterion

Recognize equivalent energy methods

The guide illustrates spring energy using an elastic-energy equation or triangular area. Q55 and Q56 have a linked rule for errors in units.

Test this possibility. A student using the force-distance graph may understand the physics even when their notation differs from the equation exemplar.

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

Exam task Official scoring criterion · PDF p. 4

JUNE 2026 / Q73 / 1 credit criterion

Trace a carried-forward circuit result

The guide permits a calculation consistent with the prior equivalent resistance. Q73 and Q74 limit repeated penalties for unit errors.

Test this possibility. Several incorrect numerical answers may arise from one earlier resistance error.

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

Exam task Official scoring criterion · PDF p. 8

JUNE 2026 / Q79 / 1 credit criterion

Measure refraction from the normal

The guide accepts a refracted ray within two degrees of 27° from the normal.

Test this possibility. A drawing error may come from measuring against the surface, or from placing the protractor inaccurately.

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

Exam task Official scoring criterion · PDF p. 10

Physical Setting/Physics

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

PHYS_LEG-3 / Use a parallel-circuit check

Two resistors of 6 Ω and 3 Ω are connected in parallel across an ideal 12 V source. Find branch currents and total current. Infer equivalent resistance and check whether its size is sensible.

Focal request

A learner first writes an incorrect equivalent resistance of 9 Ω for the parallel network. Look only at the following current calculation, then return to the circuit model.

Response A

Using my 9 Ω value, I = 12 V / 9 Ω = 1.33 A.

Response B

The branches are 2 A and 4 A. Total current is 6 A, which gives 12 V / 6 A = 2 Ω.

What the pair distinguishes

A uses Ohm’s law consistently with a wrong upstream value. B also models the parallel branches correctly. When coding local learning, distinguish the circuit error from downstream reasoning. For an official item follow its own carry-forward provisions.

A fresh transfer check

Give 2 Ω as the equivalent resistance. Ask the learner to recalculate total current and explain why the equivalent resistance is below 3 Ω.

Evidence of transfer

Calculates 6 A using the supplied value, then explains the extra current path independently.