Checking a Reading With an Internal Reference

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Checking a Reading With an Internal Reference

Question 1

Choice (3)

The reference changes from 10 to 15 with the same amount present, giving a multiplier of 15/10 = 1.5.

Question 2

Divide its raw reading of nine by the common multiplier of 1.5. The corrected reading is six, the same as P.

Question 3

The reference also reads 1.5 times higher in Q despite its unchanged amount. Under the common-multiplier model, correcting Q’s dye reading removes the difference.

Question 4

The dye changes by a factor of 9/6 = 1.5, while the reference changes by 12/10 = 1.2. A single correction factor cannot account for both. Dividing the dye reading by the reference factor would give 7.5 instead of the standard reading of six.