Separating Reaction Time From Detector Delay

Scoring guide · one credit per question · review written work against each rubric

Separating Reaction Time From Detector Delay

Question 1

Choice (3)

Q’s display at 30 s shows the measurement from 20 s.

Question 2

At actual 10 s it had 6 mL, and at actual 30 s it had 15 mL. The average is (15 − 6)/(30 − 10) = 0.45 mL/s.

Question 3

P at displayed 30 s reads 15 mL. Q at displayed 40 s reads 15 mL, which is its measurement from actual time 30 s. The same amount had been produced at that point in both reactions.

Question 4

Record when the immediate sensor first displays the volume change and when the third sensor first displays that same change. Subtract the earlier time from the later time. Using the known time of the sudden change in place of the immediate reading also works.