Separating Ink Spots in Two Directions

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

Separating Ink Spots in Two Directions

Question 1

Choice (3)

B and C both move 0.75 of solvent 1’s travel distance, so a test using only that solvent cannot separate them.

Question 2

The upper spot is 6.0 cm right and 3.0 cm up. The fractions are 6.0/8.0 = 0.75 and 3.0/4.0 = 0.75, which identify dye C.

Question 3

The lower spot moves 6.0/8.0 = 0.75 to the right and 1.0/4.0 = 0.25 upward. That pair identifies B. A would move only 2.0 cm to the right and would be 3.0 cm up.

Question 4

Dye A would appear 2.0 cm to the right and 3.0 cm up. A and C both move 0.75 of solvent 2’s travel, so their spots would be at the same height.