Checking Bond Orders in Equal-Atom Mixtures

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

Checking Bond Orders in Equal-Atom Mixtures

Question 1

Choice (3)

Each mixture has two molecules with two carbon atoms each. P has 6 + 2 = 8 hydrogen atoms, and Q has 4 + 4 = 8.

Question 2

P takes two H_2 molecules for its triple bond and none for its single bond. Q takes one for each of its two double bonds. Each takes two.

Question 3

The two H_2 molecules could fit either mixture. The triple-bond signal fits P, which contains a triple-bond molecule. Q has only double-bond molecules.

Question 4

Draw H–C≡C–H. Show one hydrogen attached to each carbon and three bonds between the carbons. Accept an equivalent labeled bond model.