Redrawing Carbon Bonds After Hydrogen Addition

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

Redrawing Carbon Bonds After Hydrogen Addition

Question 1

Before there are two carbons and four hydrogens in ethene, plus two hydrogens in H_2. After there are two carbons and six hydrogens. Both sides contain two C atoms and six H atoms.

Question 2

Choice (1)

The two lines between carbon atoms before the reaction become one line afterward.

Question 3

Three single C–H bonds give three shared pairs around each carbon. A double C–C bond would add two more, giving five rather than four. Draw a single C–C bond so each carbon has four shared pairs.

Question 4

Atoms are conserved in both an incomplete and a complete reaction. A separate H_2 molecule is evidence that some hydrogen is still unreacted. Total atom counts cannot show how many atoms are in product bonds.