Following Carbon While the Gas Count Falls

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

Following Carbon While the Gas Count Falls

Question 1

Choice (2)

The CO count decreases from 12 to 4.

Question 2

Eight CO molecules react. One O_2 is used for every two CO, so four O_2 react. The final O_2 count is 10 − 4 = 6.

Question 3

CO and CO_2 each contain one C. Before there are 12 + 8 = 20 carbon atoms. After there are 4 + 16 = 20.

Question 4

The total molecule count falls from 30 to 26 because each reaction event combines three gas molecules into two. The final pressure is 100 × 26/30, or 87 kPa. Carbon atoms are conserved in the remaining CO and CO_2.