Reading Two Meanings of an Oxide Formula

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

Reading Two Meanings of an Oxide Formula

Question 1

Choice (1)

Each group in S is internally bonded but separate from the other groups. The linked pattern in T continues beyond the drawing.

Question 2

Each of the four oxygen atoms attached to a silicon is shared between two silicon atoms. Counting each shared oxygen once gives four halves, or two oxygen atoms per silicon overall.

Question 3

The two groups in S are two separate molecules. The one connected region in T is a piece of a network whose bonds continue outside the view. Counting that region as one SiO_2 molecule confuses a network formula ratio with a discrete particle.

Question 4

The cropped view includes some oxygen atoms that bridge to silicon atoms outside the image. It can count those oxygen atoms without their second silicon neighbors, so the visible ratio can exceed the full-network ratio.