

# Competition Corner: Biomolecule Model Bounds

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Use only printed chain cards. Apply the stated linear counting rule, distinguish connectivity from biological behavior, and do not make health, nutrition, medical, or pharmaceutical claims.

1. A linear model has 12 nucleotide-unit markers. Predict adjacent-link positions and explain the counting rule.
2. Card X has 5 amino-acid-residue markers and card Y has 5 monosaccharide-unit markers. State one representational similarity and two reasons their real biological behavior cannot be assumed to match.
3. Critique: “Because a model has more unit markers, it must be biologically more important.” Replace it with a bounded statement.
4. A card labels an ordered amino-acid sequence but shows no folded shape. Name two kinds of additional evidence needed before claiming a real biological function.
5. Explain why a classroom biochemical chain card should not be used as medical, nutrition, or pharmaceutical guidance, even when its connectivity count is correct.