Rna def

RNA is made up of strands of four different bases that match up in specific ways.
The bases are elements of the set $B = \{\texttt{A}, \texttt{C}, \texttt{G}, \texttt{U}\}$.

Definition The set of RNA strands S is defined (recursively) by:

$$\begin{array}{ll} \text{Basis Step:} & \texttt{A} \in S, \texttt{C} \in S, \texttt{U} \in S, \texttt{G} \in S \\ \text{Recursive Step:} & \text{If } s \in S \text{ and } b \in B, \text{ then } sb \in S \end{array}$$

where sb is string concatenation.

Examples:

To define a set we can use the **roster method**, the **set builder notation**, and also ...
New! Recursive Definitions of Sets: The set S (pick a name) is defined by:

$$\begin{array}{ll} \text{Basis Step:} & \text{Specify finitely many elements of } S \\ \text{Recursive Step:} & \text{Give a rule for creating a new element of } S \text{ from known values existing in } S, \\ & \text{and potentially other values.} \end{array}$$

The set S then consists of all and only elements that are put in S by finitely many (a nonnegative integer number) of applications of the recursive step after the basis step.