A student of mathematics in ancient Egypt (2000-1800 B.C.) would have used only unit fractions ( $1 / \mathrm{n}$ ) to express fractional quantities, such as $1 / 10+1 / 5$ instead of $3 / 10$.

Unit fractions themselves can be expressed as the sum of other unlike unit fractions. Look for patterns that will help you write formulas.

| $1 / 2=1 / 3+1 / 6$ | $1 / 4=1 / 12+1 / 6$ | $1 / 6=1 / 24+1 / 8$ |
| :---: | :---: | :---: |
| $1 / 3=1 / 4+1 / 12$ | $1 / 6=1 / 18+1 / 9$ | $1 / 9=1 / 36+1 / 12$ |
| $1 / 4=\ldots+$ | $1 / 8=\ldots+$ | $1 / 12=\ldots+$ |
| $1 / 5=\ldots+$ | $1 / 10=\ldots+$ | $1 / 15=\ldots+$ |

Use the patterns you found to express $1 / 24$ as the sum of two unit fractions in three ways.
Create a formula or set of rules for writing any unit fraction as a sum of unit fractions.
Submit your data and write a paragraph on your conclusions.

