

This book has permission to use the "N&K method of COLORS".

Examples: Adding & Subtracting; Involving Integers & Fractions

**Traditional method** (Involves multiplication using big numbers; Error prone)

$$\begin{array}{r}
 9 \quad - \frac{699}{701} \\
 (9) \quad - \frac{699}{701} \\
 (9 \times 1) \quad - \frac{699}{701} \\
 (9 \times 1) \quad - \frac{699}{701} \\
 (9 \times \frac{1}{1}) \quad - \frac{699}{701} \\
 (9 \times \frac{701}{701}) \quad - \frac{699}{701} \\
 \frac{9 \times 701}{701} \quad - \frac{699}{701} \\
 \frac{6309}{701} \quad - \frac{699}{701} \\
 \frac{6309}{701} \quad - \frac{699}{701} \\
 \hline
 701 \\
 \frac{5610}{701} \\
 8 \frac{2}{701}
 \end{array}$$

**Alternate method** (Simpler; NO multiplication using big numbers; NOT error prone)

$$\begin{array}{r}
 9 \quad - \frac{699}{701} \\
 (9) \quad - \frac{699}{701} \\
 (8 + 1) \quad - \frac{699}{701} \\
 (8 + 1) \quad - \frac{699}{701} \\
 (8 + \frac{1}{1}) \quad - \frac{699}{701} \\
 (8 + \frac{701}{701}) \quad - \frac{699}{701} \\
 8 + \frac{701}{701} \quad - \frac{699}{701} \\
 8 + \frac{2}{701} \\
 8 \frac{2}{701}
 \end{array}$$

**Traditional Method**

$$\begin{array}{r}
 9 \quad - \quad 7 \frac{699}{701} \\
 (9 \times 1) \quad - \quad 7 \frac{699}{701} \\
 (9 \times \frac{1}{1}) \quad - \quad 7 \frac{699}{701} \\
 (9 \times \frac{701}{701}) \quad - \quad 7 \frac{699}{701} \\
 (\frac{9 \times 701}{701}) \quad - \quad 7 \frac{699}{701} \\
 \frac{9 \times 701}{701} \quad - \quad \frac{(7 \times 701) + 699}{701} \\
 \frac{6309}{701} \quad - \quad \frac{(4907) + 699}{701} \\
 \frac{6309}{701} \quad - \quad \frac{4907 + 699}{701} \\
 \frac{6309}{701} \quad - \quad \frac{5606}{701} \\
 \frac{6309}{701} \quad - \quad 5606 \\
 \hline
 701 \\
 \frac{703}{701} \\
 1 \frac{2}{701}
 \end{array}$$

**Alternate Method**

$$\begin{array}{r}
 9 \quad - \quad 7 \frac{699}{701} \\
 (9) \quad - \quad (7 \frac{699}{701}) \\
 (2 + 7) \quad - \quad (7 + \frac{699}{701}) \\
 2 + 7 \quad - \quad 7 - \frac{699}{701} \\
 (2) \quad - \quad \frac{699}{701} \\
 (1 + 1) \quad - \quad \frac{699}{701} \\
 1 + \frac{1}{1} \quad - \quad \frac{699}{701} \\
 1 + \frac{701}{701} \quad - \quad \frac{699}{701} \\
 1 + \frac{701}{701} \quad - \quad 699 \\
 1 + \frac{2}{701} \\
 1 \frac{2}{701}
 \end{array}$$