Math Manipulative for High Schoolers?

- Teaching new concepts using a new notation (logarithms)
- Managing complexity by reducing concepts to a familiar form
Addition (no sweat)

\[2 + 3 = 5\]
Multiplication (ok)

\[2 \times 3 = 6\]
Logarithms (oh no!)

New type of rulers

New notation
Logarithms (Easy!)

\[ 2 \times 3 = 6 \]

\[ 10^0 = 1 \quad 10^1 = 10 \]

\[ 2 = 10^{0.301} \quad 3 = 10^{0.477} \]

\[ 2 \times 3 = 10^{0.301} \times 10^{0.477} = 10^{0.778} = 6 \]

\[ \log 2 + \log 3 = 0.301 + 0.477 = 0.778 \]
Adding (no sweat!)

\[ 2 \times 3 = 6 \]

Multiplying by adding

http://www.ies.co.jp/math/java/misc/slide_rule/slide_rule.html