

# CALCULUS

## Functions and expressions

### NEW

NEW 0020-1. Compute  $[(9/5)C + 32]_{C:\rightarrow 100}$ .

NEW 0020-2. Compute  $[(9/5)C + 32]_{\substack{C:\rightarrow 55 \\ C:\rightarrow 40}}$ .

NEW 0020-3. Compute  $[(9/5)x + 2,770,000]_{\substack{x:\rightarrow 55 \\ x:\rightarrow 40}}$ .

NEW 0020-4. Let  $f(x) = \sqrt[3]{x + 5}$ ,  $g(x) = x^3 / (x + 2)$ .

- Find the domain of  $f$ .
- Find the domain of  $g$ .
- Find the domain of  $f + g$ .
- Find the domain of  $fg$ .
- Find the domain of  $f/g$ .
- Find the domain of  $g/f$ .

0020-5. Collect terms in  
NEW

$$-3x^4 - 7x^3 + 4 - x + 3x - 2 + 8x - 6x^5 - 7x^3 + 5x^4$$

and display this polynomial  
with terms in increasing degree.

0020-6. Solve for  $x$  in:  
NEW

$$\frac{2x + 3 - 8x}{2} = -5(7 + 3x + 3)$$