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**Key points about mathematical functions in Unix shell:**

* expr command:
  + Used for simple arithmetic operations like addition, subtraction, multiplication, and division.
  + Syntax: expr operand1 operator operand2
  + Requires escaping special characters like the multiplication symbol (\\*)
  + Considered less efficient than arithmetic expansion due to forking a new process
* Arithmetic expansion ($(( ))):
  + Preferred method for most calculations in modern shells like Bash
  + Allows direct calculation within the shell script without needing a separate command
  + Syntax: $(( expression ))

Example usage:

Addition with expr.

|  |
| --- |
| result=`expr 5 + 3`  echo $result # Outputs: 8 |

Multiplication with arithmetic expansion.

|  |
| --- |
| total=$(( 10 \* 2 ))  echo $total # Outputs: 20 |









































