APL Monadic functions

| **Name(s)** | **Notation** | **Meaning** |
| --- | --- | --- |
| Roll | ?B | One integer selected randomly from the first *B* integers |
| [Ceiling](https://en.wikipedia.org/wiki/Floor_and_ceiling_functions) | ⌈B | Least integer greater than or equal to *B* |
| [Floor](https://en.wikipedia.org/wiki/Floor_and_ceiling_functions) | ⌊B | Greatest integer less than or equal to *B* |
| Shape, [Rho](https://en.wikipedia.org/wiki/Rho) | ⍴B | Number of components in each dimension of *B* |
| [Not](https://en.wikipedia.org/wiki/Negation), [Tilde](https://en.wikipedia.org/wiki/Tilde) | ∼B | Logical: ∼1 is 0, ∼0 is 1 |
| [Absolute value](https://en.wikipedia.org/wiki/Absolute_value) | ∣B | Magnitude of *B* |
| Index generator, [Iota](https://en.wikipedia.org/wiki/Iota) | ⍳B | Vector of the first *B* integers |
| [Exponential](https://en.wikipedia.org/wiki/Exponentiation) | ⋆B | e to the *B* power |
| [Negation](https://en.wikipedia.org/wiki/Negation) | −B | Changes sign of *B* |
| [Signum](https://en.wikipedia.org/wiki/Sign_function) | ×B | ¯1 if *B*<0; 0 if *B*=0; 1 if *B*>0 |
| [Reciprocal](https://en.wikipedia.org/wiki/Multiplicative_inverse) | ÷B | 1 divided by *B* |
| Ravel, Catenate, Laminate | ,B | Reshapes *B* into a vector |
| [Pi](https://en.wikipedia.org/wiki/Pi) times | ○B | Multiply by π |
| Grade up | ⍋B | Indices of *B* which will arrange *B* in ascending order |
| Grade down | ⍒B | Indices of *B* which will arrange *B* in descending order |
| [Factorial](https://en.wikipedia.org/wiki/Factorial) | !B | Product of integers 1 to *B* |

APL Dyadic functions

| **Name(s)** | **Notation** | **Meaning** |
| --- | --- | --- |
| [Add](https://en.wikipedia.org/wiki/Addition), [Subtract](https://en.wikipedia.org/wiki/Subtraction), [Multiply](https://en.wikipedia.org/wiki/Multiply), [Divide](https://en.wikipedia.org/wiki/Division_(mathematics)) | A+B, A−B, A×B, A÷B | What you expect |
| [Exponentiation](https://en.wikipedia.org/wiki/Exponentiation) | A⋆B | *A* raised to the *B* power |
| Deal | A?B | *A* distinct integers selected randomly from the first *B* integers |
| Membership, Epsilon | A∈B | 1 for elements of *A* present in *B*; 0 where not. |
| [Maximum](https://en.wikipedia.org/wiki/Sample_maximum_and_minimum), Ceiling | A⌈B | The greater value of *A* or *B* |
| [Minimum](https://en.wikipedia.org/wiki/Sample_maximum_and_minimum), Floor | A⌊B | The smaller value of *A* or *B* |
| Reshape, Dyadic [Rho](https://en.wikipedia.org/wiki/Rho) | A⍴B | Array of shape *A* with data *B* |
| Take | A↑B | Select the first (or last) *A* elements of *B* according to ×*A* |
| Drop | A↓B | Remove the first (or last) *A* elements of *B* according to ×*A* |
| Decode | A⊥B | Value of a polynomial whose coefficients are *B* at *A* |
| Encode | A⊤B | Base-*A* representation of the value of *B* |
| [Residue](https://en.wikipedia.org/wiki/Modulo_operation) | A∣B | *B* modulo *A* |
| Catenation | A,B | Elements of *B* appended to the elements of *A* |
| Expansion, Dyadic Backslash | A\B | Insert zeros (or blanks) in *B* corresponding to zeros in *A* |
| Compression, Dyadic Slash | A/B | Select elements in *B* corresponding to ones in *A* |
| Index of, Dyadic [Iota](https://en.wikipedia.org/wiki/Iota) | A⍳B | The location (index) of *B* in *A*; 1+⍴A if not found |
| Combinations | A!B | Number of combinations of *B* taken *A* at a time |
| Diaeresis, Dieresis, Double-Dot | A¨B | Over each, or perform each separately; *B* = on these; *A* = operation to perform or using(e.g. iota) |
| Less than, Less than or equal, Equal, etc. | A<B, A≤B, A=B | Comparison: 1 if true, 0 if false |
| Not equal | A≠B | Comparison: 1 if true, 0 if false |
| [Or](https://en.wikipedia.org/wiki/Logical_disjunction) | A∨B | Boolean Logic: **0**(False) if **both** *A* and *B* = **0**, 1 otherwise. Alt: **1**(True) if *A* **or** *B* = **1**(True) |
| [And](https://en.wikipedia.org/wiki/Logical_conjunction) | A∧B | Boolean Logic: **1**(True) if **both** *A* **and** *B* = **1**, 0(False) otherwise |
| [Nor](https://en.wikipedia.org/wiki/Logical_NOR) | A⍱B | Boolean Logic: 1 if both *A* and *B* are 0, otherwise 0. Alt: ~∨ = not Or |
| [Nand](https://en.wikipedia.org/wiki/Sheffer_stroke) | A⍲B | Boolean Logic: 0 if both *A* and *B* are 1, otherwise 1. Alt: ~∧ = not And |