

0. APL "scalar" functions $+$ $-$ \times \div \lfloor \lceil $|$ $*$ \otimes \circ ... are defined on single values and generalize in a uniform way to arrays of arbitrary shape and depth.

1. We usually assign both a monadic and dyadic function to each of the primitive symbols.

2. APL uses dyadic circle for 25 primitive circle (trig) functions

```
...
-2o arccos
-1o arcsin
0o sqrt(1-n^2)
1o sin
2o cos
...
```

3. A monadic use of Pi-times gives some pleasing expressions:

```
1 2 3o÷6 3 4    A sin(pi/6), cos(pi/3), tan(pi/4)
0.5 0.5 1
```

A Engineer's proof that sin-squared + cos-squared = 1:

```
+/(1 2o.0o0.1×120)*2
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
```

John