

Real / Imaginary + . 0 0 0 GCD (Or)

<p><code>+.y</code> yields a two-element list of the real and imaginary parts of its argument. For example, <code>+.3j5</code> is <code>3 5</code>, and <code>+.3</code> is <code>3 0</code>.</p>	<p><code>x+.y</code> is the greatest common divisor of <code>x</code> and <code>y</code>. If the arguments are boolean (0 or 1), the functions <code>+. .</code> and <code>*. .</code> are equivalent to logical or and and. The function <code>-. .</code> similarly restricted is not.</p>
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```

]y=: i+2*j. i=: i.4
0 1j2 2j4 3j6
    
```

```

+. y
0 0
1 2
2 4
3 6
    
```

The greatest common divisor divides both of its arguments `x` and `y` to produce results that have no common factor, that is, the GCD of the quotients is 1. Moreover, these quotients represent the fraction `x%y` in lowest form. For example:

```

x=: 24 [ y=: 60
x;y;(x+.y);((x , y) % (x+.y))
+---+---+---+---+
|24|60|12|2 5|
+---+---+---+---+
    
```

```

lff=: , % +.      Gives lowest form of fraction
x;y;(x lff y);(%/x lff y);(%/x,y);(+./x lff y)
+---+---+---+---+
|24|60|2 5|0.4|0.4|1|
+---+---+---+---+
    
```

Since the functions `=|` and `=<.` (tests for non-negative and for integer) produce boolean results, the phrase `(=|)+.(=<.)` is a test for non-negative or integer:

```

(test=: (=|) +. (=<.) ) _2 _2.4 3 3.5
1 0 1 1
    
```

The duality of or and and may be shown as follows:

```

d (+./ i *.&.-./ i *. / i +.&.-./) d=: 0 1
+---+---+---+---+
|0 1|0 1|0 0|0 0|
|1 1|1 1|0 1|0 1|
+---+---+---+---+
    
```