

## Multi-language, multi-platform numerical test

[www.hydrometronics.com](http://www.hydrometronics.com)

platform >	HP laptop	Asus EeePC netbook	Udoo (quad core)	Beaglebone Black	Raspberry Pi
CPU >	i3-3120 dual 2.5 GHz	Atom N270 1.6 GHz	ARM Cortex-A9 1 GHz	ARM Cortex-A8 1 GHz	ARM11 700 MHz
OS+desktop >	Ubuntu 13.10 Unity	Mint 16 Xfce	Debian 7 LXDE	Debian 7 LXDE	Raspian LXDE
	seconds (version)	seconds (version)	seconds (version)	seconds (version)	seconds (version)
Matlab	0.34s (v13b)	1.69s (v12a)	Not Available	Not Available	Not Available
GCC C	0.38s (v4.8.1)	5.15s (v4.8.1)	1.74s (v4.6.3)	6.42s (v4.6.3)	4.21s (v4.6.3)
GFORTTRAN	0.39s (v4.8.1)	5.24s (v4.8.1)	1.74s (v4.6.3)	6.44s (v4.6.3)	4.26s (v4.6.3)
Go	0.66s (v1.2)	4.14s (v1.2)	9.05s (v1.2)	23.6s (v1.2)	26.1s (v1.2)
Julia	1.48s (v0.2.0)	8.6s (v0.2.0)	Not Available	Not Available	Not Available
Ruby	2.83s (v1.9.3)	21.6s (v1.9.3)	23.1s (v1.9.3)	52.7s (v1.9.1)	122s (v1.9.3)
Python 2	2.79s (v2.7.5)	23.6s (v2.7.5)	21.8s (v2.7.3)	56.6s (v2.7.3)	132s (v2.7)
Python 3	3.63s (v3.3.2)	32.4s (v3.3.2)	25.7s (v3.2.3)	70.3s (v3.2.3)	183s (v3.2)
R	9.96s (v3.0.1)	81.9s (v3.0.1)	89.3s (v2.15.1)	140s (v2.15.1)	493s (v2.15.1)
SciLab	25.6s (v5.4.1)	191s (v5.4.1)	183s (v5.3.3)	284s (v5.3)	1112s (v5.3.3)
Octave	37.2s (v3.6.4)	312s (v3.6.4)	357s (v3.6.2)	686s (v3.6.2)	2358s (v3.6.2)

### Pseudocode of test program (different syntax in each language)

```

product = 1
start timer
for 10000 iterations
  for 1 to 360 integer angles
    product = product * ( sin(angle)^2 + cos(angle)^2 )
  end inner for loop
end outer for loop
stop timer
report product (should be a number close to 1 ... and is in all cases)
report elapsed time (results above)
    
```