

$b = 2/\text{cm}^2$

$y = 274.93x^3 - 643.82x + 347.18$
 $R^2 = 0.9892$

| x | y |
|-----|------|
| 0.5 | -100 |
| 1.0 | -50 |
| 1.5 | 100 |
| 2.0 | 200 |
| 2.5 | 400 |
| 3.0 | 800 |
| 3.5 | 1400 |
| 4.0 | 2200 |

```

Intel(R) Xeon(R) Platinum 8163 CPU @ 2.50GHz
Intel(R) Xeon(R) Platinum 8163 CPU @ 2.50GHz
[Memory]:
528010348 kB
[Linux]:
Linux 00b363b30f93 4.15.0-29-generic #31~16.04.1-Ubuntu SMP Wed Jul 18 08:54:04 UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
[MAC]:
Ethernet HWaddr 02:42:ac:11:00:04
[Compiler]:
gcc (Ubuntu 4.8.4-2ubuntu1~14.04.4) 4.8.4
g++ (Ubuntu 4.8.4-2ubuntu1~14.04.4) 4.8.4
GNU Fortran (Ubuntu 4.8.4-2ubuntu1~14.04.4) 4.8.4
[Result]:
Success 164.gzip ratio=1006.29, runtime=139.124962
Success 175.vpr ratio=1237.37, runtime=113.143047
Success 176.gcc ratio=2355.56, runtime=46.698074
Success 181.mcf ratio=2554.61, runtime=70.460760
Success 186.crafty ratio=2599.97, runtime=38.462056
Success 197.parser ratio=1004.70, runtime=179.157164
Success 252.eon ratio=444.68, runtime=292.347780
Success 253.perlbmk ratio=2597.34, runtime=69.301644
Success 254.gap ratio=2955.91, runtime=37.213622
Success 255.vortex ratio=2314.62, runtime=82.086956
Success 256.bzip2 ratio=759.20, runtime=197.576573
Success 300.twolf ratio=1671.61, runtime=179.468097
Success 168.wupwise ratio=1057.78, runtime=151.259873
Success 171.swim ratio=1522.05, runtime=203.672362
Success 172.mgrid ratio=404.27, runtime=445.246005
Success 173.aplu ratio=607.92, runtime=345.437877
Success 177.mesa ratio=1608.40, runtime=87.042889
Success 178.galgel ratio=1525.93, runtime=190.048559
Success 179.art ratio=3951.36, runtime=65.000083
Success 183.quake ratio=1829.54, runtime=71.055941
Success 187.facerec ratio=1546.23, runtime=122.879866
Success 188.ammr ratio=1198.24, runtime=183.602608
Success 189.lucas ratio=2015.87, runtime=99.212962
Success 191.fma3d ratio=1415.91, runtime=148.314077
Success 200.sixtrack ratio=351.38, runtime=313.048859
Success 301.apsi ratio=830.51, runtime=313.060390

```

```

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GNU Fortran (Ubuntu 4.8.4-2ubuntu1~14.04.4) 4.8.4
[Result]:
Success 164.gzip ratio=1623.34, runtime=86.242005
Success 175.vpr ratio=2516.04, runtime=55.643003
Success 176.gcc ratio=3810.52, runtime=28.867484
Success 181.mcf ratio=3361.48, runtime=53.547835
Success 186.crafty ratio=3752.58, runtime=26.648318
Success 197.parser ratio=1940.80, runtime=92.745299
Success 252.eon ratio=4219.40, runtime=30.810040
Success 253.perlbmk ratio=3865.54, runtime=46.565328
Success 254.gap ratio=2915.03, runtime=37.735480
Success 255.vortex ratio=3854.29, runtime=49.295758
Success 256.bzip2 ratio=2079.98, runtime=72.116246
Success 300.twolf ratio=3223.01, runtime=93.080549
Success 168.wupwise ratio=4228.51, runtime=37.838359
Success 171.swim ratio=6119.05, runtime=50.661425
Success 172.mgrid ratio=2722.81, runtime=66.108086
Success 173.aplu ratio=4435.40, runtime=47.346341
Success 177.mesa ratio=4069.35, runtime=34.403534
Success 178.galgel ratio=7005.98, runtime=41.393198
Success 179.art ratio=9185.62, runtime=28.305120
Success 183.quake ratio=6222.77, runtime=20.891007
Success 187.facerec ratio=5141.70, runtime=36.952739
Success 188.ammr ratio=3704.84, runtime=59.381766
Success 189.lucas ratio=4940.36, runtime=40.482882
Success 191.fma3d ratio=4350.99, runtime=48.264903
Success 200.sixtrack ratio=1499.49, runtime=73.358264
Success 301.apsi ratio=4201.83, runtime=61.877788

```