

iniitalAnalysisQuantSeq

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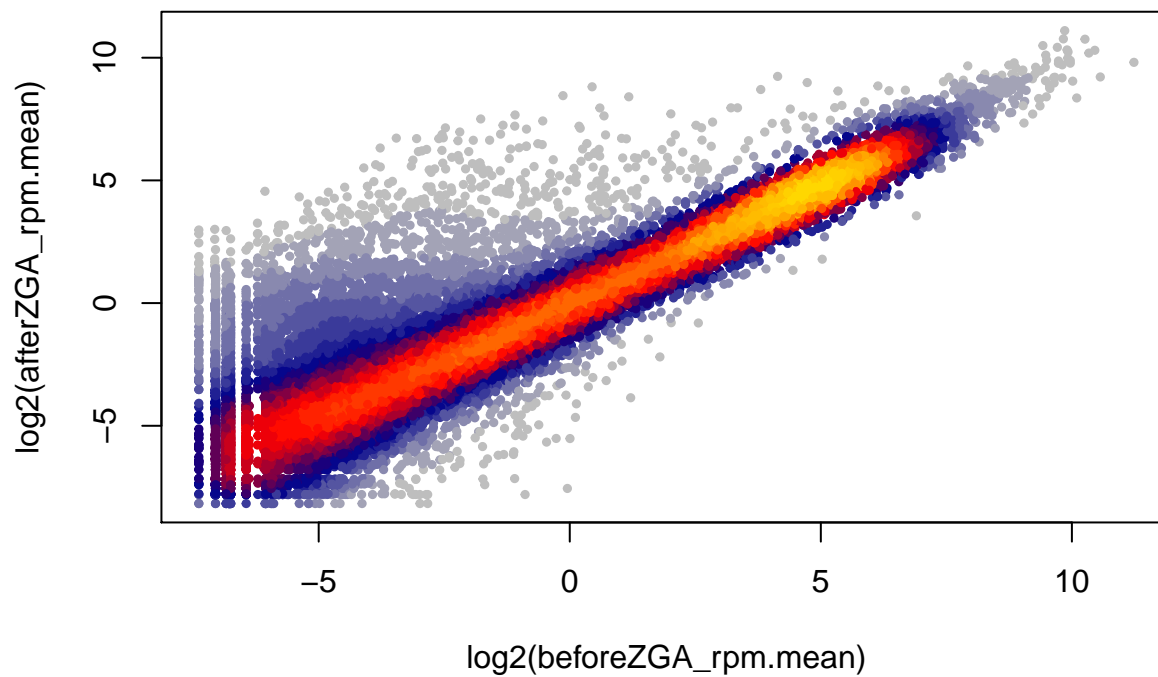
data

the data used involves:

1. SLAM seq time course
2. QuantSeq data for the UTR annotation

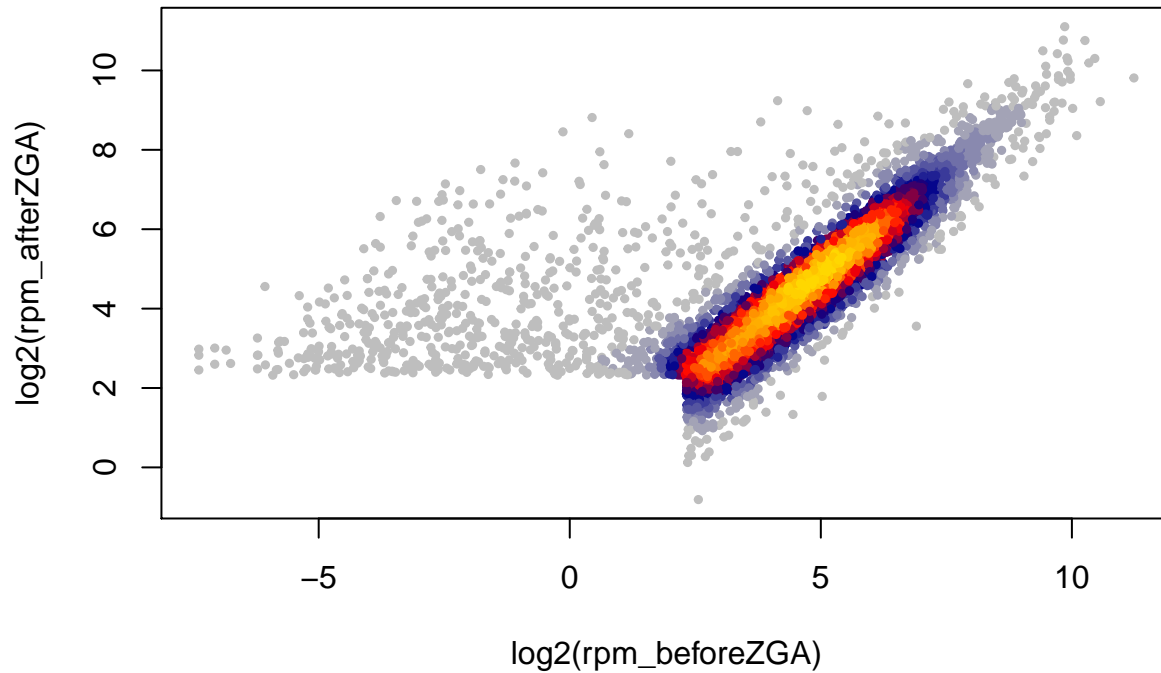
this script uses the ensembl annotation to look at the datasets.

heatscatter



```
##          0 30 65          105          140          170 names
## 34253 0  0  0  0.01748252 0.02530787 0.02382003 vent
```

Before–after above 5 RPM



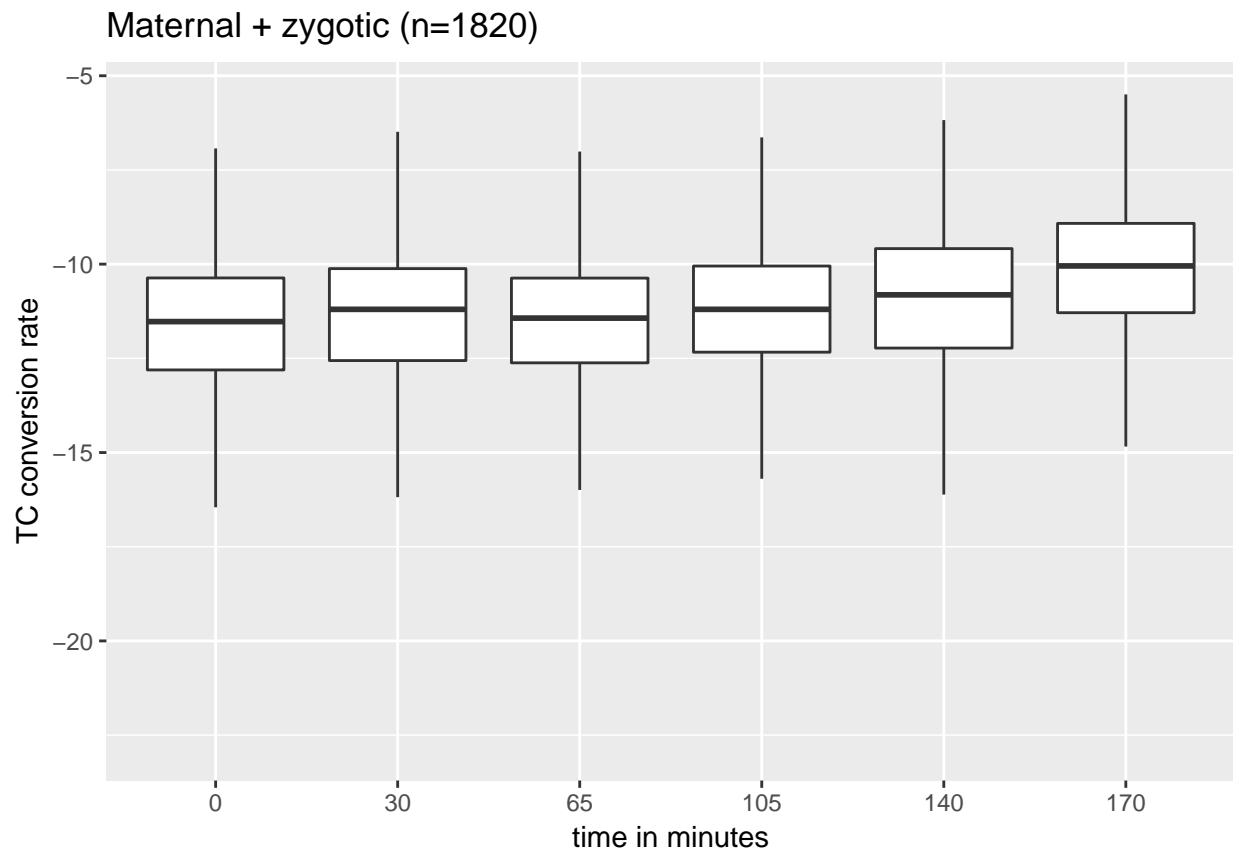
```
## Loading required package: org.Dr.eG.db
## Loading required package: AnnotationDbi
## Loading required package: stats4
## Loading required package: BiocGenerics
## Loading required package: parallel

##
## Attaching package: 'BiocGenerics'
## The following objects are masked from 'package:parallel':
##
##   clusterApply, clusterApplyLB, clusterCall, clusterEvalQ,
##   clusterExport, clusterMap, parApply, parCapply, parLapply,
##   parLapplyLB, parRapply, parSapply, parSapplyLB
## The following objects are masked from 'package:stats':
##
##   IQR, mad, sd, var, xtabs
## The following objects are masked from 'package:base':
##
##   anyDuplicated, append, as.data.frame, cbind, colMeans,
##   colnames, colSums, do.call, duplicated, eval, evalq, Filter,
##   Find, get, grep, grepl, intersect, is.unsorted, lapply,
##   lengths, Map, mapply, match, mget, order, paste, pmax,
##   pmax.int, pmin, pmin.int, Position, rank, rbind, Reduce,
##   rowMeans, rownames, rowSums, sapply, setdiff, sort, table,
##   tapply, union, unique, unsplit, which, which.max, which.min
```

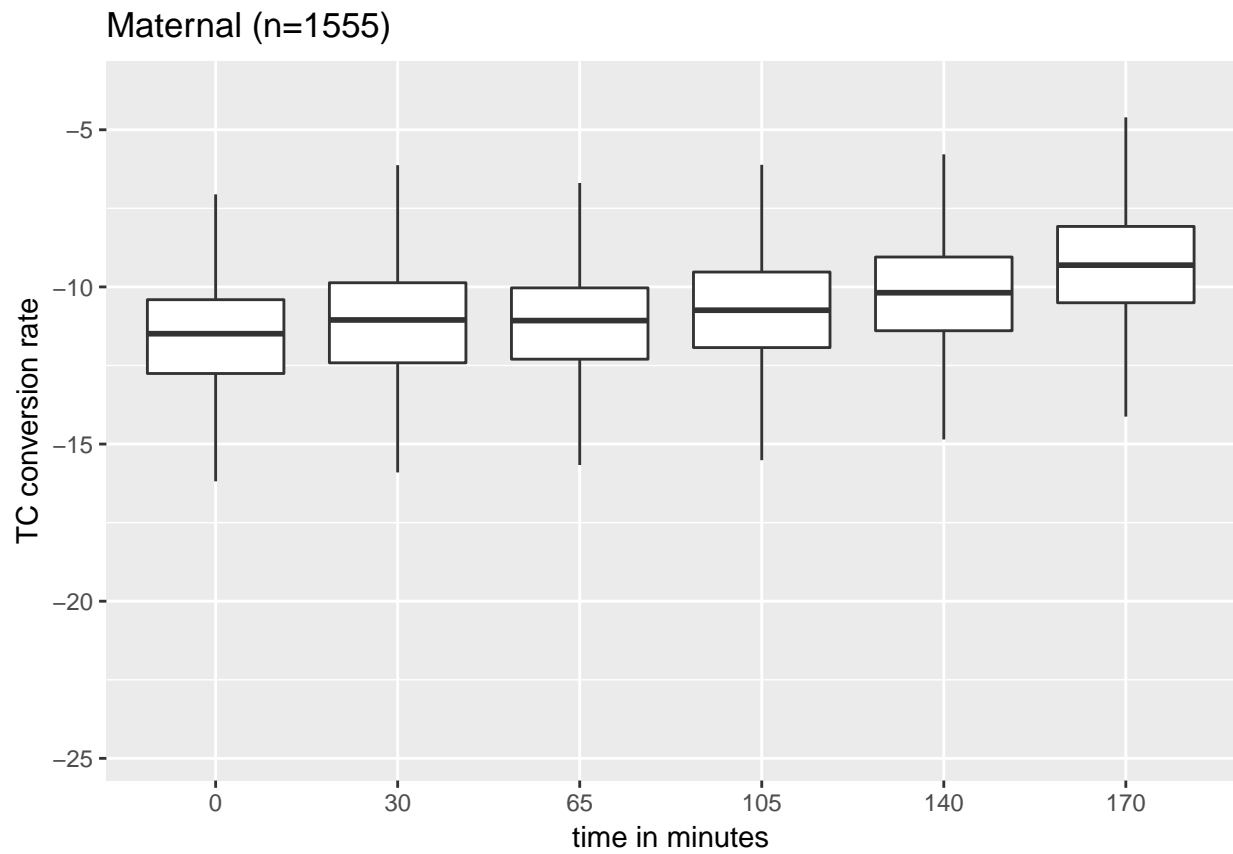
```

## Loading required package: Biobase
## Welcome to Bioconductor
##
##     Vignettes contain introductory material; view with
##     'browseVignettes()'. To cite Bioconductor, see
##     'citation("Biobase")', and for packages 'citation("pkgname)".
## Loading required package: IRanges
## Loading required package: S4Vectors
##
## Attaching package: 'S4Vectors'
## The following object is masked from 'package:base':
##
##     expand.grid
##
## [1] "ACCNUM"      "ALIAS"       "ENSEMBL"     "ENSEMBLPROT"
## [5] "ENSEMBLTRANS" "ENTREZID"    "ENZYME"      "EVIDENCE"
## [9] "EVIDENCEALL"  "GENENAME"    "GO"          "GOALL"
## [13] "IPI"         "ONTOLOGY"    "ONTOLOGYALL" "PATH"
## [17] "PFAM"        "PMID"        "PROSITE"     "REFSEQ"
## [21] "SYMBOL"      "UNIGENE"     "UNIPROT"     "ZFIN"
## 'select()' returned 1:many mapping between keys and columns
##
## 'select()' returned many:1 mapping between keys and columns
##
## Attaching package: 'reshape'
## The following objects are masked from 'package:S4Vectors':
##
##     expand, rename
## Using as id variables
## Using as id variables
## Using as id variables
## Warning: Removed 5124 rows containing non-finite values (stat_boxplot).

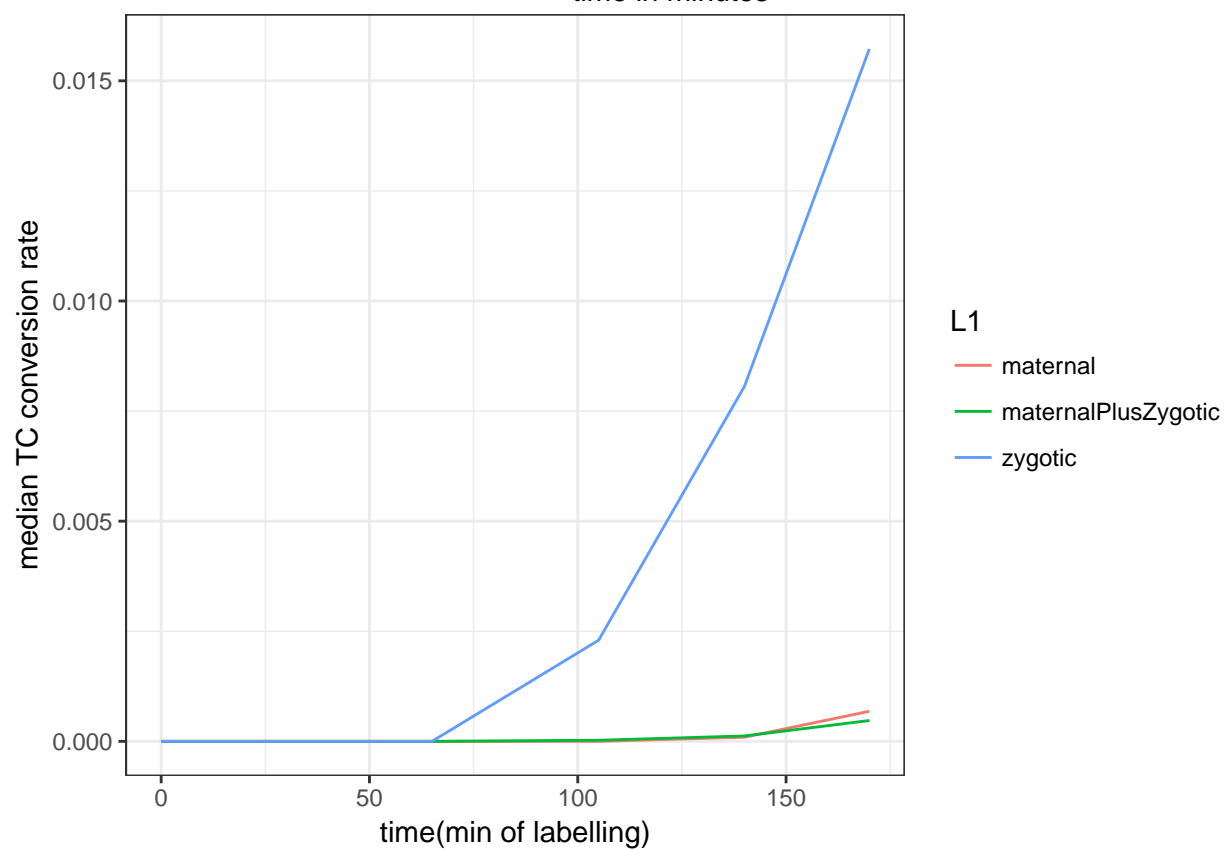
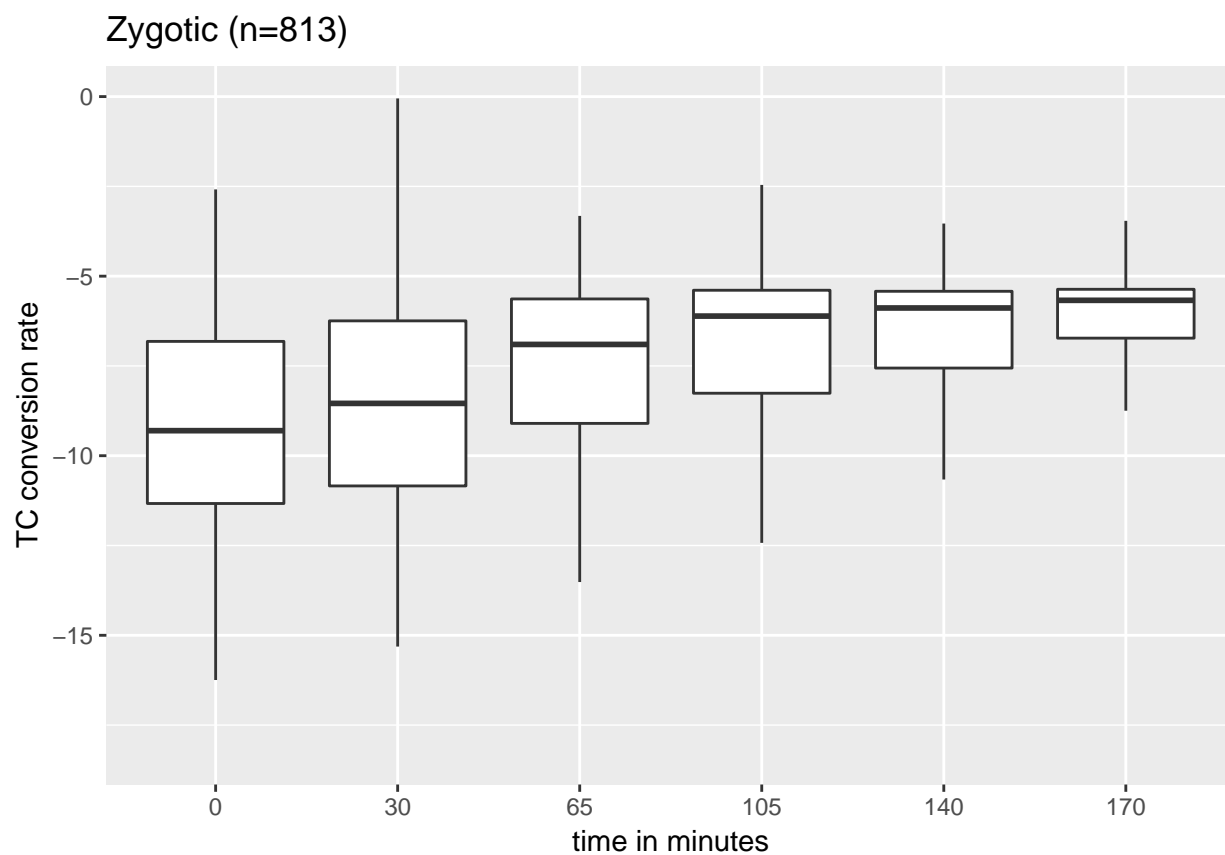
```

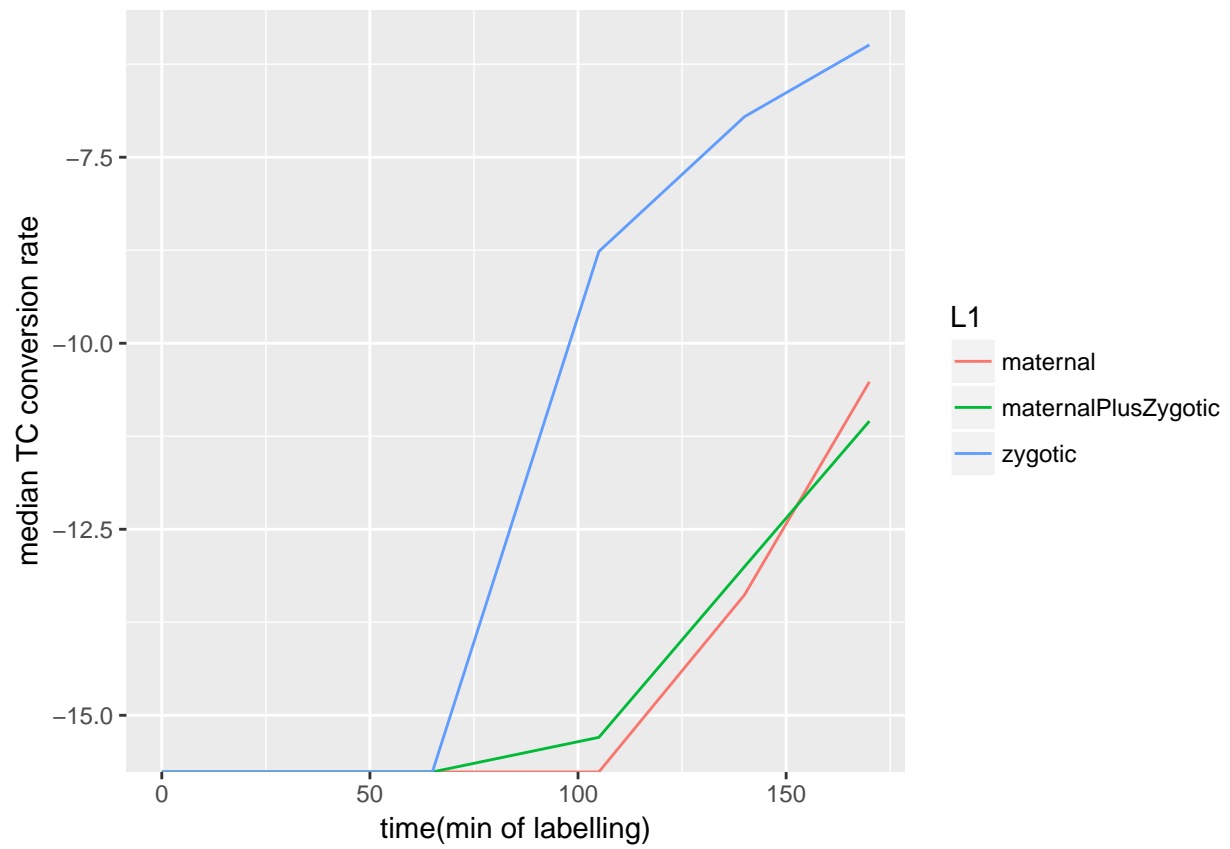


Warning: Removed 4608 rows containing non-finite values (stat_boxplot).

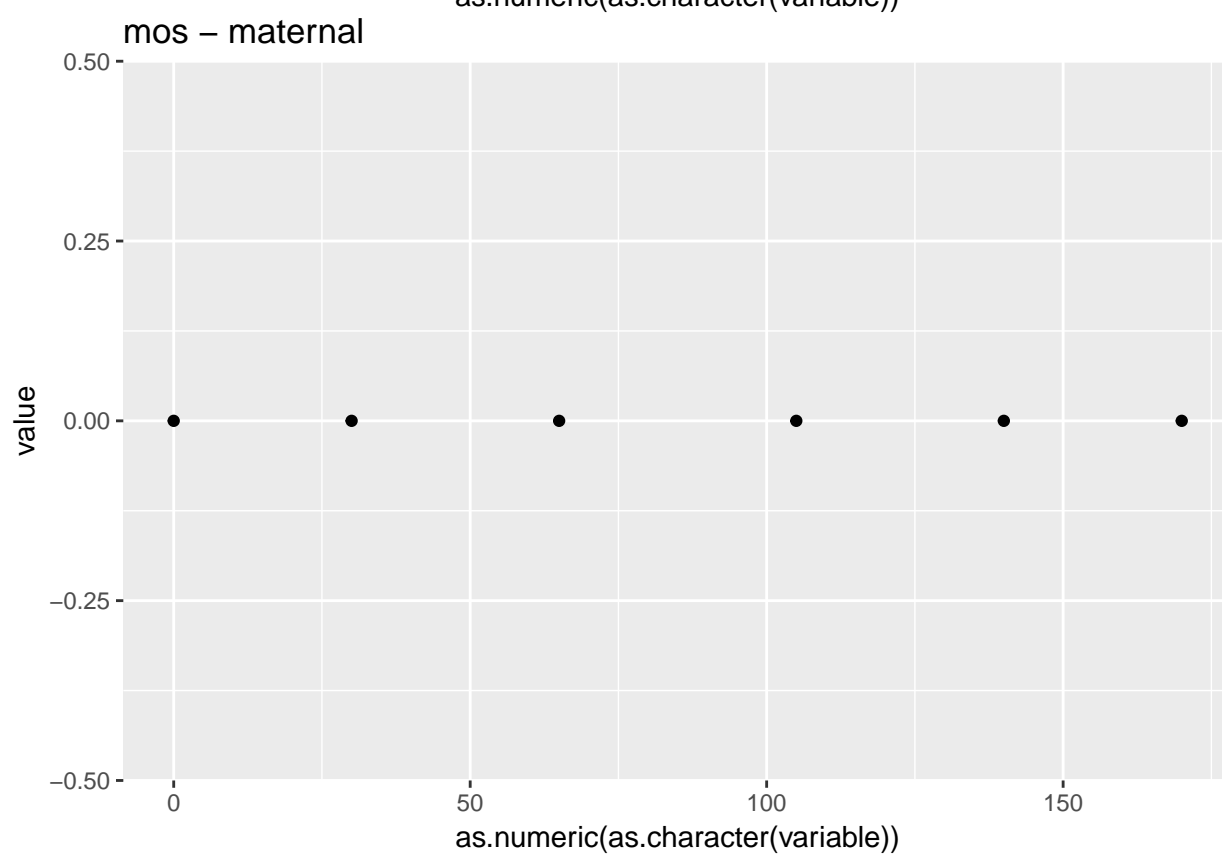
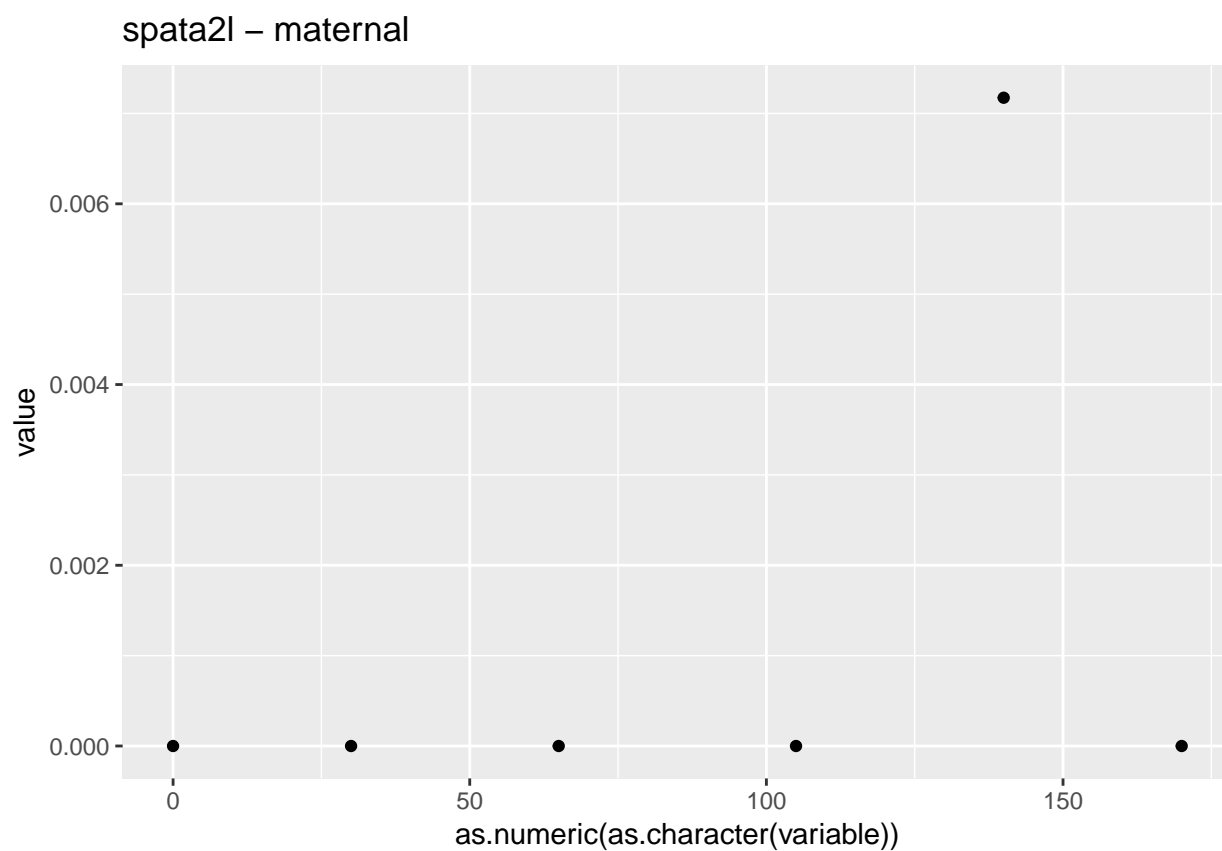


Warning: Removed 2405 rows containing non-finite values (stat_boxplot).

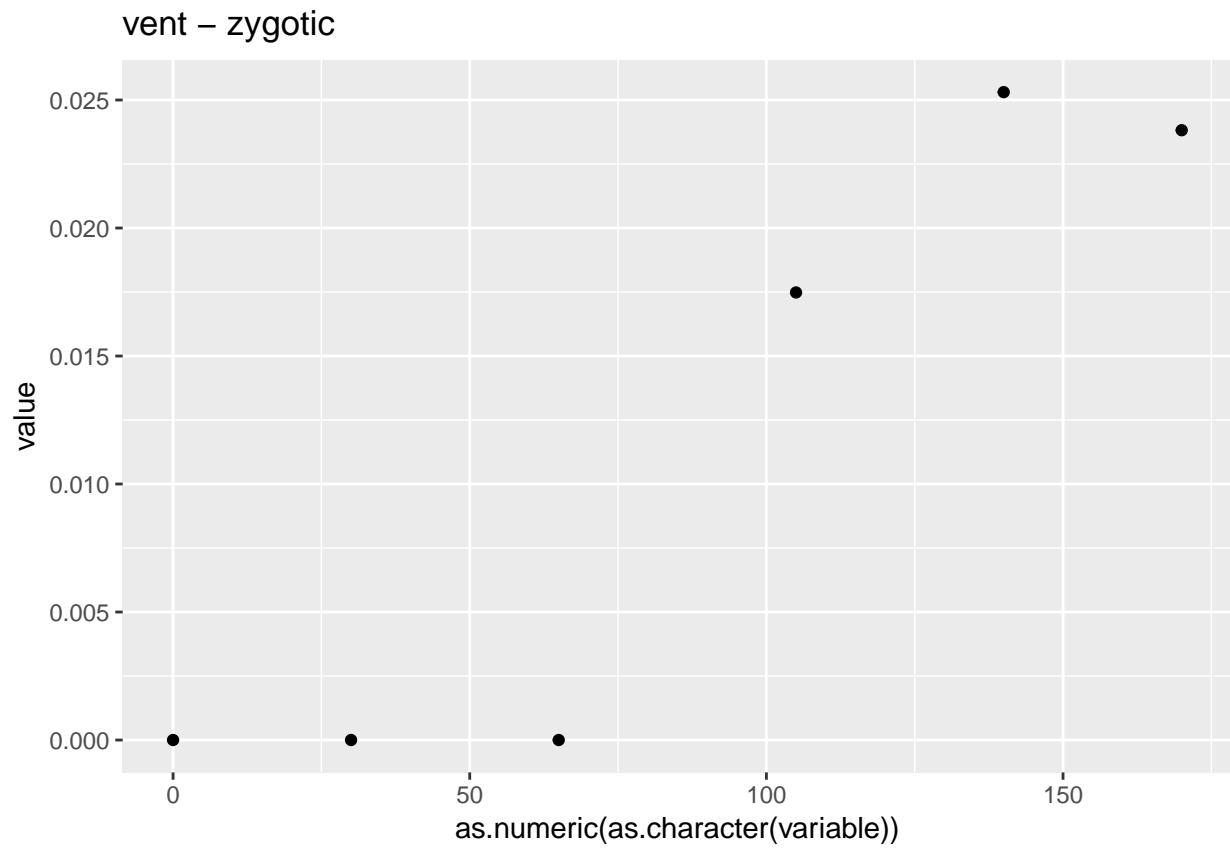




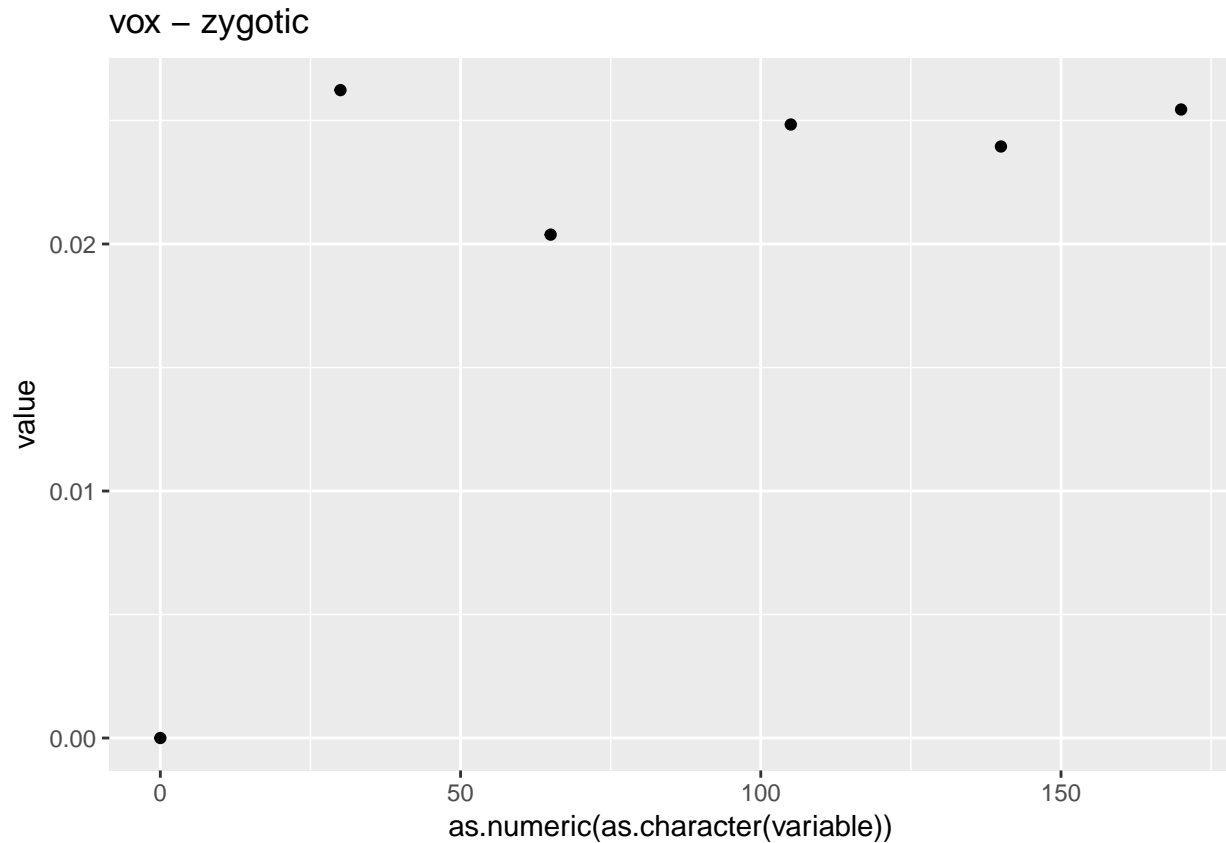
```
## Using as id variables
## Using as id variables
```



Using as id variables



Using as id variables



| ## | 0 | 30 | 65 | 105 | 140 |
|----------|--------------|--------------|--------------|--------------|--------------|
| ## 14406 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 7.173779e-03 |
| ## 25650 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## 3537 | 2.817303e-06 | 2.379253e-04 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## 22314 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## 3639 | 0.000000e+00 | 1.824398e-04 | 3.411139e-04 | 0.000000e+00 | 0.000000e+00 |
| ## 1307 | 3.087455e-03 | 8.326395e-03 | 1.041317e-04 | 1.048521e-02 | 0.000000e+00 |
| ## 5417 | 0.000000e+00 | 0.000000e+00 | 1.838235e-03 | 0.000000e+00 | 3.731343e-03 |
| ## 19381 | 3.429847e-04 | 0.000000e+00 | 0.000000e+00 | 9.483167e-04 | 0.000000e+00 |
| ## 28279 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## 7841 | 1.284458e-03 | 3.563862e-03 | 5.755649e-03 | 1.788909e-03 | 0.000000e+00 |
| ## 2718 | 3.097848e-05 | 8.340366e-04 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## 923 | 6.556822e-04 | 0.000000e+00 | 0.000000e+00 | 7.863468e-03 | 0.000000e+00 |
| ## 21358 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## 14631 | 1.367868e-03 | 1.500782e-04 | 4.043415e-04 | 1.598838e-03 | 0.000000e+00 |
| ## 27807 | 0.000000e+00 | 3.484321e-03 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## 11240 | 2.784248e-04 | 4.076755e-04 | 0.000000e+00 | 4.052468e-04 | 0.000000e+00 |
| ## 34208 | 6.230752e-04 | 0.000000e+00 | 5.841876e-04 | 0.000000e+00 | 0.000000e+00 |
| ## 28933 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 3.174603e-03 |
| ## 21556 | 0.000000e+00 | 2.051703e-04 | 0.000000e+00 | 2.950723e-04 | 3.920031e-04 |
| ## 25642 | 0.000000e+00 | 9.280281e-05 | 2.310536e-03 | 0.000000e+00 | 5.847953e-03 |
| ## 18155 | 0.000000e+00 | 0.000000e+00 | 6.153846e-03 | 3.846154e-03 | 0.000000e+00 |
| ## 16721 | 0.000000e+00 | 5.564512e-04 | 7.161362e-04 | 0.000000e+00 | 3.210340e-03 |
| ## 32068 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 2.365207e-04 | 0.000000e+00 |
| ## 10314 | 4.739336e-04 | 7.656968e-04 | 0.000000e+00 | 5.439005e-03 | 1.607303e-03 |
| ## 4601 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## 18013 | 5.033405e-05 | 0.000000e+00 | 4.881621e-04 | 0.000000e+00 | 0.000000e+00 |

```

## 33514 6.439260e-04 0.000000e+00 7.995022e-04 7.881464e-04 0.000000e+00
## 21830 6.823610e-04 1.784106e-04 0.000000e+00 1.154734e-03 0.000000e+00
## 5692 2.399091e-04 0.000000e+00 0.000000e+00 1.339298e-06 0.000000e+00
## 32010 0.000000e+00 0.000000e+00 0.000000e+00 1.683502e-03 3.472222e-03
## 21861 0.000000e+00 1.632084e-05 3.314940e-04 8.474898e-04 2.420758e-03
## 27845 1.705259e-05 0.000000e+00 5.206434e-04 0.000000e+00 0.000000e+00
## 3414 0.000000e+00 7.658923e-04 3.709542e-06 0.000000e+00 0.000000e+00
## 10021 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 11349 6.875000e-02 0.000000e+00 0.000000e+00 0.000000e+00 1.008416e-02
## 17858 0.000000e+00 2.706234e-06 5.177406e-04 8.830022e-04 4.032010e-04
## 16105 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.980014e-04
## 18389 0.000000e+00 1.390705e-03 0.000000e+00 4.743866e-03 7.136246e-03
## 29080 1.153724e-03 1.814882e-03 1.834862e-03 1.611153e-03 2.945342e-04
## 33214 0.000000e+00 1.080608e-03 0.000000e+00 1.097477e-03 0.000000e+00
## 28426 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 11403 0.000000e+00 2.504461e-04 0.000000e+00 0.000000e+00 1.488221e-03
## 28606 2.109841e-04 7.898894e-04 0.000000e+00 0.000000e+00 1.411433e-03
## 21396 0.000000e+00 1.052604e-05 0.000000e+00 0.000000e+00 1.007049e-03
## 23271 0.000000e+00 0.000000e+00 8.924587e-04 0.000000e+00 0.000000e+00
## 10244 1.305483e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7136 4.782401e-04 9.228148e-05 0.000000e+00 0.000000e+00 8.838384e-03
## 16347 0.000000e+00 0.000000e+00 6.811226e-05 3.825415e-04 0.000000e+00
## 28161 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 5.494505e-03
## 33792 0.000000e+00 4.466932e-04 0.000000e+00 4.744591e-04 2.161177e-03
## 34925 0.000000e+00 0.000000e+00 0.000000e+00 2.885640e-05 1.390468e-03
## 35220 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7522 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 4.975124e-03
## 11969 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 16966 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 26419 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 16795 7.469397e-04 1.063547e-03 5.589715e-04 0.000000e+00 1.031897e-03
## 7374 5.842828e-04 0.000000e+00 0.000000e+00 9.350164e-04 1.755926e-03
## 34596 3.762321e-03 0.000000e+00 1.632757e-02 0.000000e+00 0.000000e+00
## 15653 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.818182e-02
## 26777 0.000000e+00 6.529391e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 15354 0.000000e+00 0.000000e+00 4.600130e-04 5.516883e-04 1.361797e-03
## 6170 0.000000e+00 0.000000e+00 0.000000e+00 2.436054e-03 0.000000e+00
## 30139 7.216611e-05 2.342405e-04 0.000000e+00 0.000000e+00 4.346474e-04
## 29735 1.224182e-04 2.705118e-04 2.352757e-05 0.000000e+00 0.000000e+00
## 17859 0.000000e+00 4.008016e-03 0.000000e+00 0.000000e+00 4.310345e-03
## 4616 0.000000e+00 2.126354e-05 0.000000e+00 1.777269e-05 0.000000e+00
## 20009 0.000000e+00 1.448594e-03 6.105750e-04 1.093308e-03 5.587902e-04
## 14159 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.731697e-04
## 31927 2.083165e-04 0.000000e+00 1.305335e-04 0.000000e+00 1.603369e-04
## 26903 6.267920e-04 1.865944e-04 0.000000e+00 3.441837e-05 4.003814e-04
## 17483 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 24648 4.405286e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 9563 2.735622e-05 0.000000e+00 0.000000e+00 9.551098e-04 1.647446e-03
## 16740 8.133160e-04 1.559718e-03 0.000000e+00 2.020014e-03 5.347729e-03
## 12272 0.000000e+00 6.565988e-04 1.095890e-03 0.000000e+00 0.000000e+00
## 16549 0.000000e+00 6.360414e-04 9.025271e-04 0.000000e+00 9.665458e-04
## 4602 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 324 0.000000e+00 4.347826e-03 0.000000e+00 2.057613e-03 0.000000e+00
## 14626 2.901906e-04 0.000000e+00 1.308776e-04 0.000000e+00 2.430509e-03

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## 16984 0.000000e+00 7.929954e-04 7.183908e-04 0.000000e+00 0.000000e+00
## 4525 0.000000e+00 0.000000e+00 0.000000e+00 1.641925e-03 0.000000e+00
## 34764 3.922578e-05 1.728249e-04 0.000000e+00 1.553432e-04 0.000000e+00
## 9175 9.401442e-04 0.000000e+00 0.000000e+00 1.694399e-03 9.523810e-03
## 18958 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.834455e-04
## 18472 0.000000e+00 0.000000e+00 3.449832e-04 1.481679e-03 6.338363e-04
## 1201 0.000000e+00 1.550735e-03 0.000000e+00 2.702721e-03 1.495971e-03
## 1310 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7839 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 26626 1.705613e-04 5.221165e-05 1.158525e-03 0.000000e+00 8.968429e-04
## 29253 5.023356e-05 0.000000e+00 1.486620e-03 0.000000e+00 0.000000e+00
## 14536 0.000000e+00 0.000000e+00 0.000000e+00 5.039946e-04 1.977960e-03
## 14612 5.615215e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 633 0.000000e+00 0.000000e+00 9.763615e-04 0.000000e+00 1.338473e-03
## 10521 8.920306e-03 3.757999e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 5977 0.000000e+00 0.000000e+00 0.000000e+00 9.708738e-04 0.000000e+00
## 16708 0.000000e+00 0.000000e+00 4.785367e-04 3.731076e-04 2.027959e-04
## 34692 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15734 0.000000e+00 0.000000e+00 2.867358e-04 1.099656e-05 0.000000e+00
## 27242 1.578591e-03 0.000000e+00 0.000000e+00 1.592273e-03 4.416025e-03
## 6896 2.052096e-02 5.642328e-03 3.266929e-03 0.000000e+00 5.788804e-03
## 16079 3.389831e-03 2.673797e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 30669 2.194798e-03 5.275746e-03 3.061517e-03 0.000000e+00 8.490162e-03
## 3317 1.577605e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 31867 2.472165e-04 7.857304e-05 3.792272e-04 8.162817e-04 2.104484e-03
## 4083 4.749212e-05 5.440046e-04 0.000000e+00 1.747773e-04 0.000000e+00
## 2051 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.078749e-03
## 34089 2.880360e-04 2.024558e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 6701 0.000000e+00 0.000000e+00 0.000000e+00 4.743721e-04 1.268549e-03
## 1217 1.747208e-04 0.000000e+00 0.000000e+00 8.140361e-04 2.008274e-03
## 21264 0.000000e+00 6.753542e-04 5.230260e-03 4.640371e-03 0.000000e+00
## 17138 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.841857e-04
## 2071 1.335348e-03 1.814165e-03 8.379769e-04 1.744923e-03 3.768398e-03
## 17798 4.526513e-04 1.197779e-03 0.000000e+00 0.000000e+00 3.399845e-03
## 24921 5.952464e-05 0.000000e+00 1.199579e-04 1.641328e-04 0.000000e+00
## 30974 0.000000e+00 6.678883e-05 0.000000e+00 0.000000e+00 6.805527e-04
## 6662 0.000000e+00 0.000000e+00 0.000000e+00 2.109705e-03 0.000000e+00
## 1616 0.000000e+00 2.665073e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 32049 7.371913e-04 0.000000e+00 0.000000e+00 0.000000e+00 5.208333e-03
## 1259 1.393728e-03 0.000000e+00 0.000000e+00 0.000000e+00 5.535055e-03
## 19300 0.000000e+00 0.000000e+00 1.246803e-03 0.000000e+00 0.000000e+00
## 6612 0.000000e+00 9.183570e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 31425 0.000000e+00 1.524551e-03 3.542120e-04 1.457967e-04 3.857077e-04
## 28497 4.177760e-04 0.000000e+00 1.262644e-03 0.000000e+00 0.000000e+00
## 18876 0.000000e+00 0.000000e+00 5.616400e-04 3.953596e-04 1.633181e-03
## 17164 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 4.347826e-03
## 31053 0.000000e+00 1.963672e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 33972 2.128365e-03 0.000000e+00 0.000000e+00 3.182452e-03 6.144339e-03
## 15929 0.000000e+00 1.070572e-03 0.000000e+00 8.033735e-04 4.327095e-03
## 15204 2.238811e-04 0.000000e+00 3.505749e-04 5.667337e-04 2.299359e-03
## 14986 0.000000e+00 8.183306e-04 0.000000e+00 2.924280e-04 0.000000e+00
## 21377 0.000000e+00 0.000000e+00 5.973247e-04 2.105225e-03 0.000000e+00
## 25652 0.000000e+00 0.000000e+00 0.000000e+00 2.941176e-03 0.000000e+00
## 2615 1.040200e-04 4.599759e-04 1.739855e-04 0.000000e+00 2.082178e-03

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## 1209 1.712875e-03 1.531148e-03 0.000000e+00 9.323793e-03 8.358952e-03
## 33029 0.000000e+00 0.000000e+00 1.081771e-04 5.333333e-04 1.254152e-03
## 9851 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 13672 2.145695e-04 0.000000e+00 0.000000e+00 4.415011e-04 1.029619e-03
## 28280 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 6578 1.607717e-03 0.000000e+00 1.329787e-03 0.000000e+00 0.000000e+00
## 15187 6.810121e-04 1.452304e-04 0.000000e+00 0.000000e+00 8.803397e-04
## 32838 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.840041e-04
## 15729 1.538695e-04 2.291200e-04 3.432476e-05 5.229214e-04 0.000000e+00
## 21340 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18835 0.000000e+00 1.488329e-04 0.000000e+00 1.585794e-03 5.420233e-04
## 15169 9.242144e-04 0.000000e+00 5.547378e-05 0.000000e+00 0.000000e+00
## 10593 0.000000e+00 3.811339e-04 0.000000e+00 2.168043e-04 1.374278e-03
## 35184 5.692491e-04 4.660595e-04 0.000000e+00 1.382285e-04 2.411027e-04
## 2587 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7818 0.000000e+00 8.625647e-04 0.000000e+00 4.941352e-04 3.460492e-03
## 2091 6.583738e-04 2.629160e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 20213 3.923107e-04 3.677911e-04 0.000000e+00 0.000000e+00 3.137224e-04
## 33474 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 26174 2.037942e-04 7.209805e-04 0.000000e+00 5.139883e-04 0.000000e+00
## 10474 2.948332e-05 0.000000e+00 4.067447e-05 0.000000e+00 5.399568e-04
## 17090 9.032469e-05 0.000000e+00 0.000000e+00 5.278916e-04 3.182637e-04
## 21158 1.728608e-03 2.147955e-04 0.000000e+00 0.000000e+00 2.415459e-03
## 6223 3.667033e-04 0.000000e+00 0.000000e+00 6.823990e-04 2.606910e-04
## 15378 2.561326e-04 0.000000e+00 0.000000e+00 0.000000e+00 2.429772e-03
## 31889 0.000000e+00 0.000000e+00 7.305274e-04 7.248101e-04 2.776235e-04
## 1012 0.000000e+00 0.000000e+00 0.000000e+00 1.796716e-04 4.798953e-05
## 15605 9.372071e-04 0.000000e+00 0.000000e+00 1.210654e-03 0.000000e+00
## 25281 6.003229e-05 0.000000e+00 0.000000e+00 0.000000e+00 3.270329e-04
## 7520 0.000000e+00 0.000000e+00 2.061856e-03 0.000000e+00 0.000000e+00
## 25994 0.000000e+00 0.000000e+00 1.949538e-03 4.636472e-04 0.000000e+00
## 25541 1.941571e-04 9.203175e-05 0.000000e+00 3.087856e-03 1.444887e-03
## 6917 0.000000e+00 0.000000e+00 1.184934e-05 2.414488e-04 2.981003e-04
## 10592 2.890903e-04 0.000000e+00 3.672491e-04 0.000000e+00 3.250975e-03
## 24225 0.000000e+00 9.398496e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 16124 0.000000e+00 0.000000e+00 5.563167e-05 8.689648e-05 1.245899e-03
## 4724 0.000000e+00 0.000000e+00 0.000000e+00 1.863968e-04 8.304255e-04
## 29510 0.000000e+00 1.385958e-03 1.066098e-03 0.000000e+00 0.000000e+00
## 27249 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 25857 2.680446e-04 0.000000e+00 0.000000e+00 9.604459e-04 3.229164e-03
## 547 1.293192e-04 3.190144e-04 4.666737e-05 8.367923e-04 0.000000e+00
## 34852 5.737235e-04 0.000000e+00 7.977663e-04 0.000000e+00 0.000000e+00
## 29788 6.923907e-04 0.000000e+00 8.843475e-04 0.000000e+00 0.000000e+00
## 34996 0.000000e+00 2.907457e-04 4.765258e-04 1.703345e-04 4.283448e-04
## 6045 0.000000e+00 0.000000e+00 2.102153e-04 0.000000e+00 0.000000e+00
## 24713 2.787567e-05 1.307911e-04 4.921634e-04 9.383938e-04 4.685803e-03
## 10348 0.000000e+00 0.000000e+00 6.704946e-04 2.298615e-03 1.228371e-03
## 33270 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.733333e-03
## 10634 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.792389e-04
## 20363 9.088511e-06 0.000000e+00 1.187732e-04 3.500313e-06 1.297031e-04
## 10844 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18154 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 8.000879e-05
## 23849 0.000000e+00 2.626529e-04 0.000000e+00 6.648956e-04 0.000000e+00
## 15572 1.048686e-04 3.202588e-04 0.000000e+00 4.370777e-03 1.506493e-02

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## 33709 5.285933e-04 0.000000e+00 6.080707e-05 0.000000e+00 0.000000e+00
## 29326 3.888649e-04 0.000000e+00 0.000000e+00 1.153490e-03 2.171065e-03
## 30224 1.070060e-02 6.649928e-03 0.000000e+00 2.308388e-03 0.000000e+00
## 30141 0.000000e+00 1.367989e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 28805 6.932290e-06 2.829180e-04 2.942789e-04 3.847570e-05 6.838602e-04
## 7100 0.000000e+00 0.000000e+00 5.249096e-04 0.000000e+00 0.000000e+00
## 35164 3.960629e-04 0.000000e+00 3.015876e-04 1.372255e-03 1.679729e-03
## 614 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7797 3.251715e-04 0.000000e+00 1.539860e-04 0.000000e+00 0.000000e+00
## 14760 1.587400e-05 2.810083e-05 4.756620e-04 0.000000e+00 0.000000e+00
## 22405 2.284148e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 32622 4.552845e-04 2.700492e-04 6.110922e-05 0.000000e+00 0.000000e+00
## 546 2.455969e-04 4.051224e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 23123 1.491453e-04 1.755603e-03 1.073793e-03 0.000000e+00 0.000000e+00
## 14704 1.097272e-04 4.835058e-05 0.000000e+00 2.964211e-04 0.000000e+00
## 20109 6.928204e-04 0.000000e+00 0.000000e+00 1.143334e-03 1.645639e-03
## 34646 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 515 0.000000e+00 1.968060e-04 7.793949e-04 2.477076e-03 2.319276e-03
## 3114 0.000000e+00 0.000000e+00 9.874854e-04 1.478943e-04 1.499541e-03
## 18109 0.000000e+00 4.347826e-03 2.623254e-05 5.973716e-04 9.041591e-04
## 8535 0.000000e+00 0.000000e+00 3.078103e-04 1.207160e-03 2.364011e-03
## 16714 0.000000e+00 0.000000e+00 0.000000e+00 1.366120e-03 3.266446e-03
## 9578 7.146627e-04 2.262523e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 33126 2.735085e-04 3.672929e-04 1.290757e-03 0.000000e+00 5.849664e-04
## 25760 0.000000e+00 0.000000e+00 0.000000e+00 2.385042e-04 0.000000e+00
## 21291 0.000000e+00 0.000000e+00 0.000000e+00 2.346331e-05 0.000000e+00
## 28779 0.000000e+00 0.000000e+00 4.920052e-03 0.000000e+00 1.938872e-03
## 21669 1.383755e-04 8.923966e-05 0.000000e+00 6.617353e-05 0.000000e+00
## 33803 0.000000e+00 0.000000e+00 0.000000e+00 4.535950e-03 0.000000e+00
## 4484 1.504716e-04 7.117388e-04 2.097630e-04 4.118616e-04 3.748698e-04
## 33425 0.000000e+00 2.568338e-04 2.624437e-04 6.147472e-04 0.000000e+00
## 24658 7.975681e-05 0.000000e+00 5.378375e-04 1.788909e-03 2.401922e-03
## 25718 0.000000e+00 1.520751e-04 2.866972e-03 0.000000e+00 1.821494e-03
## 7117 0.000000e+00 1.239216e-04 0.000000e+00 1.124859e-03 6.603678e-04
## 14333 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 23666 1.336553e-03 1.968504e-03 1.003009e-03 4.739336e-03 2.178649e-03
## 13718 0.000000e+00 0.000000e+00 4.063389e-04 7.680492e-04 0.000000e+00
## 7444 6.230372e-04 1.690376e-04 9.214758e-05 3.492735e-04 6.982388e-04
## 24938 0.000000e+00 0.000000e+00 0.000000e+00 5.330576e-05 5.693140e-04
## 8616 0.000000e+00 0.000000e+00 9.627036e-04 1.531930e-03 0.000000e+00
## 34542 1.152987e-05 0.000000e+00 4.295104e-04 5.140671e-04 3.107103e-05
## 20491 0.000000e+00 0.000000e+00 2.616994e-04 0.000000e+00 1.428550e-03
## 19493 2.341375e-04 0.000000e+00 0.000000e+00 0.000000e+00 2.766252e-03
## 15406 6.394849e-05 0.000000e+00 0.000000e+00 2.730049e-04 7.433747e-05
## 2000 3.280840e-04 0.000000e+00 0.000000e+00 0.000000e+00 9.433215e-04
## 25230 0.000000e+00 3.086420e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 33439 0.000000e+00 0.000000e+00 2.074481e-04 0.000000e+00 0.000000e+00
## 30219 0.000000e+00 0.000000e+00 1.752848e-03 0.000000e+00 0.000000e+00
## 33585 0.000000e+00 1.448680e-03 4.479781e-03 0.000000e+00 3.722633e-03
## 19737 0.000000e+00 4.928175e-04 5.261218e-05 0.000000e+00 9.072283e-04
## 20110 2.899574e-04 6.693568e-04 3.835429e-03 0.000000e+00 2.223200e-03
## 18473 0.000000e+00 0.000000e+00 0.000000e+00 7.445989e-05 0.000000e+00
## 18396 1.481756e-03 0.000000e+00 5.080410e-04 0.000000e+00 1.280441e-04
## 22649 1.915709e-03 0.000000e+00 0.000000e+00 0.000000e+00 3.906250e-03

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## 17191 0.000000e+00 1.622765e-04 0.000000e+00 0.000000e+00 1.095721e-03
## 790 0.000000e+00 2.984657e-04 3.547410e-04 1.853531e-04 2.091803e-03
## 29812 1.238810e-03 8.600917e-04 1.214408e-03 2.570179e-04 1.863570e-04
## 24033 0.000000e+00 2.475123e-04 3.676732e-04 2.940147e-04 0.000000e+00
## 12738 0.000000e+00 2.214328e-04 2.986948e-03 0.000000e+00 0.000000e+00
## 4488 0.000000e+00 1.664586e-03 2.608594e-04 4.562044e-04 1.721864e-04
## 33643 0.000000e+00 0.000000e+00 5.740714e-05 1.770547e-03 4.490094e-03
## 6287 5.050505e-04 0.000000e+00 0.000000e+00 0.000000e+00 4.464286e-03
## 21435 7.094714e-04 0.000000e+00 0.000000e+00 2.269632e-03 3.446912e-03
## 4286 0.000000e+00 2.109867e-04 1.938267e-04 2.157904e-05 0.000000e+00
## 1127 0.000000e+00 1.343771e-03 0.000000e+00 9.923917e-04 3.374802e-03
## 3818 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 7.092199e-03
## 33464 0.000000e+00 2.895819e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 7465 3.706020e-04 2.019660e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 5608 0.000000e+00 2.596257e-03 1.309688e-04 0.000000e+00 1.215526e-03
## 28349 0.000000e+00 4.778281e-04 6.760386e-04 0.000000e+00 3.173520e-03
## 10318 1.768255e-03 0.000000e+00 5.892867e-04 0.000000e+00 6.383033e-04
## 22483 0.000000e+00 4.050389e-03 0.000000e+00 1.564257e-03 3.392070e-03
## 27655 0.000000e+00 4.557173e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 18022 9.165903e-04 0.000000e+00 1.119821e-03 0.000000e+00 2.490449e-04
## 28584 0.000000e+00 1.262308e-04 0.000000e+00 1.960551e-04 9.301891e-04
## 35435 3.268841e-03 1.309475e-03 5.395946e-04 1.974037e-03 0.000000e+00
## 15256 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.745858e-03
## 33912 5.511429e-04 0.000000e+00 4.974647e-05 0.000000e+00 1.275971e-03
## 9633 0.000000e+00 7.073710e-04 0.000000e+00 2.889467e-03 0.000000e+00
## 13842 0.000000e+00 0.000000e+00 0.000000e+00 2.172911e-03 5.200403e-03
## 17430 0.000000e+00 0.000000e+00 1.683502e-03 1.372684e-03 3.802281e-03
## 814 1.233155e-04 2.926589e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 24362 0.000000e+00 3.039514e-03 2.023787e-05 0.000000e+00 0.000000e+00
## 1170 4.651163e-04 5.621773e-05 3.123048e-04 1.297438e-03 9.996240e-04
## 21583 2.135201e-03 4.637897e-03 0.000000e+00 1.644469e-04 1.353059e-03
## 35418 4.639842e-04 8.950538e-05 3.099311e-03 0.000000e+00 5.241679e-03
## 25503 2.223482e-05 0.000000e+00 2.758080e-04 0.000000e+00 0.000000e+00
## 21176 0.000000e+00 0.000000e+00 4.081666e-04 1.285996e-03 1.988294e-03
## 32050 2.446226e-04 0.000000e+00 5.247267e-05 4.064468e-04 0.000000e+00
## 23343 0.000000e+00 0.000000e+00 2.633865e-03 4.846527e-03 1.110088e-03
## 21678 0.000000e+00 2.266197e-04 4.213733e-05 0.000000e+00 2.640994e-04
## 21810 0.000000e+00 0.000000e+00 0.000000e+00 9.635209e-05 3.367165e-04
## 16254 7.173561e-04 1.726169e-03 3.474358e-04 0.000000e+00 0.000000e+00
## 1034 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 4577 8.300202e-05 0.000000e+00 4.122012e-03 0.000000e+00 3.587258e-03
## 34622 0.000000e+00 0.000000e+00 2.954947e-04 0.000000e+00 7.552575e-04
## 17150 1.916933e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 5967 8.450200e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 16877 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15804 2.632627e-04 8.809070e-04 3.687834e-05 4.107013e-04 1.008065e-03
## 20150 0.000000e+00 0.000000e+00 8.568225e-05 1.409704e-05 1.842832e-04
## 18670 0.000000e+00 5.376425e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 734 0.000000e+00 2.478641e-04 3.709812e-04 0.000000e+00 0.000000e+00
## 9217 7.601640e-05 0.000000e+00 0.000000e+00 0.000000e+00 3.722771e-03
## 20579 6.633741e-05 1.138952e-03 0.000000e+00 1.650165e-03 6.158277e-05
## 29930 1.970904e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7289 3.740017e-04 2.253935e-04 1.097093e-03 0.000000e+00 0.000000e+00
## 27257 6.742748e-04 2.442929e-03 0.000000e+00 2.924499e-03 2.877161e-03

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## 19304 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18352 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 636 0.000000e+00 9.900990e-04 7.396450e-04 0.000000e+00 6.163328e-03
## 16567 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.914486e-03
## 28910 3.502037e-05 0.000000e+00 6.342140e-04 3.459439e-03 2.849367e-03
## 27262 0.000000e+00 0.000000e+00 0.000000e+00 4.987531e-03 0.000000e+00
## 11669 0.000000e+00 1.376005e-04 3.382542e-04 0.000000e+00 0.000000e+00
## 12515 1.549187e-03 0.000000e+00 1.992032e-03 7.581501e-04 0.000000e+00
## 25846 1.313226e-03 0.000000e+00 2.624813e-04 0.000000e+00 6.581056e-04
## 15114 1.004016e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 19827 1.049759e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 4189 6.763980e-04 0.000000e+00 4.072036e-03 0.000000e+00 0.000000e+00
## 30133 0.000000e+00 8.398032e-04 0.000000e+00 2.192982e-03 8.587371e-04
## 18921 7.235317e-04 3.212691e-04 3.799279e-04 0.000000e+00 0.000000e+00
## 7243 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 8.090411e-04
## 16103 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 8.568445e-04
## 33352 0.000000e+00 2.570694e-03 0.000000e+00 3.903201e-04 0.000000e+00
## 5841 1.112933e-04 0.000000e+00 2.574986e-04 3.674419e-04 1.049793e-03
## 5117 0.000000e+00 2.389486e-03 0.000000e+00 2.047083e-03 0.000000e+00
## 17576 0.000000e+00 0.000000e+00 6.770481e-04 0.000000e+00 1.129944e-03
## 6436 0.000000e+00 0.000000e+00 0.000000e+00 4.006762e-05 1.458570e-04
## 18865 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18834 1.961381e-04 0.000000e+00 0.000000e+00 3.955334e-05 5.924040e-04
## 22484 2.003205e-04 0.000000e+00 3.114295e-04 8.396306e-04 1.694915e-03
## 10022 0.000000e+00 1.408451e-02 0.000000e+00 0.000000e+00 0.000000e+00
## 28796 1.613294e-03 0.000000e+00 0.000000e+00 3.512293e-03 4.435447e-05
## 28337 0.000000e+00 1.558676e-04 0.000000e+00 1.286174e-03 9.920635e-04
## 29041 1.741238e-03 0.000000e+00 1.002267e-03 0.000000e+00 5.557515e-04
## 19960 0.000000e+00 2.172271e-03 4.681790e-03 7.787710e-04 0.000000e+00
## 2796 3.010971e-04 9.183749e-05 0.000000e+00 1.408468e-03 1.250523e-04
## 27553 2.513883e-04 0.000000e+00 0.000000e+00 0.000000e+00 3.493526e-05
## 21505 0.000000e+00 0.000000e+00 3.685435e-05 0.000000e+00 0.000000e+00
## 10853 0.000000e+00 3.408142e-03 0.000000e+00 0.000000e+00 2.772799e-03
## 22339 1.112532e-05 1.448855e-04 2.799716e-05 0.000000e+00 0.000000e+00
## 26253 0.000000e+00 0.000000e+00 9.085336e-05 1.959861e-04 0.000000e+00
## 3430 0.000000e+00 0.000000e+00 3.095484e-05 0.000000e+00 0.000000e+00
## 18418 4.282655e-04 0.000000e+00 1.017812e-03 0.000000e+00 8.431703e-04
## 10319 7.170218e-05 0.000000e+00 0.000000e+00 4.545455e-03 5.723490e-03
## 30902 0.000000e+00 6.400160e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 16843 0.000000e+00 9.866622e-04 9.894220e-06 2.720222e-04 0.000000e+00
## 24174 0.000000e+00 0.000000e+00 0.000000e+00 2.795899e-03 0.000000e+00
## 560 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18226 2.168265e-04 9.564736e-04 9.746165e-04 0.000000e+00 0.000000e+00
## 35475 2.747903e-04 0.000000e+00 6.641668e-04 4.894614e-04 1.204751e-03
## 34564 1.673664e-05 0.000000e+00 0.000000e+00 0.000000e+00 1.069434e-04
## 8888 6.361124e-05 1.891588e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 11180 0.000000e+00 6.475392e-05 1.831180e-04 0.000000e+00 1.876302e-04
## 17398 3.451736e-04 0.000000e+00 2.364128e-04 4.091863e-04 4.413063e-04
## 21604 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.173913e-03
## 34585 7.327869e-05 6.683954e-04 0.000000e+00 0.000000e+00 6.445051e-04
## 22224 3.369511e-04 0.000000e+00 2.134472e-03 0.000000e+00 4.764971e-04
## 26577 0.000000e+00 8.687855e-04 0.000000e+00 1.436767e-03 2.829187e-03
## 24286 2.991859e-05 0.000000e+00 5.384943e-05 0.000000e+00 0.000000e+00
## 7493 0.000000e+00 1.522349e-03 0.000000e+00 1.401066e-03 1.453720e-03

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## 11905 0.000000e+00 2.178573e-04 0.000000e+00 8.760403e-04 1.709033e-04
## 13089 0.000000e+00 0.000000e+00 7.562112e-03 0.000000e+00 0.000000e+00
## 23769 0.000000e+00 0.000000e+00 0.000000e+00 9.752000e-05 1.603055e-03
## 2816 5.278503e-04 4.863148e-04 0.000000e+00 0.000000e+00 1.138197e-04
## 27248 1.416948e-04 7.125944e-05 3.779133e-04 2.847847e-04 0.000000e+00
## 3876 4.836692e-04 8.509980e-05 4.761905e-04 8.962181e-04 1.383604e-03
## 15475 0.000000e+00 1.476224e-03 1.347531e-03 7.593997e-04 1.333065e-05
## 25377 1.246507e-03 0.000000e+00 0.000000e+00 0.000000e+00 1.817609e-03
## 22210 0.000000e+00 2.118644e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 35217 0.000000e+00 1.225195e-04 1.988150e-04 1.803756e-04 6.344360e-04
## 1067 3.443035e-04 4.391097e-04 6.115933e-04 2.954210e-04 6.743088e-04
## 5711 0.000000e+00 1.547070e-04 2.078612e-04 0.000000e+00 2.402109e-05
## 15008 2.056535e-05 3.297619e-04 0.000000e+00 4.998750e-04 0.000000e+00
## 23942 0.000000e+00 8.269146e-06 0.000000e+00 3.487218e-04 0.000000e+00
## 7943 0.000000e+00 1.860617e-04 0.000000e+00 8.563407e-05 9.372558e-05
## 20804 0.000000e+00 3.826207e-04 0.000000e+00 8.767388e-06 1.110731e-04
## 22626 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.525139e-05
## 29223 5.660649e-04 0.000000e+00 0.000000e+00 8.278146e-04 0.000000e+00
## 29303 0.000000e+00 0.000000e+00 1.616367e-03 0.000000e+00 9.703935e-04
## 3579 0.000000e+00 4.109818e-02 3.268336e-02 0.000000e+00 0.000000e+00
## 11255 2.598382e-04 2.050943e-03 1.971514e-03 2.439127e-04 0.000000e+00
## 9980 0.000000e+00 5.924807e-04 0.000000e+00 3.863988e-04 1.844984e-03
## 28393 4.905059e-06 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 24720 1.710128e-04 1.643592e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 32968 0.000000e+00 0.000000e+00 2.195327e-04 0.000000e+00 1.123867e-03
## 2454 0.000000e+00 5.388686e-04 0.000000e+00 4.148464e-04 1.410899e-03
## 33486 0.000000e+00 0.000000e+00 7.239631e-04 0.000000e+00 8.583691e-04
## 31574 1.930728e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 11221 0.000000e+00 2.564103e-03 0.000000e+00 1.226902e-03 0.000000e+00
## 17159 6.437083e-03 3.060799e-03 0.000000e+00 0.000000e+00 1.902206e-03
## 21453 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 32368 0.000000e+00 4.585053e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 14796 0.000000e+00 1.062699e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 5693 4.550310e-04 1.802003e-04 6.595924e-04 0.000000e+00 4.138267e-03
## 35160 3.928587e-04 0.000000e+00 8.398643e-05 0.000000e+00 7.008472e-04
## 12127 0.000000e+00 1.256281e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 7105 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.798561e-03
## 12625 1.156888e-03 0.000000e+00 4.180271e-04 0.000000e+00 4.694475e-03
## 25375 5.394949e-05 0.000000e+00 7.611315e-04 2.764222e-04 2.222270e-04
## 13512 3.549876e-04 1.915775e-04 1.094092e-03 7.462687e-04 0.000000e+00
## 15961 0.000000e+00 4.439132e-05 2.634790e-04 0.000000e+00 9.587857e-04
## 16436 2.899896e-04 1.574605e-03 0.000000e+00 4.566454e-04 0.000000e+00
## 33471 0.000000e+00 2.389876e-04 0.000000e+00 1.316268e-03 4.146723e-03
## 34663 0.000000e+00 0.000000e+00 4.475378e-06 0.000000e+00 0.000000e+00
## 10628 1.015722e-04 0.000000e+00 4.943639e-04 0.000000e+00 0.000000e+00
## 24467 7.065677e-04 5.364040e-04 0.000000e+00 0.000000e+00 4.741584e-04
## 4604 0.000000e+00 2.240321e-03 0.000000e+00 0.000000e+00 2.164418e-03
## 16236 0.000000e+00 3.749352e-05 5.284016e-04 1.452566e-03 0.000000e+00
## 35242 3.245699e-04 4.732608e-04 0.000000e+00 0.000000e+00 2.243829e-03
## 7807 3.997553e-04 0.000000e+00 1.884953e-04 0.000000e+00 0.000000e+00
## 35213 0.000000e+00 1.001032e-04 1.547207e-05 0.000000e+00 5.049879e-05
## 35 8.798944e-04 7.217050e-04 5.955926e-04 0.000000e+00 0.000000e+00
## 16779 5.806549e-04 4.815129e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 27314 0.000000e+00 0.000000e+00 1.074120e-04 0.000000e+00 0.000000e+00

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## 20149 1.248830e-03 0.000000e+00 2.798309e-04 0.000000e+00 3.173247e-03
## 9309 9.249236e-04 0.000000e+00 0.000000e+00 0.000000e+00 4.917199e-04
## 18383 3.247275e-04 1.438767e-03 0.000000e+00 0.000000e+00 8.773422e-04
## 28292 2.323763e-04 1.629965e-03 0.000000e+00 3.797918e-04 0.000000e+00
## 34283 3.517759e-05 0.000000e+00 0.000000e+00 1.771630e-05 8.253476e-05
## 13997 1.345895e-03 0.000000e+00 0.000000e+00 2.433090e-03 0.000000e+00
## 6847 0.000000e+00 0.000000e+00 0.000000e+00 2.642008e-03 0.000000e+00
## 3187 1.947857e-05 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18040 0.000000e+00 0.000000e+00 6.101281e-04 0.000000e+00 3.859514e-04
## 12349 0.000000e+00 8.634134e-05 0.000000e+00 4.106565e-05 1.364043e-05
## 8131 4.547522e-04 1.112200e-04 0.000000e+00 0.000000e+00 4.633920e-03
## 21582 1.591182e-04 1.039511e-04 5.899705e-04 0.000000e+00 0.000000e+00
## 18697 0.000000e+00 1.895405e-04 0.000000e+00 4.037142e-03 0.000000e+00
## 26415 0.000000e+00 9.037272e-04 0.000000e+00 0.000000e+00 3.001813e-05
## 21628 0.000000e+00 0.000000e+00 2.832804e-04 0.000000e+00 0.000000e+00
## 33002 0.000000e+00 4.343576e-04 0.000000e+00 1.166861e-03 0.000000e+00
## 7308 0.000000e+00 0.000000e+00 2.349624e-04 3.554961e-04 0.000000e+00
## 5335 0.000000e+00 0.000000e+00 8.195043e-05 0.000000e+00 1.262988e-04
## 25988 0.000000e+00 0.000000e+00 2.804474e-04 1.505581e-05 0.000000e+00
## 17502 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.767335e-04
## 28434 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 4.190960e-03
## 28111 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 3415 0.000000e+00 7.734780e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 17615 0.000000e+00 0.000000e+00 8.291874e-04 0.000000e+00 1.042753e-03
## 25433 0.000000e+00 2.266899e-04 5.409570e-04 0.000000e+00 5.917160e-03
## 11868 0.000000e+00 1.187348e-04 4.924847e-04 0.000000e+00 0.000000e+00
## 33408 0.000000e+00 0.000000e+00 1.827139e-06 5.926522e-04 1.504312e-03
## 1335 0.000000e+00 0.000000e+00 0.000000e+00 1.027748e-06 7.669380e-05
## 27830 2.678093e-03 0.000000e+00 0.000000e+00 1.253840e-03 7.004646e-03
## 31649 2.015846e-05 7.032650e-06 2.223472e-04 8.854835e-04 5.075262e-03
## 16774 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 5.035815e-04
## 16825 1.400061e-04 8.190185e-04 0.000000e+00 3.458384e-03 4.907819e-03
## 14213 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 5.904856e-04
## 2805 0.000000e+00 1.311284e-04 0.000000e+00 4.557885e-04 2.469136e-03
## 22276 9.633911e-04 1.012765e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 15617 0.000000e+00 0.000000e+00 6.752002e-05 0.000000e+00 0.000000e+00
## 18412 5.337585e-05 0.000000e+00 1.300292e-04 5.933813e-04 5.440369e-04
## 11115 0.000000e+00 0.000000e+00 3.906368e-05 3.263696e-06 0.000000e+00
## 4332 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 16136 4.664160e-04 1.243266e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 6706 0.000000e+00 4.989979e-04 0.000000e+00 7.791410e-04 4.628221e-03
## 20833 0.000000e+00 2.552127e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 16181 1.406470e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
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## 7915 0.000000e+00 0.000000e+00 3.949390e-05 3.620328e-04 1.653546e-03
## 18930 0.000000e+00 0.000000e+00 0.000000e+00 5.396654e-04 4.113289e-04
## 7682 2.166858e-04 1.126880e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 15142 7.774968e-05 0.000000e+00 0.000000e+00 0.000000e+00 1.314060e-03
## 18795 8.548037e-05 0.000000e+00 0.000000e+00 3.536068e-03 1.478521e-03
## 16660 0.000000e+00 0.000000e+00 1.580031e-03 0.000000e+00 0.000000e+00
## 7286 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 10316 7.708067e-04 0.000000e+00 0.000000e+00 0.000000e+00 3.118503e-03
## 2267 4.602836e-04 1.627316e-04 0.000000e+00 0.000000e+00 1.351458e-03
## 5468 7.147686e-05 0.000000e+00 4.739733e-04 0.000000e+00 0.000000e+00

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## 21775 4.629630e-04 0.000000e+00 1.144165e-03 7.951607e-04 0.000000e+00
## 12497 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.211069e-04
## 32052 0.000000e+00 0.000000e+00 4.687966e-04 0.000000e+00 1.331696e-04
## 14954 9.900990e-04 0.000000e+00 3.374958e-04 0.000000e+00 0.000000e+00
## 24670 0.000000e+00 0.000000e+00 8.319468e-04 0.000000e+00 1.677852e-03
## 22333 0.000000e+00 1.594896e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 29339 3.125282e-06 5.906689e-05 0.000000e+00 1.162290e-03 1.824664e-04
## 28323 6.694415e-06 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18214 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 34004 0.000000e+00 3.808790e-05 0.000000e+00 2.560606e-04 7.913800e-04
## 33893 3.137756e-04 0.000000e+00 0.000000e+00 3.562736e-04 0.000000e+00
## 32043 2.311211e-04 3.307128e-04 7.730311e-04 0.000000e+00 2.347503e-03
## 16781 1.075212e-04 6.473496e-04 1.913209e-04 5.515429e-04 4.745838e-04
## 2536 0.000000e+00 0.000000e+00 2.906977e-03 1.727116e-03 1.294227e-03
## 20070 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 510 0.000000e+00 1.032279e-03 9.003143e-04 6.974796e-04 0.000000e+00
## 28120 0.000000e+00 0.000000e+00 0.000000e+00 1.682062e-04 1.461275e-03
## 23954 0.000000e+00 1.115526e-03 1.087118e-04 0.000000e+00 0.000000e+00
## 16353 6.701426e-04 0.000000e+00 1.881258e-03 0.000000e+00 0.000000e+00
## 17856 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 34108 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 4.499438e-03
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## 34937 0.000000e+00 2.595482e-05 0.000000e+00 0.000000e+00 3.448849e-04
## 29647 2.044409e-05 0.000000e+00 5.189200e-05 9.267496e-05 0.000000e+00
## 32510 0.000000e+00 0.000000e+00 1.342330e-04 0.000000e+00 0.000000e+00
## 22666 0.000000e+00 0.000000e+00 5.913661e-04 0.000000e+00 9.017133e-04
## 29331 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 34022 8.546021e-05 2.939849e-03 3.407759e-04 0.000000e+00 0.000000e+00
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## 34009 0.000000e+00 6.791171e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 21107 1.309763e-03 3.792528e-03 0.000000e+00 9.197291e-03 0.000000e+00
## 22416 0.000000e+00 6.926626e-04 2.617801e-03 2.242152e-03 2.469136e-03
## 26915 0.000000e+00 0.000000e+00 1.970740e-04 7.405710e-04 0.000000e+00
## 1284 0.000000e+00 6.770676e-03 0.000000e+00 0.000000e+00 5.715160e-04
## 23699 1.880089e-04 0.000000e+00 4.847503e-04 3.002897e-04 2.896247e-04
## 10490 0.000000e+00 1.837483e-04 7.986417e-05 3.527121e-04 5.184594e-03
## 5963 0.000000e+00 0.000000e+00 8.460237e-04 0.000000e+00 3.323223e-04
## 26024 0.000000e+00 0.000000e+00 2.560317e-04 1.936446e-03 1.069423e-03
## 21702 0.000000e+00 6.493506e-04 0.000000e+00 4.334634e-04 9.295839e-04
## 14693 0.000000e+00 0.000000e+00 4.885198e-04 0.000000e+00 0.000000e+00
## 14464 0.000000e+00 3.758694e-03 4.237536e-04 2.698785e-03 1.069771e-03
## 32839 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.937686e-04
## 14404 0.000000e+00 1.435210e-03 0.000000e+00 0.000000e+00 6.738544e-04
## 18060 0.000000e+00 0.000000e+00 0.000000e+00 9.235316e-05 0.000000e+00
## 10286 9.242144e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 21686 1.891385e-04 3.814137e-04 1.073605e-04 0.000000e+00 0.000000e+00
## 8371 0.000000e+00 0.000000e+00 4.264870e-05 1.246635e-04 0.000000e+00
## 7372 0.000000e+00 0.000000e+00 8.289215e-04 9.422342e-04 3.743964e-05
## 10418 1.580370e-05 5.393688e-05 2.044277e-04 2.330323e-03 2.687504e-03
## 1592 6.075873e-04 0.000000e+00 2.349240e-04 0.000000e+00 2.817073e-04
## 32360 9.358170e-04 0.000000e+00 6.609385e-04 4.977601e-04 2.001510e-04
## 34832 7.350173e-03 1.431051e-02 0.000000e+00 6.889564e-03 0.000000e+00
## 1740 0.000000e+00 1.840698e-04 0.000000e+00 2.605087e-04 9.670981e-04
## 32623 0.000000e+00 2.309019e-04 0.000000e+00 2.639683e-03 2.421591e-03

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## 25205 6.038647e-04 0.000000e+00 6.199628e-04 0.000000e+00 0.000000e+00
## 276 3.732951e-04 8.779631e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 28333 0.000000e+00 0.000000e+00 4.152756e-03 0.000000e+00 5.435174e-03
## 6941 5.718548e-04 5.966206e-04 1.134398e-03 0.000000e+00 0.000000e+00
## 34867 0.000000e+00 9.875576e-04 5.664938e-04 2.717995e-04 0.000000e+00
## 4398 0.000000e+00 0.000000e+00 0.000000e+00 4.412615e-05 0.000000e+00
## 10273 1.206910e-03 0.000000e+00 0.000000e+00 2.095705e-03 1.718637e-04
## 30810 2.836382e-04 0.000000e+00 5.591718e-04 8.192842e-04 0.000000e+00
## 15289 0.000000e+00 0.000000e+00 2.457997e-05 2.079434e-04 0.000000e+00
## 7328 7.557407e-05 9.214874e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 24568 0.000000e+00 4.205648e-03 0.000000e+00 5.769873e-03 7.572755e-03
## 31035 2.089199e-04 0.000000e+00 6.757430e-04 1.562856e-03 2.122172e-03
## 121 7.295862e-04 0.000000e+00 0.000000e+00 3.967733e-04 0.000000e+00
## 2108 9.169869e-05 2.006275e-04 6.167500e-06 2.957807e-04 0.000000e+00
## 20135 3.606098e-03 0.000000e+00 0.000000e+00 5.405168e-03 6.744208e-03
## 14779 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 6.269592e-03
## 35137 0.000000e+00 1.545658e-04 2.672916e-04 0.000000e+00 2.224609e-04
## 32025 7.422902e-05 1.513623e-04 0.000000e+00 5.367681e-05 0.000000e+00
## 24784 3.438963e-04 8.671439e-04 0.000000e+00 1.527750e-03 3.781037e-03
## 5145 0.000000e+00 0.000000e+00 8.688097e-04 2.222179e-03 0.000000e+00
## 20625 0.000000e+00 2.001554e-04 3.222023e-04 0.000000e+00 0.000000e+00
## 882 7.547920e-04 3.835104e-04 1.125450e-03 2.858366e-03 5.845920e-04
## 18631 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 6872 1.056636e-03 1.349528e-03 0.000000e+00 2.139037e-03 5.276566e-04
## 3197 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 6.736013e-05
## 3860 3.537162e-05 0.000000e+00 0.000000e+00 3.331121e-04 0.000000e+00
## 21642 0.000000e+00 0.000000e+00 6.733790e-04 0.000000e+00 6.468305e-04
## 6761 6.042296e-04 1.064178e-03 6.817351e-04 1.860465e-03 0.000000e+00
## 28748 2.797442e-04 2.885170e-04 0.000000e+00 1.335625e-04 9.947865e-05
## 12038 5.663430e-03 0.000000e+00 1.988072e-03 0.000000e+00 9.385175e-03
## 25869 0.000000e+00 1.728582e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 6199 1.576439e-04 0.000000e+00 0.000000e+00 0.000000e+00 2.161937e-04
## 21481 0.000000e+00 0.000000e+00 1.053027e-04 0.000000e+00 2.176517e-04
## 22481 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 26824 1.141026e-03 8.019246e-04 6.075334e-04 0.000000e+00 1.373745e-04
## 5861 0.000000e+00 0.000000e+00 6.369427e-03 0.000000e+00 0.000000e+00
## 20479 3.367648e-04 1.197093e-02 0.000000e+00 4.627275e-03 0.000000e+00
## 25703 0.000000e+00 0.000000e+00 0.000000e+00 3.277894e-04 4.141144e-06
## 29623 1.626016e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 26503 2.648332e-05 1.383359e-04 8.841384e-04 0.000000e+00 4.015472e-04
## 30942 3.077926e-03 1.195424e-03 0.000000e+00 2.478315e-03 0.000000e+00
## 26156 1.060590e-05 5.917160e-04 0.000000e+00 9.049774e-04 7.692308e-04
## 18290 4.317789e-04 0.000000e+00 0.000000e+00 0.000000e+00 3.348214e-03
## 17669 1.792480e-03 4.027394e-03 2.037208e-03 5.257248e-03 0.000000e+00
## 11202 7.728158e-04 7.536220e-03 0.000000e+00 3.334976e-03 1.106773e-03
## 18417 0.000000e+00 0.000000e+00 1.862876e-04 0.000000e+00 1.312719e-04
## 14660 0.000000e+00 0.000000e+00 0.000000e+00 5.738635e-04 6.959820e-04
## 727 0.000000e+00 0.000000e+00 0.000000e+00 8.258863e-05 3.417001e-05
## 32546 1.640930e-05 2.009803e-05 0.000000e+00 0.000000e+00 2.424010e-04
## 30382 2.168470e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18610 0.000000e+00 8.949295e-04 0.000000e+00 3.751127e-03 0.000000e+00
## 22209 1.772151e-04 0.000000e+00 0.000000e+00 3.021854e-04 2.441283e-04
## 14265 0.000000e+00 3.381207e-03 0.000000e+00 1.027749e-03 1.883484e-03
## 24403 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.224998e-03

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## 5209 0.000000e+00 1.226114e-04 0.000000e+00 1.176876e-03 2.370292e-03
## 32269 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 25695 5.891844e-04 2.793296e-03 4.672897e-03 1.858736e-03 2.949853e-03
## 2695 1.541955e-03 1.584526e-03 0.000000e+00 0.000000e+00 3.783748e-04
## 26443 0.000000e+00 8.354219e-04 0.000000e+00 9.057971e-04 0.000000e+00
## 27259 0.000000e+00 6.026558e-04 7.246377e-04 0.000000e+00 0.000000e+00
## 11231 0.000000e+00 8.493919e-04 0.000000e+00 3.786445e-04 4.873294e-04
## 9805 1.001061e-04 0.000000e+00 2.680965e-04 6.989543e-04 7.447725e-04
## 7120 1.268783e-04 0.000000e+00 1.234035e-05 0.000000e+00 8.030006e-04
## 25940 1.927396e-03 1.650409e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 8966 7.076294e-05 0.000000e+00 0.000000e+00 4.914694e-06 0.000000e+00
## 18645 0.000000e+00 1.267527e-03 8.153282e-04 0.000000e+00 1.609940e-03
## 28403 2.427381e-03 0.000000e+00 2.111183e-03 2.386981e-03 0.000000e+00
## 31657 0.000000e+00 0.000000e+00 1.472899e-04 0.000000e+00 3.728725e-04
## 25182 0.000000e+00 2.858765e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 12299 0.000000e+00 2.632272e-04 0.000000e+00 5.600672e-04 3.704844e-03
## 7125 7.948005e-05 1.696708e-03 2.213372e-04 0.000000e+00 7.711938e-04
## 16452 2.304932e-03 1.923247e-03 2.460612e-03 0.000000e+00 0.000000e+00
## 32384 0.000000e+00 0.000000e+00 6.653858e-04 7.999363e-04 0.000000e+00
## 20570 0.000000e+00 0.000000e+00 5.540166e-04 0.000000e+00 0.000000e+00
## 11532 4.647175e-05 0.000000e+00 0.000000e+00 7.980846e-04 9.433962e-04
## 1178 0.000000e+00 0.000000e+00 4.037142e-04 6.047777e-04 1.529767e-03
## 1475 0.000000e+00 0.000000e+00 7.723036e-06 0.000000e+00 2.455149e-04
## 33878 2.140434e-04 1.992067e-04 1.208019e-04 2.759652e-05 1.873519e-05
## 22441 2.979135e-04 0.000000e+00 0.000000e+00 1.250782e-03 0.000000e+00
## 18633 0.000000e+00 0.000000e+00 0.000000e+00 8.090217e-04 1.234088e-03
## 5219 0.000000e+00 2.741228e-04 5.905512e-04 6.629830e-04 1.030982e-04
## 1266 1.097050e-04 0.000000e+00 1.174974e-03 1.018995e-03 2.091849e-03
## 15650 1.184348e-04 0.000000e+00 1.974764e-04 0.000000e+00 7.465743e-04
## 1249 2.226305e-04 3.967562e-04 0.000000e+00 6.431439e-05 3.649922e-04
## 23166 0.000000e+00 1.678510e-04 0.000000e+00 1.162492e-03 0.000000e+00
## 178 1.380950e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 34147 0.000000e+00 0.000000e+00 1.587302e-02 0.000000e+00 1.492537e-02
## 23651 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.964441e-04
## 16872 4.713646e-04 6.908463e-04 0.000000e+00 3.476104e-04 0.000000e+00
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## 15672 0.000000e+00 2.138507e-03 0.000000e+00 4.350311e-04 1.197468e-03
## 11167 2.585093e-04 0.000000e+00 0.000000e+00 4.153635e-04 5.881436e-04
## 2368 4.482295e-04 0.000000e+00 0.000000e+00 5.443658e-04 0.000000e+00
## 3819 1.379120e-04 4.227785e-05 0.000000e+00 2.998155e-03 5.816268e-03
## 23672 0.000000e+00 0.000000e+00 0.000000e+00 3.081664e-03 1.061571e-02
## 34815 0.000000e+00 0.000000e+00 0.000000e+00 2.331002e-03 0.000000e+00
## 9290 1.805706e-04 9.313274e-05 0.000000e+00 0.000000e+00 1.098421e-04
## 19876 0.000000e+00 0.000000e+00 1.470588e-02 0.000000e+00 0.000000e+00
## 20244 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 28441 0.000000e+00 0.000000e+00 2.138175e-04 1.214303e-04 0.000000e+00
## 446 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15781 2.473595e-04 0.000000e+00 1.349067e-04 3.114086e-04 0.000000e+00
## 11477 0.000000e+00 0.000000e+00 0.000000e+00 9.519277e-04 0.000000e+00
## 27886 0.000000e+00 0.000000e+00 1.584786e-03 0.000000e+00 0.000000e+00
## 27802 0.000000e+00 9.921958e-05 0.000000e+00 4.207194e-04 9.110949e-04
## 22853 0.000000e+00 7.985046e-05 2.822697e-04 1.205183e-04 0.000000e+00
## 7732 0.000000e+00 4.318217e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 16574 1.135761e-03 2.532350e-04 0.000000e+00 0.000000e+00 2.394282e-03

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## 16578 2.411790e-05 1.775694e-05 0.000000e+00 1.700826e-04 3.570787e-04
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## 22445 0.000000e+00 3.456764e-04 0.000000e+00 0.000000e+00 4.059173e-04
## 14036 0.000000e+00 1.218595e-02 6.862393e-03 0.000000e+00 0.000000e+00
## 7317 3.886784e-04 0.000000e+00 0.000000e+00 2.899391e-04 5.038818e-04
## 11721 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 456 0.000000e+00 2.613370e-03 4.542755e-03 0.000000e+00 0.000000e+00
## 20233 0.000000e+00 3.653753e-04 8.939718e-05 1.085824e-04 7.257715e-05
## 8796 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15041 0.000000e+00 9.973195e-04 0.000000e+00 5.864129e-04 3.330526e-04
## 1164 2.488768e-06 0.000000e+00 7.763975e-04 7.917656e-04 1.642036e-03
## 31512 3.187049e-04 0.000000e+00 0.000000e+00 3.810503e-04 5.271618e-04
## 27603 1.049410e-04 5.852055e-05 4.089799e-05 0.000000e+00 4.387889e-04
## 11955 3.985302e-04 1.060864e-03 1.192848e-03 6.943042e-04 1.163257e-03
## 20358 0.000000e+00 1.018956e-03 3.289184e-05 7.552870e-04 0.000000e+00
## 34183 0.000000e+00 0.000000e+00 3.526093e-04 6.906077e-04 0.000000e+00
## 1126 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 17930 5.402019e-05 0.000000e+00 0.000000e+00 0.000000e+00 5.930229e-04
## 34835 0.000000e+00 5.233659e-04 0.000000e+00 0.000000e+00 9.416196e-04
## 20819 2.592689e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
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## 26979 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 34192 5.336179e-04 0.000000e+00 0.000000e+00 0.000000e+00 1.360544e-03
## 18886 2.315053e-04 1.593831e-04 2.261603e-04 0.000000e+00 0.000000e+00
## 23817 3.655588e-04 0.000000e+00 0.000000e+00 2.338634e-04 0.000000e+00
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## 18061 0.000000e+00 2.234209e-04 0.000000e+00 3.812874e-04 7.577214e-04
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## 6957 0.000000e+00 1.120681e-03 4.192872e-04 4.535147e-04 1.125492e-03
## 20174 4.230913e-04 8.871782e-04 7.131072e-04 8.522843e-04 6.795483e-05
## 18846 5.885815e-03 9.186131e-04 5.866952e-04 6.566295e-04 0.000000e+00
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## 21392 0.000000e+00 0.000000e+00 3.752913e-04 2.390645e-04 4.879636e-04
## 7853 0.000000e+00 3.454305e-04 8.056750e-05 0.000000e+00 0.000000e+00
## 837 0.000000e+00 4.168311e-03 0.000000e+00 0.000000e+00 9.700098e-04
## 24059 0.000000e+00 8.524059e-06 0.000000e+00 1.517329e-03 2.916078e-03
## 22332 0.000000e+00 1.755002e-04 8.236561e-04 0.000000e+00 0.000000e+00
## 14277 7.936508e-04 0.000000e+00 7.326007e-04 0.000000e+00 1.400560e-03
## 466 0.000000e+00 3.984234e-04 4.653015e-04 6.254464e-04 6.103426e-04
## 17004 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15085 1.026121e-02 0.000000e+00 6.359954e-03 4.795669e-03 0.000000e+00
## 7714 0.000000e+00 7.181678e-05 0.000000e+00 2.969165e-04 7.466210e-04
## 997 0.000000e+00 1.394700e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 10707 0.000000e+00 0.000000e+00 6.023466e-04 0.000000e+00 0.000000e+00
## 7584 0.000000e+00 0.000000e+00 0.000000e+00 7.949126e-04 0.000000e+00
## 5302 0.000000e+00 0.000000e+00 0.000000e+00 2.249719e-03 0.000000e+00
## 22134 0.000000e+00 3.475198e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 16080 2.732614e-04 0.000000e+00 1.752115e-04 8.356546e-04 1.108293e-03
## 561 0.000000e+00 3.986683e-04 0.000000e+00 6.202649e-05 3.431089e-04
## 841 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 4.852796e-04
## 15557 0.000000e+00 0.000000e+00 0.000000e+00 2.905333e-04 0.000000e+00
## 9769 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 14635 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.736584e-04
## 7077 2.130848e-04 3.134971e-04 0.000000e+00 0.000000e+00 0.000000e+00

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## 28513 1.426511e-03 0.000000e+00 0.000000e+00 1.658803e-03 0.000000e+00
## 29619 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 821 0.000000e+00 0.000000e+00 0.000000e+00 2.450980e-03 3.076923e-03
## 15813 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 27860 5.224509e-04 5.074430e-04 7.692388e-04 0.000000e+00 3.223684e-04
## 24292 5.288207e-04 1.715279e-04 0.000000e+00 4.276694e-03 1.685202e-03
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## 8834 0.000000e+00 1.675042e-03 0.000000e+00 0.000000e+00 1.642707e-04
## 4225 6.228148e-04 5.203421e-04 0.000000e+00 6.955715e-04 1.810923e-03
## 17401 0.000000e+00 0.000000e+00 1.170094e-03 1.152262e-04 2.254278e-04
## 18377 0.000000e+00 0.000000e+00 3.094385e-04 3.190727e-04 1.338135e-03
## 15027 5.668934e-04 0.000000e+00 6.872852e-04 0.000000e+00 0.000000e+00
## 30045 0.000000e+00 4.389686e-03 3.439738e-04 0.000000e+00 6.989353e-04
## 34281 0.000000e+00 0.000000e+00 1.927957e-03 6.986556e-04 7.478940e-03
## 25048 4.072771e-03 0.000000e+00 0.000000e+00 1.443125e-02 4.990879e-03
## 1023 0.000000e+00 2.433936e-03 1.678704e-03 3.311866e-04 6.793886e-04
## 6394 1.473839e-03 5.190957e-05 0.000000e+00 0.000000e+00 4.961808e-04
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## 27356 0.000000e+00 0.000000e+00 0.000000e+00 4.145078e-03 0.000000e+00
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## 12989 8.262824e-06 0.000000e+00 0.000000e+00 6.414368e-04 2.055498e-03
## 11994 0.000000e+00 0.000000e+00 1.651539e-04 4.206403e-04 8.284214e-04
## 15376 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 10941 1.162791e-03 0.000000e+00 1.736111e-03 0.000000e+00 0.000000e+00
## 32237 0.000000e+00 0.000000e+00 0.000000e+00 6.430868e-04 0.000000e+00
## 18931 0.000000e+00 0.000000e+00 4.646840e-04 7.780228e-05 3.323363e-04
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## 33641 0.000000e+00 0.000000e+00 0.000000e+00 2.347810e-04 0.000000e+00
## 22652 0.000000e+00 7.524930e-04 0.000000e+00 0.000000e+00 5.924171e-04
## 34436 1.074896e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 9916 6.131810e-04 0.000000e+00 1.177657e-04 5.690413e-04 0.000000e+00
## 4730 0.000000e+00 0.000000e+00 5.695842e-04 0.000000e+00 0.000000e+00
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## 20011 2.279016e-03 3.065280e-03 1.506945e-03 0.000000e+00 0.000000e+00
## 10732 0.000000e+00 0.000000e+00 2.993656e-04 2.538955e-04 9.153525e-05
## 33802 0.000000e+00 0.000000e+00 1.786115e-04 0.000000e+00 2.327132e-04
## 11061 0.000000e+00 0.000000e+00 0.000000e+00 5.858231e-04 0.000000e+00
## 24304 0.000000e+00 0.000000e+00 6.944444e-03 7.812500e-03 0.000000e+00
## 25231 2.083333e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
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## 8245 7.552870e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 3721 9.673433e-04 0.000000e+00 0.000000e+00 1.647361e-03 8.910433e-04
## 22354 1.412429e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 31156 2.228437e-04 5.895137e-04 6.418379e-04 0.000000e+00 0.000000e+00
## 10809 2.817353e-04 0.000000e+00 0.000000e+00 0.000000e+00 2.834936e-04
## 16636 0.000000e+00 0.000000e+00 1.239601e-03 0.000000e+00 0.000000e+00
## 14643 0.000000e+00 0.000000e+00 2.853749e-04 2.014968e-03 2.623524e-03
## 18829 0.000000e+00 0.000000e+00 0.000000e+00 7.722008e-03 4.472272e-03
## 5885 0.000000e+00 1.973891e-04 3.390987e-04 0.000000e+00 0.000000e+00

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## 32382 2.923281e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 6584 5.485387e-04 3.318859e-04 4.053483e-04 1.185235e-03 4.862020e-03
## 25116 1.287001e-03 1.686341e-03 1.245330e-03 9.165903e-04 0.000000e+00
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## 16402 2.542071e-06 0.000000e+00 8.447267e-05 6.097561e-04 1.298709e-03
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## 7642 1.455604e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
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## 22560 2.294104e-04 2.610600e-04 0.000000e+00 3.837377e-04 8.934319e-04
## 34171 1.497464e-04 0.000000e+00 1.551310e-04 4.821219e-04 1.247430e-04
## 8964 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 6.906026e-04
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## 9642 0.000000e+00 0.000000e+00 0.000000e+00 9.928022e-04 0.000000e+00
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## 27956 0.000000e+00 5.976644e-04 0.000000e+00 0.000000e+00 1.165204e-04
## 15257 4.650564e-05 0.000000e+00 0.000000e+00 1.326556e-04 9.354219e-04
## 20125 3.745389e-04 0.000000e+00 3.446252e-04 0.000000e+00 0.000000e+00
## 4759 0.000000e+00 4.890229e-05 2.138761e-04 0.000000e+00 6.962299e-05
## 9176 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 2024 4.119477e-04 0.000000e+00 2.506266e-03 0.000000e+00 0.000000e+00
## 16303 0.000000e+00 4.778006e-04 0.000000e+00 5.196209e-04 2.674965e-04
## 18765 2.064149e-04 3.163640e-05 0.000000e+00 0.000000e+00 8.657222e-05
## 22238 0.000000e+00 0.000000e+00 1.390869e-03 0.000000e+00 0.000000e+00
## 3634 0.000000e+00 5.033309e-04 1.351734e-04 0.000000e+00 0.000000e+00
## 5577 0.000000e+00 4.977866e-03 1.140492e-03 7.001752e-03 0.000000e+00
## 5780 1.133276e-04 0.000000e+00 0.000000e+00 4.084967e-04 3.641802e-04
## 20100 4.277160e-04 0.000000e+00 1.162115e-03 0.000000e+00 0.000000e+00
## 9186 8.694914e-05 0.000000e+00 8.158774e-05 1.353028e-04 9.141091e-06
## 2092 0.000000e+00 0.000000e+00 2.261973e-04 0.000000e+00 0.000000e+00
## 5357 1.896379e-04 0.000000e+00 5.891135e-04 2.969836e-04 4.279448e-04
## 21603 2.351570e-05 0.000000e+00 0.000000e+00 6.377982e-04 1.760877e-03
## 4216 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 22280 4.870603e-04 5.700253e-04 2.197203e-03 0.000000e+00 7.453587e-04
## 3085 1.742283e-05 6.707741e-05 0.000000e+00 0.000000e+00 5.817204e-04
## 4555 3.132570e-04 0.000000e+00 2.254919e-04 0.000000e+00 4.607266e-04
## 4689 0.000000e+00 1.724634e-04 1.922246e-04 0.000000e+00 0.000000e+00
## 25601 1.883945e-04 1.015979e-03 0.000000e+00 5.494103e-04 0.000000e+00
## 6560 1.337129e-04 2.312153e-04 0.000000e+00 2.527044e-04 1.161601e-03
## 10733 2.143789e-04 0.000000e+00 1.043332e-04 0.000000e+00 0.000000e+00
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## 13793 0.000000e+00 1.083424e-03 3.380362e-03 3.000750e-03 0.000000e+00
## 30574 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 4.743330e-04
## 30223 3.492392e-03 1.582395e-03 0.000000e+00 0.000000e+00 3.477260e-03
## 28728 1.564446e-04 0.000000e+00 1.730347e-04 1.857355e-04 8.683068e-04
## 32047 4.098623e-04 1.107829e-03 8.210181e-04 0.000000e+00 6.610048e-04
## 31153 9.156906e-03 0.000000e+00 0.000000e+00 0.000000e+00 6.621681e-03
## 21715 2.784551e-04 2.178649e-04 0.000000e+00 0.000000e+00 0.000000e+00

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## 3389 2.651519e-04 1.641412e-05 0.000000e+00 1.194095e-03 7.963984e-05
## 32395 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 29482 0.000000e+00 0.000000e+00 8.260177e-04 4.378284e-04 0.000000e+00
## 32517 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.232217e-04
## 23467 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 16866 0.000000e+00 7.541845e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 27359 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.033628e-03
## 15115 1.714717e-03 3.728179e-04 0.000000e+00 1.151746e-04 6.284935e-04
## 22446 0.000000e+00 0.000000e+00 1.949518e-04 0.000000e+00 0.000000e+00
## 10238 1.916498e-04 0.000000e+00 0.000000e+00 0.000000e+00 2.893789e-04
## 16630 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 30784 7.751938e-04 1.140251e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 34278 0.000000e+00 1.043841e-03 0.000000e+00 1.506024e-03 5.766693e-03
## 14609 0.000000e+00 0.000000e+00 0.000000e+00 1.029230e-03 6.919083e-04
## 33373 6.792917e-05 1.172549e-04 6.551654e-05 8.304908e-06 4.829409e-04
## 16730 0.000000e+00 0.000000e+00 1.326675e-04 1.305708e-04 2.989612e-04
## 24394 3.674104e-04 0.000000e+00 4.037313e-06 0.000000e+00 2.688210e-04
## 14321 1.246213e-04 0.000000e+00 3.305225e-04 0.000000e+00 0.000000e+00
## 6046 2.050861e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 25418 3.352434e-03 8.230160e-03 3.271065e-03 0.000000e+00 0.000000e+00
## 21236 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 5712 3.933910e-05 0.000000e+00 0.000000e+00 0.000000e+00 4.414421e-04
## 28786 2.194871e-03 2.994900e-03 0.000000e+00 7.007749e-03 6.191113e-03
## 22559 0.000000e+00 3.581585e-04 3.776720e-04 0.000000e+00 4.694803e-04
## 27524 0.000000e+00 0.000000e+00 3.949447e-04 1.995208e-04 0.000000e+00
## 23589 0.000000e+00 2.325876e-03 2.587895e-03 0.000000e+00 0.000000e+00
## 14910 0.000000e+00 3.333730e-04 0.000000e+00 1.272684e-04 0.000000e+00
## 32354 0.000000e+00 0.000000e+00 8.361204e-04 0.000000e+00 0.000000e+00
## 10818 2.385345e-04 6.101884e-05 1.335192e-04 4.557885e-04 0.000000e+00
## 5506 1.978388e-04 1.699612e-04 1.680486e-04 4.359059e-04 1.925828e-04
## 24679 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 25604 0.000000e+00 0.000000e+00 0.000000e+00 7.656968e-04 5.668538e-04
## 7329 0.000000e+00 0.000000e+00 9.637714e-05 0.000000e+00 1.011225e-03
## 23049 0.000000e+00 0.000000e+00 2.985766e-04 2.564103e-03 1.296617e-04
## 35049 0.000000e+00 3.876756e-04 3.741714e-04 0.000000e+00 0.000000e+00
## 27646 0.000000e+00 0.000000e+00 0.000000e+00 2.918856e-03 7.960079e-03
## 31667 0.000000e+00 0.000000e+00 1.860569e-04 4.062452e-04 0.000000e+00
## 2047 0.000000e+00 6.814707e-04 0.000000e+00 2.626426e-05 2.114798e-04
## 20556 5.809731e-05 7.440291e-04 5.150431e-04 7.114062e-04 0.000000e+00
## 28817 5.420858e-04 0.000000e+00 9.995893e-04 0.000000e+00 5.082955e-04
## 5511 5.561060e-04 0.000000e+00 1.268552e-04 0.000000e+00 0.000000e+00
## 7305 6.749916e-04 0.000000e+00 0.000000e+00 0.000000e+00 7.074389e-04
## 17873 0.000000e+00 4.990378e-03 6.684799e-03 1.036461e-03 0.000000e+00
## 15457 3.701575e-04 3.725111e-03 1.012402e-03 7.207876e-04 0.000000e+00
## 16490 7.955449e-04 1.324503e-03 0.000000e+00 0.000000e+00 2.125414e-03
## 18407 2.752870e-03 0.000000e+00 2.305873e-03 5.264240e-04 1.983961e-03
## 4619 1.266236e-04 5.136513e-04 3.568311e-04 4.034427e-04 1.536228e-04
## 14713 7.032238e-04 0.000000e+00 0.000000e+00 0.000000e+00 9.429697e-03
## 35002 0.000000e+00 0.000000e+00 0.000000e+00 4.008377e-04 1.276201e-04
## 32815 1.756527e-04 0.000000e+00 4.987531e-04 0.000000e+00 0.000000e+00
## 23469 0.000000e+00 0.000000e+00 3.292524e-04 0.000000e+00 3.296906e-04
## 28029 0.000000e+00 0.000000e+00 0.000000e+00 1.017640e-03 1.573078e-03
## 5142 5.754082e-04 1.077914e-03 8.149044e-04 0.000000e+00 0.000000e+00
## 15181 0.000000e+00 5.527916e-04 4.310345e-04 0.000000e+00 1.968787e-04

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## 21684 1.362069e-03 8.720632e-04 0.000000e+00 1.034236e-03 2.733179e-03
## 34299 1.318269e-03 1.599184e-03 6.120675e-04 1.769113e-03 4.884364e-04
## 32550 0.000000e+00 0.000000e+00 0.000000e+00 3.743567e-04 2.262637e-03
## 6610 3.211987e-04 2.338410e-04 0.000000e+00 2.817115e-04 5.482690e-05
## 20554 3.754495e-04 2.506266e-03 9.945301e-04 0.000000e+00 9.823183e-04
## 20319 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 9592 0.000000e+00 0.000000e+00 0.000000e+00 6.691885e-04 1.507055e-03
## 9557 1.040524e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 34008 5.314281e-04 0.000000e+00 3.184713e-04 1.832341e-03 0.000000e+00
## 35412 1.116028e-04 2.682140e-04 2.417612e-04 0.000000e+00 0.000000e+00
## 16481 0.000000e+00 0.000000e+00 6.523711e-04 0.000000e+00 0.000000e+00
## 10497 3.936481e-04 4.908721e-04 2.799044e-04 0.000000e+00 8.260116e-05
## 6364 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.054949e-05
## 9917 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 9260 8.328652e-05 0.000000e+00 0.000000e+00 6.122152e-04 7.066302e-04
## 28177 0.000000e+00 0.000000e+00 6.877579e-04 0.000000e+00 0.000000e+00
## 518 0.000000e+00 0.000000e+00 3.260701e-03 0.000000e+00 0.000000e+00
## 15563 1.448587e-04 0.000000e+00 2.862660e-03 0.000000e+00 0.000000e+00
## 23590 0.000000e+00 0.000000e+00 0.000000e+00 5.872388e-04 0.000000e+00
## 635 0.000000e+00 3.409097e-04 0.000000e+00 0.000000e+00 3.973858e-04
## 18532 2.275460e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 32816 0.000000e+00 6.292957e-05 0.000000e+00 1.450141e-03 3.800987e-03
## 32311 0.000000e+00 0.000000e+00 9.963273e-04 1.859014e-04 2.358519e-04
## 7324 0.000000e+00 8.084074e-04 6.583278e-04 0.000000e+00 1.572327e-03
## 18592 2.651879e-04 8.823557e-04 0.000000e+00 9.087601e-04 1.978235e-04
## 10777 0.000000e+00 0.000000e+00 4.665630e-03 0.000000e+00 0.000000e+00
## 27042 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 27909 1.229588e-03 0.000000e+00 0.000000e+00 0.000000e+00 6.287092e-03
## 16255 0.000000e+00 0.000000e+00 3.766880e-05 0.000000e+00 0.000000e+00
## 15172 2.299272e-03 0.000000e+00 0.000000e+00 1.133131e-03 0.000000e+00
## 6879 0.000000e+00 0.000000e+00 1.708275e-04 4.161279e-04 4.148151e-04
## 13224 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 6.540575e-04
## 12796 0.000000e+00 0.000000e+00 2.862012e-04 0.000000e+00 0.000000e+00
## 13003 5.155890e-04 0.000000e+00 2.164605e-04 0.000000e+00 0.000000e+00
## 26506 0.000000e+00 0.000000e+00 7.264693e-04 7.434912e-04 0.000000e+00
## 24613 0.000000e+00 4.633904e-05 0.000000e+00 7.273388e-04 0.000000e+00
## 14186 0.000000e+00 6.706908e-04 0.000000e+00 1.150307e-03 1.415219e-04
## 3736 4.349717e-04 7.067138e-04 1.340483e-03 0.000000e+00 0.000000e+00
## 17828 0.000000e+00 0.000000e+00 8.130081e-04 0.000000e+00 0.000000e+00
## 20377 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.357659e-04
## 34258 8.536065e-04 0.000000e+00 7.949105e-05 2.086625e-04 0.000000e+00
## 3588 1.480797e-03 0.000000e+00 4.197668e-03 0.000000e+00 1.020376e-03
## 21651 0.000000e+00 3.535057e-03 2.975449e-04 5.758987e-03 0.000000e+00
## 14437 3.346980e-04 9.534706e-04 6.383374e-04 3.530160e-04 0.000000e+00
## 25548 0.000000e+00 1.175427e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 25808 1.643673e-04 8.755704e-05 0.000000e+00 1.199709e-04 0.000000e+00
## 34960 0.000000e+00 0.000000e+00 4.807692e-04 5.820722e-04 2.937536e-03
## 34139 0.000000e+00 2.839751e-04 0.000000e+00 1.120469e-03 0.000000e+00
## 9532 0.000000e+00 8.918554e-04 0.000000e+00 1.290251e-03 0.000000e+00
## 12312 4.016854e-06 0.000000e+00 3.501410e-04 0.000000e+00 0.000000e+00
## 12354 5.179881e-04 0.000000e+00 0.000000e+00 6.293617e-04 4.369485e-04
## 18124 0.000000e+00 6.079370e-04 0.000000e+00 4.424779e-04 0.000000e+00
## 26254 8.554545e-04 6.598177e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 16313 1.072076e-03 8.143183e-04 1.958074e-03 0.000000e+00 0.000000e+00

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## 5884 0.000000e+00 1.322788e-04 0.000000e+00 5.903188e-04 0.000000e+00
## 24278 3.707136e-04 0.000000e+00 8.920886e-04 5.926897e-05 0.000000e+00
## 33646 1.209190e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 6842 0.000000e+00 2.296488e-04 1.540953e-04 0.000000e+00 0.000000e+00
## 144 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 28737 0.000000e+00 4.340146e-04 6.844133e-04 1.509748e-04 8.236199e-04
## 34406 4.230383e-06 3.217963e-04 0.000000e+00 0.000000e+00 1.360742e-04
## 31052 2.376426e-04 0.000000e+00 2.758621e-04 2.943774e-04 3.676471e-04
## 15930 0.000000e+00 0.000000e+00 2.307139e-04 9.041591e-04 0.000000e+00
## 32165 1.365654e-03 5.851375e-04 0.000000e+00 0.000000e+00 1.405811e-03
## 11359 0.000000e+00 6.521749e-04 3.569726e-04 3.779004e-03 5.215054e-04
## 24614 0.000000e+00 3.381516e-04 1.212963e-03 2.801592e-04 0.000000e+00
## 26128 8.265202e-04 1.596760e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 29636 0.000000e+00 4.239084e-04 0.000000e+00 0.000000e+00 9.246954e-04
## 5233 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 1051 0.000000e+00 0.000000e+00 6.385092e-04 3.642058e-04 2.793132e-04
## 9595 1.393395e-04 0.000000e+00 0.000000e+00 2.706737e-04 7.603380e-04
## 14724 4.100994e-04 2.435815e-04 1.537279e-03 0.000000e+00 0.000000e+00
## 17558 7.293345e-04 1.814382e-04 0.000000e+00 0.000000e+00 1.073274e-03
## 23463 0.000000e+00 1.040616e-03 7.012623e-04 0.000000e+00 0.000000e+00
## 17480 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 33861 6.044217e-04 5.421288e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 24923 2.741532e-04 2.319647e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 7777 0.000000e+00 0.000000e+00 0.000000e+00 8.650519e-04 0.000000e+00
## 3764 0.000000e+00 0.000000e+00 2.141062e-04 0.000000e+00 4.810630e-04
## 27629 0.000000e+00 0.000000e+00 6.042383e-04 0.000000e+00 2.909826e-05
## 27066 0.000000e+00 4.228260e-04 5.497526e-04 0.000000e+00 0.000000e+00
## 15839 1.711785e-04 0.000000e+00 0.000000e+00 0.000000e+00 7.370806e-04
## 28110 0.000000e+00 4.447590e-04 0.000000e+00 0.000000e+00 2.731576e-03
## 11747 0.000000e+00 0.000000e+00 1.480768e-03 0.000000e+00 8.657948e-04
## 31772 0.000000e+00 0.000000e+00 0.000000e+00 1.584399e-03 1.050860e-03
## 7037 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 26624 7.766420e-05 0.000000e+00 3.304633e-04 0.000000e+00 2.042016e-04
## 15145 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 35481 1.374746e-04 0.000000e+00 1.712131e-05 6.264539e-04 0.000000e+00
## 6134 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7028 3.784253e-04 0.000000e+00 0.000000e+00 1.369863e-03 0.000000e+00
## 19511 0.000000e+00 0.000000e+00 1.298701e-03 5.364807e-04 0.000000e+00
## 2458 8.865251e-05 1.339078e-04 2.285714e-04 0.000000e+00 7.576071e-05
## 3062 0.000000e+00 0.000000e+00 1.546647e-04 2.889510e-05 6.377156e-04
## 32359 0.000000e+00 5.091650e-04 0.000000e+00 0.000000e+00 5.523825e-04
## 30427 0.000000e+00 5.656425e-04 4.750530e-04 2.592514e-04 0.000000e+00
## 6407 2.526292e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 33300 2.536380e-04 0.000000e+00 1.644030e-04 4.760752e-04 1.371602e-03
## 28014 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.036269e-02
## 25554 9.404514e-06 0.000000e+00 3.586898e-04 0.000000e+00 0.000000e+00
## 17634 0.000000e+00 3.650689e-03 1.095390e-03 1.858295e-04 0.000000e+00
## 30927 5.760432e-04 5.288207e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 5609 4.827284e-05 0.000000e+00 1.098621e-03 4.062022e-03 0.000000e+00
## 18468 0.000000e+00 0.000000e+00 1.457640e-04 0.000000e+00 0.000000e+00
## 28746 5.742133e-04 0.000000e+00 2.611033e-04 0.000000e+00 0.000000e+00
## 14830 0.000000e+00 3.797521e-05 0.000000e+00 0.000000e+00 1.744176e-03
## 23354 0.000000e+00 1.538279e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 32041 6.612306e-05 0.000000e+00 4.481707e-04 0.000000e+00 5.684956e-05

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## 27324 1.257123e-04 2.288331e-04 1.843617e-04 9.202010e-05 9.264965e-05
## 8446 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 27924 0.000000e+00 4.216045e-04 0.000000e+00 0.000000e+00 1.890319e-05
## 9289 8.309098e-04 5.494505e-04 0.000000e+00 1.221001e-03 0.000000e+00
## 6329 5.081200e-04 0.000000e+00 0.000000e+00 3.702749e-04 0.000000e+00
## 732 0.000000e+00 2.312022e-04 6.015368e-05 8.797962e-05 8.457572e-04
## 28785 1.432805e-04 1.364488e-04 0.000000e+00 1.879733e-04 0.000000e+00
## 32284 7.558865e-04 9.072582e-05 1.315703e-03 1.664266e-03 2.118358e-03
## 9567 0.000000e+00 0.000000e+00 3.628133e-04 7.479716e-04 0.000000e+00
## 4503 0.000000e+00 0.000000e+00 1.324503e-03 0.000000e+00 0.000000e+00
## 34058 5.731913e-04 0.000000e+00 0.000000e+00 0.000000e+00 5.601136e-04
## 4548 4.054060e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15805 1.323035e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 19687 0.000000e+00 5.914227e-04 0.000000e+00 9.292862e-05 2.006777e-04
## 26918 0.000000e+00 1.318212e-04 1.616916e-04 3.391241e-04 2.358273e-04
## 27274 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 5.795848e-04
## 28289 1.364256e-03 0.000000e+00 1.411767e-04 9.741841e-04 0.000000e+00
## 23345 4.657662e-04 7.745933e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 15842 0.000000e+00 0.000000e+00 0.000000e+00 3.412969e-04 0.000000e+00
## 32822 0.000000e+00 0.000000e+00 2.013776e-03 0.000000e+00 0.000000e+00
## 18617 1.449826e-04 0.000000e+00 1.066776e-05 0.000000e+00 0.000000e+00
## 20370 0.000000e+00 1.937633e-04 0.000000e+00 2.506969e-04 9.700232e-04
## 6914 0.000000e+00 5.865728e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 15581 0.000000e+00 0.000000e+00 1.172333e-03 4.418342e-03 1.214849e-03
## 275 0.000000e+00 0.000000e+00 1.779359e-03 1.755148e-03 0.000000e+00
## 5768 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 28249 3.100011e-04 5.958549e-04 1.724419e-04 0.000000e+00 0.000000e+00
## 6687 3.047232e-04 4.317631e-05 0.000000e+00 0.000000e+00 6.986671e-04
## 30296 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 8.371127e-04
## 19921 0.000000e+00 2.052059e-04 5.131072e-04 0.000000e+00 0.000000e+00
## 23821 0.000000e+00 7.318045e-04 0.000000e+00 3.617945e-04 0.000000e+00
## 25743 0.000000e+00 6.821282e-04 3.436959e-05 5.238170e-04 1.672241e-03
## 14600 0.000000e+00 4.578004e-04 1.416412e-04 8.014850e-04 0.000000e+00
## 33033 2.875657e-04 1.614712e-03 0.000000e+00 2.268552e-04 0.000000e+00
## 16780 2.242722e-06 0.000000e+00 6.138840e-05 1.752305e-04 0.000000e+00
## 14906 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.576002e-04
## 5860 1.194268e-03 0.000000e+00 0.000000e+00 0.000000e+00 2.506266e-03
## 15691 0.000000e+00 1.120161e-03 6.673582e-04 1.171298e-03 2.836879e-03
## 3610 6.565757e-04 0.000000e+00 8.499878e-07 3.819882e-04 2.669823e-04
## 5406 0.000000e+00 5.437738e-04 0.000000e+00 0.000000e+00 9.915716e-04
## 35051 3.756557e-04 3.110535e-04 6.779661e-04 1.725626e-03 8.025682e-04
## 25397 2.652783e-05 0.000000e+00 2.865941e-04 0.000000e+00 0.000000e+00
## 6230 2.135065e-04 1.120681e-03 2.437241e-04 0.000000e+00 1.186582e-03
## 29228 0.000000e+00 0.000000e+00 7.133812e-05 5.817645e-04 1.003702e-03
## 20606 1.176884e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 6237 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.134796e-03
## 8932 2.897920e-04 0.000000e+00 0.000000e+00 0.000000e+00 2.403729e-04
## 17498 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.371977e-03
## 18423 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.347733e-05
## 3962 8.841733e-04 0.000000e+00 3.635508e-04 0.000000e+00 0.000000e+00
## 4475 5.873738e-05 4.654215e-04 0.000000e+00 0.000000e+00 1.680632e-03
## 10493 0.000000e+00 0.000000e+00 1.516300e-03 9.350164e-04 1.676222e-03
## 16310 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.164144e-03
## 2798 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 6.693440e-04

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## 28781 9.317478e-05 0.000000e+00 0.000000e+00 0.000000e+00 1.191426e-03
## 16518 2.081599e-04 0.000000e+00 5.263938e-04 1.417434e-04 2.007181e-03
## 35142 0.000000e+00 1.372712e-03 2.470278e-03 0.000000e+00 6.124234e-04
## 14742 0.000000e+00 1.027760e-03 6.501753e-04 1.035649e-03 0.000000e+00
## 21646 1.051417e-04 0.000000e+00 6.475684e-04 1.448323e-04 0.000000e+00
## 16509 0.000000e+00 0.000000e+00 0.000000e+00 8.912656e-04 8.591065e-04
## 34977 0.000000e+00 0.000000e+00 3.300384e-04 0.000000e+00 0.000000e+00
## 17123 5.924064e-05 3.870676e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 4625 6.434671e-05 0.000000e+00 0.000000e+00 1.920953e-04 8.364930e-05
## 945 0.000000e+00 0.000000e+00 0.000000e+00 2.733838e-04 0.000000e+00
## 8938 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.117494e-03
## 4160 4.874953e-04 1.568100e-04 0.000000e+00 0.000000e+00 9.473330e-04
## 32528 1.749410e-03 4.392602e-04 0.000000e+00 0.000000e+00 5.143526e-04
## 32000 0.000000e+00 0.000000e+00 0.000000e+00 3.891487e-04 0.000000e+00
## 33167 0.000000e+00 0.000000e+00 0.000000e+00 1.684357e-04 0.000000e+00
## 18023 4.477587e-04 0.000000e+00 3.144654e-04 1.460965e-04 4.208754e-04
## 6770 7.879111e-05 0.000000e+00 0.000000e+00 1.481481e-03 5.979072e-04
## 35470 3.111472e-04 0.000000e+00 0.000000e+00 0.000000e+00 3.844975e-04
## 8983 1.528352e-05 0.000000e+00 0.000000e+00 0.000000e+00 5.185905e-04
## 25709 6.419793e-04 1.254329e-04 0.000000e+00 2.677265e-03 0.000000e+00
## 7565 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7960 0.000000e+00 0.000000e+00 4.510965e-04 2.053725e-04 0.000000e+00
## 4155 0.000000e+00 0.000000e+00 9.962370e-05 0.000000e+00 5.358995e-04
## 15592 0.000000e+00 0.000000e+00 0.000000e+00 7.722008e-04 0.000000e+00
## 8844 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.307404e-04
## 15338 0.000000e+00 6.456369e-04 3.091689e-05 0.000000e+00 0.000000e+00
## 16775 0.000000e+00 0.000000e+00 7.997443e-04 9.284526e-04 0.000000e+00
## 17439 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 35027 8.777525e-04 1.710673e-03 3.321105e-04 0.000000e+00 4.909703e-04
## 15086 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 4.186242e-04
## 25674 4.983274e-04 1.823844e-04 4.662019e-04 0.000000e+00 0.000000e+00
## 15647 0.000000e+00 0.000000e+00 0.000000e+00 2.350265e-04 4.432826e-04
## 29319 0.000000e+00 0.000000e+00 1.969602e-04 1.928722e-04 2.191347e-03
## 6181 4.222973e-04 1.022487e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 23790 0.000000e+00 1.665303e-04 3.105966e-04 6.454317e-05 5.150149e-04
## 27742 0.000000e+00 0.000000e+00 5.392246e-04 3.061849e-04 3.185003e-04
## 35485 0.000000e+00 0.000000e+00 5.004582e-04 9.332711e-04 1.246251e-03
## 17110 0.000000e+00 1.010293e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 1015 1.178657e-04 0.000000e+00 1.274003e-04 5.275387e-04 6.120616e-04
## 28180 0.000000e+00 0.000000e+00 0.000000e+00 2.134892e-04 2.348769e-04
## 14368 0.000000e+00 0.000000e+00 7.445135e-04 0.000000e+00 0.000000e+00
## 11397 1.919839e-04 0.000000e+00 2.267848e-04 1.112407e-04 0.000000e+00
## 4620 4.957852e-05 7.896133e-04 4.858421e-04 5.638726e-03 1.126541e-02
## 7145 0.000000e+00 0.000000e+00 2.369946e-03 0.000000e+00 0.000000e+00
## 19949 7.107582e-04 8.372485e-04 3.149697e-04 0.000000e+00 6.069934e-04
## 12045 0.000000e+00 0.000000e+00 3.832886e-04 9.807127e-04 0.000000e+00
## 26779 2.219195e-04 0.000000e+00 0.000000e+00 0.000000e+00 2.563226e-04
## 16171 7.515758e-03 0.000000e+00 0.000000e+00 2.509410e-03 6.260211e-04
## 27824 0.000000e+00 0.000000e+00 8.688097e-04 1.336898e-03 4.535147e-03
## 8474 2.840070e-03 1.519785e-04 0.000000e+00 4.581962e-03 2.770008e-03
## 20463 0.000000e+00 4.248074e-03 0.000000e+00 6.082566e-03 2.001760e-03
## 30131 0.000000e+00 0.000000e+00 1.193317e-03 0.000000e+00 8.012786e-04
## 8233 0.000000e+00 0.000000e+00 0.000000e+00 3.821040e-04 9.259438e-04
## 9197 0.000000e+00 7.522699e-04 2.115408e-04 7.395150e-04 0.000000e+00

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## 104 4.024422e-04 0.000000e+00 6.382457e-04 1.839653e-04 5.257543e-04
## 23132 0.000000e+00 0.000000e+00 0.000000e+00 4.284490e-04 8.045052e-04
## 15220 0.000000e+00 4.195488e-05 0.000000e+00 2.259790e-04 2.457229e-04
## 32262 0.000000e+00 0.000000e+00 3.424255e-03 0.000000e+00 1.013067e-03
## 32505 6.306028e-04 0.000000e+00 1.922753e-05 0.000000e+00 3.944493e-04
## 11533 1.844277e-03 3.161594e-03 2.849649e-03 0.000000e+00 1.654159e-03
## 15492 1.710847e-04 0.000000e+00 0.000000e+00 3.175107e-04 0.000000e+00
## 947 0.000000e+00 4.514673e-04 0.000000e+00 0.000000e+00 5.864327e-05
## 10625 2.826911e-04 0.000000e+00 0.000000e+00 8.304745e-04 0.000000e+00
## 5659 4.731894e-04 0.000000e+00 0.000000e+00 8.620883e-04 0.000000e+00
## 32984 6.129599e-05 7.624977e-04 0.000000e+00 0.000000e+00 5.385713e-04
## 8387 5.122951e-04 0.000000e+00 0.000000e+00 3.317023e-04 4.651267e-04
## 136 6.246096e-04 0.000000e+00 0.000000e+00 0.000000e+00 3.896717e-04
## 23594 1.359989e-04 6.676451e-05 3.709026e-04 0.000000e+00 0.000000e+00
## 2431 3.721835e-05 0.000000e+00 4.329036e-04 3.203978e-03 6.432943e-03
## 16426 1.657335e-04 5.475702e-04 4.797077e-04 3.199268e-04 0.000000e+00
## 15987 0.000000e+00 0.000000e+00 1.094874e-04 0.000000e+00 0.000000e+00
## 15871 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.953961e-04
## 35490 0.000000e+00 2.626615e-03 0.000000e+00 0.000000e+00 4.445091e-03
## 25455 0.000000e+00 0.000000e+00 5.152794e-04 1.552158e-04 0.000000e+00
## 34653 1.062699e-03 9.358289e-04 0.000000e+00 0.000000e+00 1.425517e-03
## 3696 4.950495e-03 5.231002e-03 2.767724e-04 5.876878e-03 1.474926e-02
## 12556 0.000000e+00 1.119192e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 637 0.000000e+00 4.725898e-04 0.000000e+00 0.000000e+00 4.806507e-04
## 3990 5.938483e-04 7.862107e-04 0.000000e+00 4.986542e-04 4.872355e-06
## 33758 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 2476 0.000000e+00 0.000000e+00 3.976806e-03 0.000000e+00 0.000000e+00
## 9977 0.000000e+00 0.000000e+00 3.745767e-04 9.218378e-05 4.391122e-04
## 14634 1.506024e-03 0.000000e+00 0.000000e+00 6.758146e-04 8.279628e-04
## 268 7.542117e-05 0.000000e+00 1.064657e-04 1.647439e-04 0.000000e+00
## 26899 1.777097e-03 5.681052e-03 0.000000e+00 5.222502e-03 0.000000e+00
## 13090 0.000000e+00 9.871668e-04 8.032129e-04 0.000000e+00 0.000000e+00
## 9191 4.077423e-04 0.000000e+00 8.018344e-04 4.643891e-05 6.411398e-04
## 15424 5.066865e-04 5.007311e-04 4.347194e-04 0.000000e+00 7.799705e-04
## 1713 0.000000e+00 6.060484e-04 8.958697e-04 1.776199e-03 1.146544e-03
## 33046 1.192223e-04 3.421728e-04 0.000000e+00 2.640264e-04 0.000000e+00
## 25235 0.000000e+00 3.506090e-04 5.567929e-04 0.000000e+00 1.413267e-03
## 24646 6.119202e-04 0.000000e+00 6.170589e-04 0.000000e+00 0.000000e+00
## 11209 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 27251 1.672873e-04 0.000000e+00 2.015852e-04 7.958556e-05 8.845644e-04
## 105 0.000000e+00 0.000000e+00 0.000000e+00 1.126156e-03 2.133845e-03
## 19690 0.000000e+00 0.000000e+00 0.000000e+00 1.240943e-03 7.860265e-04
## 10366 0.000000e+00 2.476092e-03 5.458729e-03 4.919281e-03 1.240836e-02
## 34931 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 2245 1.015983e-04 0.000000e+00 0.000000e+00 1.362398e-03 0.000000e+00
## 16314 0.000000e+00 7.651109e-04 0.000000e+00 8.203445e-04 0.000000e+00
## 5305 0.000000e+00 0.000000e+00 0.000000e+00 4.726643e-04 0.000000e+00
## 22068 2.079024e-04 1.993070e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 29690 0.000000e+00 1.202216e-04 0.000000e+00 1.389742e-04 2.077855e-04
## 29285 0.000000e+00 3.305304e-04 0.000000e+00 1.142046e-04 4.603345e-04
## 33219 0.000000e+00 6.295770e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 22241 7.390983e-04 0.000000e+00 0.000000e+00 6.968641e-04 0.000000e+00
## 33472 1.562513e-03 1.473102e-03 0.000000e+00 0.000000e+00 1.354580e-03
## 7437 0.000000e+00 0.000000e+00 1.517451e-03 0.000000e+00 0.000000e+00

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## 34711 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 5.059820e-03
## 18359 0.000000e+00 2.021563e-03 0.000000e+00 1.295896e-03 0.000000e+00
## 26246 0.000000e+00 0.000000e+00 0.000000e+00 7.451565e-04 0.000000e+00
## 5232 2.708292e-05 0.000000e+00 5.005515e-05 0.000000e+00 0.000000e+00
## 26416 5.370569e-04 2.500620e-04 0.000000e+00 0.000000e+00 1.667913e-03
## 31030 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18307 3.025719e-04 6.379970e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 34839 2.053820e-03 0.000000e+00 0.000000e+00 2.431287e-05 0.000000e+00
## 15857 4.798464e-04 0.000000e+00 0.000000e+00 1.308810e-04 0.000000e+00
## 2214 2.117369e-05 7.941051e-04 2.157461e-04 9.250694e-04 3.263403e-03
## 16304 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 5.949093e-04
## 5556 0.000000e+00 7.281789e-03 0.000000e+00 7.574152e-03 0.000000e+00
## 15943 0.000000e+00 2.371266e-06 6.813478e-06 8.101266e-04 4.770510e-04
## 4756 0.000000e+00 0.000000e+00 1.640230e-03 0.000000e+00 2.213130e-03
## 14985 0.000000e+00 0.000000e+00 0.000000e+00 3.502395e-04 2.025745e-03
## 27059 0.000000e+00 1.412949e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 18825 0.000000e+00 1.126854e-03 0.000000e+00 0.000000e+00 3.501998e-04
## 1981 2.220577e-03 0.000000e+00 0.000000e+00 0.000000e+00 1.129944e-03
## 24252 4.889976e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 28937 0.000000e+00 4.937715e-04 0.000000e+00 2.882960e-03 2.502221e-03
## 21469 0.000000e+00 0.000000e+00 0.000000e+00 5.189949e-04 9.194832e-04
## 35376 1.177512e-03 9.922466e-04 7.746077e-04 2.673829e-04 2.650410e-03
## 34221 0.000000e+00 3.738318e-04 0.000000e+00 3.796601e-04 0.000000e+00
## 27078 2.392344e-03 1.157549e-02 4.524887e-03 0.000000e+00 0.000000e+00
## 25568 1.364156e-05 0.000000e+00 5.488037e-05 0.000000e+00 0.000000e+00
## 8157 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 8.381771e-04
## 355 5.714937e-05 0.000000e+00 5.275195e-04 1.276324e-03 1.128331e-03
## 25388 2.572091e-04 4.673808e-04 2.897061e-04 0.000000e+00 3.387838e-04
## 2256 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 12399 9.557452e-04 6.048387e-03 0.000000e+00 1.669449e-03 2.376377e-03
## 14554 7.144272e-04 1.213344e-04 3.953759e-04 3.597509e-04 0.000000e+00
## 15797 2.250411e-04 3.429092e-04 0.000000e+00 0.000000e+00 5.775969e-04
## 17760 3.389831e-04 4.662005e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 5557 3.036110e-05 3.765090e-05 0.000000e+00 2.955658e-05 0.000000e+00
## 15455 0.000000e+00 8.294122e-06 3.035191e-04 0.000000e+00 7.689112e-04
## 34174 0.000000e+00 8.892977e-05 1.930367e-05 0.000000e+00 1.884969e-04
## 32666 0.000000e+00 1.287830e-03 1.803969e-03 0.000000e+00 0.000000e+00
## 15950 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 7.685153e-04
## 35225 0.000000e+00 4.470205e-03 1.650679e-03 0.000000e+00 0.000000e+00
## 13852 1.341786e-05 0.000000e+00 3.926651e-05 0.000000e+00 5.931936e-05
## 120 0.000000e+00 1.241966e-04 4.607823e-04 3.124285e-04 0.000000e+00
## 2443 0.000000e+00 0.000000e+00 0.000000e+00 9.430231e-04 0.000000e+00
## 24345 0.000000e+00 0.000000e+00 0.000000e+00 1.526718e-03 0.000000e+00
## 34814 0.000000e+00 5.820386e-04 1.109286e-03 3.783784e-03 0.000000e+00
## 19915 0.000000e+00 1.298610e-04 0.000000e+00 0.000000e+00 5.169605e-03
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## 1097 0.000000e+00 5.466570e-04 0.000000e+00 2.030878e-04 6.620179e-04
## 27748 1.771561e-04 0.000000e+00 1.191770e-04 0.000000e+00 0.000000e+00
## 5656 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.109174e-04
## 5453 9.082652e-04 0.000000e+00 8.741122e-06 3.551439e-04 1.040770e-03
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## 3512 0.000000e+00 3.565592e-04 0.000000e+00 1.294080e-03 0.000000e+00
## 32307 0.000000e+00 1.204819e-02 0.000000e+00 4.433516e-03 4.047145e-03
## 4120 0.000000e+00 0.000000e+00 2.159827e-03 0.000000e+00 1.394700e-03

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## 34891 1.776921e-04 1.677084e-04 0.000000e+00 2.174369e-05 0.000000e+00
## 21550 0.000000e+00 2.346696e-04 3.317008e-05 2.084540e-03 4.034399e-03
## 16532 6.649186e-06 0.000000e+00 5.754195e-04 4.657411e-04 2.414481e-03
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## 31828 0.000000e+00 0.000000e+00 3.027399e-04 4.775918e-04 2.745612e-05
## 13008 7.714346e-05 1.383126e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 30168 1.808297e-04 1.693357e-04 0.000000e+00 2.137632e-05 0.000000e+00
## 4158 2.634038e-03 5.970684e-03 1.215871e-03 2.406955e-03 2.963145e-03
## 34795 1.808297e-04 1.693357e-04 0.000000e+00 2.137632e-05 0.000000e+00
## 5661 5.782575e-04 0.000000e+00 0.000000e+00 6.385696e-04 3.828484e-04
## 29364 0.000000e+00 0.000000e+00 1.355334e-03 2.746315e-03 7.861635e-04
## 33007 0.000000e+00 1.805856e-04 1.053476e-04 0.000000e+00 0.000000e+00
## 16709 9.212338e-04 1.196514e-04 4.377961e-03 0.000000e+00 0.000000e+00
## 21099 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 7.730447e-03
## 23359 1.968581e-04 6.431064e-04 5.259438e-06 1.088435e-03 0.000000e+00
## 25367 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 3.630815e-04
## 13863 6.024096e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 20247 0.000000e+00 6.290750e-04 0.000000e+00 1.201923e-03 0.000000e+00
## 23002 0.000000e+00 0.000000e+00 2.673892e-04 1.739290e-04 1.513729e-03
## 13079 6.932704e-04 0.000000e+00 0.000000e+00 7.379661e-03 5.968975e-03
## 3122 3.167947e-04 0.000000e+00 3.024054e-04 4.054984e-04 2.870010e-04
## 34394 0.000000e+00 0.000000e+00 0.000000e+00 8.077130e-04 0.000000e+00
## 10423 0.000000e+00 1.458814e-03 5.857620e-04 0.000000e+00 1.188540e-04
## 34168 2.547343e-04 4.665396e-04 0.000000e+00 4.000400e-04 0.000000e+00
## 35397 0.000000e+00 3.491879e-04 1.780547e-04 2.086456e-04 2.000398e-03
## 29353 0.000000e+00 4.464286e-04 1.011864e-03 0.000000e+00 0.000000e+00
## 35007 5.335113e-05 1.045041e-04 4.180806e-04 4.861535e-04 0.000000e+00
## 5740 0.000000e+00 0.000000e+00 0.000000e+00 1.943603e-04 8.154722e-04
## 29730 6.106288e-05 0.000000e+00 6.834435e-05 0.000000e+00 0.000000e+00
## 20454 0.000000e+00 2.087765e-04 4.201429e-04 1.979359e-03 8.102253e-04
## 33965 2.644219e-04 0.000000e+00 1.672183e-04 0.000000e+00 0.000000e+00
## 21434 0.000000e+00 1.086366e-03 0.000000e+00 2.461034e-03 3.353454e-03
## 9 6.858458e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15555 5.862010e-04 2.240617e-04 0.000000e+00 5.733093e-05 0.000000e+00
## 4434 4.084116e-04 2.901876e-03 3.880776e-04 1.699777e-03 8.560993e-04
## 14315 0.000000e+00 4.586477e-04 0.000000e+00 0.000000e+00 6.330556e-04
## 20636 0.000000e+00 0.000000e+00 5.431831e-04 0.000000e+00 0.000000e+00
## 18878 1.442140e-04 1.444268e-03 2.600869e-04 4.201700e-04 0.000000e+00
## 876 9.501926e-05 9.822359e-05 4.918640e-04 2.318714e-04 3.030619e-04
## 17492 2.131545e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15686 0.000000e+00 0.000000e+00 0.000000e+00 5.392103e-04 2.210718e-03
## 19939 0.000000e+00 0.000000e+00 3.556030e-04 4.171705e-04 1.334223e-04
## 28102 0.000000e+00 0.000000e+00 5.562668e-04 0.000000e+00 1.231399e-03
## 9661 3.797715e-04 0.000000e+00 0.000000e+00 0.000000e+00 8.962948e-04
## 4725 1.361792e-03 0.000000e+00 0.000000e+00 3.909810e-04 3.626109e-05
## 3590 0.000000e+00 0.000000e+00 3.562522e-04 5.630050e-05 0.000000e+00
## 6892 0.000000e+00 0.000000e+00 6.160617e-04 0.000000e+00 0.000000e+00
## 25392 0.000000e+00 0.000000e+00 7.739938e-04 0.000000e+00 1.401542e-03
## 34290 2.868895e-03 0.000000e+00 1.179315e-03 0.000000e+00 4.162322e-04
## 3872 3.578325e-03 2.142022e-03 1.305141e-03 7.421478e-04 0.000000e+00
## 26248 0.000000e+00 0.000000e+00 3.362790e-04 2.586350e-04 1.015879e-04
## 30337 9.223043e-04 5.649474e-06 0.000000e+00 4.592762e-04 1.344311e-03
## 22657 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.173913e-03
## 30315 0.000000e+00 3.545151e-04 0.000000e+00 0.000000e+00 0.000000e+00

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## 5803 2.912503e-04 0.000000e+00 0.000000e+00 0.000000e+00 5.756772e-04
## 33946 0.000000e+00 3.538469e-03 0.000000e+00 4.890296e-03 0.000000e+00
## 5306 1.613284e-03 2.847384e-04 4.476334e-04 0.000000e+00 0.000000e+00
## 8226 3.316144e-04 0.000000e+00 0.000000e+00 2.449359e-04 1.681077e-03
## 14255 0.000000e+00 0.000000e+00 5.647958e-04 3.405797e-05 0.000000e+00
## 2527 0.000000e+00 0.000000e+00 0.000000e+00 1.091703e-03 0.000000e+00
## 32628 3.819279e-04 0.000000e+00 0.000000e+00 1.271707e-04 0.000000e+00
## 10456 2.693240e-04 1.525935e-04 0.000000e+00 5.279831e-04 2.361236e-03
## 20309 0.000000e+00 8.621258e-04 1.123442e-03 0.000000e+00 1.665572e-03
## 18523 0.000000e+00 4.053667e-04 0.000000e+00 0.000000e+00 1.943005e-03
## 8029 2.607427e-05 0.000000e+00 0.000000e+00 0.000000e+00 2.534570e-03
## 1071 0.000000e+00 7.806401e-04 1.131616e-04 0.000000e+00 0.000000e+00
## 9990 0.000000e+00 2.758317e-04 1.265080e-04 2.288595e-04 0.000000e+00
## 5338 6.140794e-05 5.679982e-03 0.000000e+00 1.712062e-03 0.000000e+00
## 19907 0.000000e+00 0.000000e+00 1.554692e-05 1.329925e-03 5.553954e-03
## 4765 1.397333e-03 1.864007e-03 3.639672e-04 0.000000e+00 6.725458e-04
## 33259 0.000000e+00 4.912152e-04 3.949004e-04 0.000000e+00 0.000000e+00
## 31024 0.000000e+00 0.000000e+00 6.061264e-04 0.000000e+00 1.354488e-04
## 34206 2.221235e-04 0.000000e+00 0.000000e+00 3.607762e-04 3.018061e-04
## 7026 9.601636e-04 6.800829e-04 8.855003e-05 0.000000e+00 1.874844e-04
## 12502 2.140667e-04 0.000000e+00 0.000000e+00 1.704191e-04 1.254165e-04
## 27635 0.000000e+00 0.000000e+00 0.000000e+00 3.824663e-04 0.000000e+00
## 3411 9.842520e-04 0.000000e+00 0.000000e+00 2.546689e-03 0.000000e+00
## 18847 1.361488e-04 3.043166e-04 5.143889e-04 0.000000e+00 3.779563e-04
## 20211 4.245933e-04 2.187601e-04 5.938365e-04 6.549366e-04 6.040901e-04
## 28275 0.000000e+00 0.000000e+00 0.000000e+00 2.995732e-04 0.000000e+00
## 9901 4.144733e-04 0.000000e+00 9.073066e-04 0.000000e+00 0.000000e+00
## 26636 0.000000e+00 2.629133e-04 3.843192e-04 2.061022e-04 1.906529e-03
## 7830 0.000000e+00 2.011018e-04 1.454767e-04 0.000000e+00 9.153318e-04
## 5046 0.000000e+00 5.367687e-04 0.000000e+00 1.464844e-03 0.000000e+00
## 29388 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 4.846035e-04
## 14116 0.000000e+00 3.374961e-04 0.000000e+00 3.437678e-04 0.000000e+00
## 21175 3.895964e-04 1.335537e-03 0.000000e+00 1.125756e-03 1.183376e-03
## 21548 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 6.772854e-03
## 27835 2.105047e-05 4.989114e-05 0.000000e+00 2.760480e-04 1.529373e-04
## 32400 0.000000e+00 0.000000e+00 2.710762e-04 0.000000e+00 0.000000e+00
## 3559 1.879910e-04 0.000000e+00 0.000000e+00 1.707235e-03 3.114458e-03
## 5533 0.000000e+00 7.385524e-04 0.000000e+00 1.197605e-03 6.981417e-04
## 2079 2.104427e-04 3.567606e-04 1.797156e-04 0.000000e+00 0.000000e+00
## 615 2.601046e-04 8.979827e-05 1.145896e-04 2.725329e-04 5.725809e-04
## 31401 0.000000e+00 0.000000e+00 2.316635e-04 4.991681e-04 0.000000e+00
## 24284 0.000000e+00 9.518278e-04 0.000000e+00 0.000000e+00 1.815066e-04
## 26066 1.679037e-04 5.130641e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 7795 5.830116e-04 0.000000e+00 9.082652e-04 0.000000e+00 1.042753e-03
## 24674 1.405746e-03 1.467593e-03 1.965454e-03 2.412775e-03 7.161922e-04
## 28893 0.000000e+00 5.150109e-04 0.000000e+00 6.140620e-04 1.385040e-03
## 29221 0.000000e+00 0.000000e+00 2.534471e-04 5.441437e-04 9.873056e-05
## 26180 1.237561e-05 0.000000e+00 5.670139e-04 5.997615e-04 5.736366e-04
## 10374 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 7696 0.000000e+00 0.000000e+00 7.930268e-04 1.461470e-05 0.000000e+00
## 9225 2.903239e-04 2.710733e-04 0.000000e+00 1.199984e-04 0.000000e+00
## 33350 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 9.237875e-03
## 28250 0.000000e+00 0.000000e+00 4.042955e-04 0.000000e+00 0.000000e+00
## 9873 4.156406e-05 6.238768e-04 0.000000e+00 3.201420e-04 9.746344e-04

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## 8637 0.000000e+00 0.000000e+00 7.251410e-04 0.000000e+00 1.364256e-03
## 9669 5.730482e-05 3.111751e-04 1.758070e-04 0.000000e+00 0.000000e+00
## 28324 0.000000e+00 0.000000e+00 1.066098e-03 1.858736e-03 1.650165e-03
## 4517 3.473004e-05 0.000000e+00 3.702233e-04 1.186240e-03 0.000000e+00
## 9703 0.000000e+00 0.000000e+00 0.000000e+00 2.868424e-04 0.000000e+00
## 6762 0.000000e+00 1.127340e-04 3.538588e-04 6.602008e-04 3.074382e-03
## 15380 0.000000e+00 1.864066e-05 5.636979e-04 2.123142e-03 1.481662e-03
## 2037 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 25409 0.000000e+00 1.469697e-04 0.000000e+00 1.144357e-03 7.093464e-04
## 32493 1.352272e-05 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 24801 0.000000e+00 6.353098e-05 0.000000e+00 3.121307e-05 0.000000e+00
## 18685 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 2633 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 2145 6.434642e-05 0.000000e+00 0.000000e+00 0.000000e+00 6.461031e-04
## 27168 0.000000e+00 8.098432e-04 1.907156e-06 1.738526e-04 0.000000e+00
## 25739 5.078212e-04 0.000000e+00 0.000000e+00 0.000000e+00 5.525235e-04
## 18725 2.263038e-05 0.000000e+00 2.063990e-03 0.000000e+00 4.940925e-04
## 29406 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 2797 0.000000e+00 2.908314e-05 9.276467e-05 2.578595e-04 1.130738e-03
## 25181 0.000000e+00 7.204431e-05 0.000000e+00 0.000000e+00 4.997673e-05
## 5741 1.176471e-03 1.018916e-03 0.000000e+00 0.000000e+00 1.257222e-03
## 25124 9.545022e-05 6.301426e-05 1.803247e-05 3.482922e-04 1.810007e-03
## 34709 0.000000e+00 7.629295e-04 9.562882e-04 0.000000e+00 3.378811e-05
## 33859 2.780868e-05 1.563275e-04 0.000000e+00 0.000000e+00 7.829148e-05
## 5862 0.000000e+00 0.000000e+00 2.485489e-04 2.543222e-04 1.025379e-03
## 19808 0.000000e+00 3.485452e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 14479 0.000000e+00 1.344760e-03 0.000000e+00 1.922245e-03 1.305969e-03
## 32428 0.000000e+00 6.733672e-04 2.249569e-03 3.035168e-03 4.800000e-03
## 1333 1.013233e-05 2.982248e-04 0.000000e+00 2.953462e-06 4.725317e-04
## 15559 5.241090e-04 1.877934e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 34123 6.049535e-04 2.246330e-03 0.000000e+00 2.967269e-03 3.655401e-03
## 16777 3.463621e-04 0.000000e+00 0.000000e+00 1.801281e-03 0.000000e+00
## 25100 4.545455e-04 0.000000e+00 0.000000e+00 0.000000e+00 1.355014e-03
## 16663 0.000000e+00 4.587254e-05 5.767235e-06 0.000000e+00 1.050758e-03
## 17707 0.000000e+00 0.000000e+00 1.190165e-03 1.560075e-03 3.947888e-04
## 15351 0.000000e+00 0.000000e+00 0.000000e+00 9.620051e-05 0.000000e+00
## 19074 1.595710e-04 8.399759e-04 0.000000e+00 0.000000e+00 3.889145e-04
## 4897 0.000000e+00 0.000000e+00 0.000000e+00 1.500162e-03 0.000000e+00
## 7475 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 34643 0.000000e+00 0.000000e+00 9.662166e-03 2.359046e-02 0.000000e+00
## 31212 0.000000e+00 0.000000e+00 3.890709e-04 0.000000e+00 1.258889e-03
## 557 0.000000e+00 0.000000e+00 4.472201e-04 6.225529e-04 1.155182e-04
## 16221 3.900367e-04 4.095973e-04 1.590876e-04 4.961404e-04 0.000000e+00
## 4864 0.000000e+00 1.510574e-03 0.000000e+00 4.825090e-03 8.620690e-03
## 22320 0.000000e+00 1.021730e-04 9.277911e-04 0.000000e+00 0.000000e+00
## 22808 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 8.104485e-05
## 7569 0.000000e+00 0.000000e+00 2.074891e-04 4.383053e-05 9.210944e-05
## 25162 7.189170e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 33333 0.000000e+00 9.896331e-05 5.397806e-04 0.000000e+00 0.000000e+00
## 33423 6.949270e-04 0.000000e+00 0.000000e+00 0.000000e+00 4.225856e-04
## 17545 1.198517e-03 1.710376e-03 0.000000e+00 1.065530e-03 5.611885e-04
## 8488 2.002764e-04 1.976415e-03 1.625499e-03 0.000000e+00 3.865405e-03
## 12514 2.529920e-03 0.000000e+00 0.000000e+00 6.971147e-03 9.849074e-04
## 34391 1.935480e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00

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## 32560 0.000000e+00 1.581147e-04 0.000000e+00 0.000000e+00 9.706239e-05
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## 20059 1.135185e-04 0.000000e+00 0.000000e+00 2.374640e-04 1.662499e-03
## 27759 2.933412e-04 5.449591e-04 8.499788e-04 0.000000e+00 1.031804e-03
## 6374 2.880706e-04 2.799374e-05 4.019477e-04 1.532598e-04 0.000000e+00
## 14968 0.000000e+00 5.263606e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 21343 0.000000e+00 0.000000e+00 3.450211e-04 0.000000e+00 0.000000e+00
## 10191 6.603914e-04 2.151323e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 7585 1.348618e-03 1.938650e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 15668 3.007318e-04 2.943868e-04 1.965547e-04 0.000000e+00 0.000000e+00
## 25755 0.000000e+00 0.000000e+00 0.000000e+00 1.030928e-03 3.206460e-04
## 32219 0.000000e+00 1.750316e-03 1.677231e-03 0.000000e+00 4.711766e-03
## 24672 0.000000e+00 0.000000e+00 2.125111e-04 3.764247e-04 0.000000e+00
## 22877 0.000000e+00 1.019900e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 11556 2.639448e-04 3.144674e-04 0.000000e+00 4.020909e-04 1.881049e-03
## 30235 0.000000e+00 4.413894e-03 2.763787e-03 1.639489e-03 7.035229e-04
## 31195 8.004695e-04 5.444693e-04 0.000000e+00 0.000000e+00 1.471216e-05
## 8519 0.000000e+00 1.413691e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 20582 0.000000e+00 2.839244e-04 3.227033e-04 1.135189e-04 5.288841e-07
## 35259 0.000000e+00 1.978088e-03 0.000000e+00 3.135556e-04 0.000000e+00
## 23300 0.000000e+00 1.794585e-03 0.000000e+00 6.016618e-04 1.643429e-03
## 3027 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 3865 0.000000e+00 0.000000e+00 3.317850e-04 5.359057e-04 0.000000e+00
## 15752 0.000000e+00 1.053741e-03 0.000000e+00 0.000000e+00 1.128668e-03
## 462 0.000000e+00 0.000000e+00 1.890359e-03 1.217656e-02 2.297316e-02
## 2367 4.844961e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 34023 0.000000e+00 1.442009e-04 3.211821e-04 0.000000e+00 0.000000e+00
## 13796 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 13149 6.774984e-05 1.345552e-04 4.391988e-05 0.000000e+00 2.548254e-04
## 15182 5.437738e-04 1.740644e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 34569 2.070136e-04 0.000000e+00 3.145979e-04 3.610108e-04 1.006543e-03
## 24634 1.099384e-04 0.000000e+00 3.721559e-04 1.586817e-04 1.435778e-04
## 34003 0.000000e+00 0.000000e+00 0.000000e+00 1.949159e-04 7.241500e-04
## 9125 1.331373e-03 0.000000e+00 0.000000e+00 2.246975e-03 0.000000e+00
## 14430 5.002668e-04 0.000000e+00 0.000000e+00 2.523885e-04 0.000000e+00
## 35241 5.628597e-04 0.000000e+00 2.483444e-03 1.129518e-03 0.000000e+00
## 13395 3.938193e-04 2.729500e-06 2.732240e-03 0.000000e+00 4.305583e-04
## 2074 0.000000e+00 0.000000e+00 1.683502e-03 3.711851e-05 0.000000e+00
## 12300 2.266635e-04 3.318951e-04 0.000000e+00 0.000000e+00 1.705727e-03
## 23013 8.468707e-04 3.461281e-03 3.341206e-04 1.246779e-03 4.045070e-04
## 21087 4.716548e-03 0.000000e+00 5.099367e-03 0.000000e+00 1.913942e-03
## 23219 0.000000e+00 0.000000e+00 7.839769e-04 0.000000e+00 0.000000e+00
## 4510 0.000000e+00 4.022675e-04 8.110731e-04 1.069519e-03 1.144165e-03
## 24181 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.254705e-03
## 32287 0.000000e+00 8.783262e-05 0.000000e+00 0.000000e+00 9.430201e-04
## 5660 2.571355e-04 0.000000e+00 0.000000e+00 2.317156e-04 7.713226e-04
## 22047 7.366454e-04 1.167315e-03 0.000000e+00 1.537257e-04 0.000000e+00
## 6559 7.849294e-04 0.000000e+00 9.460738e-04 0.000000e+00 0.000000e+00
## 24157 0.000000e+00 4.994281e-03 2.069007e-03 1.089340e-03 0.000000e+00
## 33733 1.037883e-03 1.525553e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 31556 0.000000e+00 6.299213e-04 0.000000e+00 0.000000e+00 8.827772e-05
## 32973 0.000000e+00 0.000000e+00 3.191958e-04 9.192955e-05 1.496045e-03
## 16552 1.130527e-03 0.000000e+00 0.000000e+00 7.345773e-04 1.155323e-03
## 10470 0.000000e+00 0.000000e+00 0.000000e+00 9.551098e-04 3.079006e-03

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## 6590 5.197505e-04 0.000000e+00 0.000000e+00 1.488834e-03 2.121963e-04
## 19659 0.000000e+00 0.000000e+00 2.338927e-04 0.000000e+00 0.000000e+00
## 4483 4.413256e-06 0.000000e+00 8.707009e-04 2.403611e-04 1.612585e-04
## 16169 0.000000e+00 0.000000e+00 0.000000e+00 4.706461e-04 0.000000e+00
## 8949 0.000000e+00 0.000000e+00 6.977536e-04 0.000000e+00 1.034049e-02
## 530 0.000000e+00 0.000000e+00 1.700625e-03 0.000000e+00 2.695664e-03
## 17047 0.000000e+00 5.293500e-04 0.000000e+00 0.000000e+00 1.296142e-03
## 27210 0.000000e+00 3.773560e-04 6.651885e-04 0.000000e+00 1.502843e-03
## 16440 0.000000e+00 0.000000e+00 6.629653e-04 5.331760e-04 3.075146e-03
## 10109 3.887394e-05 0.000000e+00 0.000000e+00 8.467401e-04 0.000000e+00
## 34617 4.221619e-04 0.000000e+00 4.413253e-04 0.000000e+00 3.881625e-04
## 17464 0.000000e+00 0.000000e+00 0.000000e+00 4.079254e-03 2.291690e-03
## 32996 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 9184 3.572108e-04 1.475877e-04 7.880390e-04 7.847754e-04 0.000000e+00
## 30206 4.663401e-04 1.831702e-04 0.000000e+00 0.000000e+00 6.739691e-04
## 25602 3.500181e-03 0.000000e+00 0.000000e+00 7.763108e-04 7.637290e-04
## 4126 2.347418e-04 0.000000e+00 0.000000e+00 1.911411e-04 0.000000e+00
## 29942 2.713764e-04 0.000000e+00 5.770921e-05 5.946979e-05 4.803878e-04
## 25236 1.781016e-04 0.000000e+00 6.296703e-05 2.244742e-05 3.421667e-04
## 28579 3.133555e-03 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 6925 0.000000e+00 0.000000e+00 3.010911e-05 1.584699e-04 3.968930e-04
## 32184 0.000000e+00 8.957750e-04 0.000000e+00 0.000000e+00 1.226994e-03
## 7548 0.000000e+00 1.199041e-03 0.000000e+00 7.149423e-03 8.902917e-03
## 8108 0.000000e+00 0.000000e+00 3.336129e-04 0.000000e+00 0.000000e+00
## 17115 0.000000e+00 1.961421e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 18387 1.777401e-04 4.544422e-04 1.524573e-04 2.248707e-04 3.267918e-03
## 24953 0.000000e+00 4.106925e-04 0.000000e+00 0.000000e+00 5.617273e-04
## 5950 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18711 0.000000e+00 0.000000e+00 1.570400e-04 0.000000e+00 0.000000e+00
## 25693 0.000000e+00 0.000000e+00 9.254414e-04 7.038763e-04 1.426048e-04
## 25488 6.139971e-04 0.000000e+00 0.000000e+00 0.000000e+00 8.051530e-04
## 14652 2.520069e-03 7.464370e-04 7.087172e-04 0.000000e+00 0.000000e+00
## 10968 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 20212 1.461628e-04 2.485896e-04 1.943640e-04 1.388208e-03 0.000000e+00
## 3106 4.839286e-04 0.000000e+00 2.479964e-03 0.000000e+00 2.803223e-03
## 33318 8.060512e-04 1.350893e-03 4.821897e-04 1.685748e-03 1.937673e-03
## 16671 2.562873e-04 0.000000e+00 0.000000e+00 6.343165e-04 1.542165e-04
## 5690 7.184808e-05 5.050976e-05 4.423826e-05 4.421321e-05 0.000000e+00
## 33736 0.000000e+00 2.626071e-03 0.000000e+00 2.646190e-04 0.000000e+00
## 9798 2.190581e-04 5.347790e-05 6.717352e-04 0.000000e+00 0.000000e+00
## 19825 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 22035 9.944510e-04 0.000000e+00 8.337243e-04 2.701758e-03 6.613236e-03
## 34439 1.293235e-03 0.000000e+00 3.256879e-03 3.122500e-03 0.000000e+00
## 4654 0.000000e+00 0.000000e+00 0.000000e+00 2.025431e-04 6.691630e-05
## 948 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.799540e-04
## 7382 5.352904e-04 1.127802e-04 0.000000e+00 0.000000e+00 1.282935e-03
## 4537 1.109124e-03 0.000000e+00 0.000000e+00 7.727975e-04 4.577738e-04
## 1198 0.000000e+00 4.431126e-04 6.645332e-05 0.000000e+00 0.000000e+00
## 18813 1.383950e-04 0.000000e+00 0.000000e+00 7.293946e-04 0.000000e+00
## 16172 0.000000e+00 5.668899e-04 5.029552e-04 2.456037e-05 0.000000e+00
## 8784 4.267327e-04 2.320712e-04 0.000000e+00 0.000000e+00 4.458028e-06
## 5579 1.018780e-04 1.933969e-05 0.000000e+00 0.000000e+00 1.307190e-03
## 35090 1.801664e-04 0.000000e+00 1.019704e-04 3.169454e-04 4.008053e-06
## 4227 0.000000e+00 1.467051e-03 1.183798e-03 3.051199e-03 0.000000e+00

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## 17074 4.992787e-04 4.931727e-03 0.000000e+00 0.000000e+00 0.000000e+00
## 2673 0.000000e+00 0.000000e+00 1.983823e-04 2.587992e-04 1.994374e-03
## 25159 0.000000e+00 3.985167e-04 5.740528e-04 0.000000e+00 3.855050e-04
## 21393 1.244128e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 26083 2.027607e-04 5.154463e-05 1.080609e-04 0.000000e+00 3.902999e-04
## 28469 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 11223 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.820699e-03
## 9513 2.730376e-05 2.957940e-05 0.000000e+00 6.899225e-05 0.000000e+00
## 16335 0.000000e+00 0.000000e+00 9.877447e-06 0.000000e+00 0.000000e+00
## 14471 0.000000e+00 2.775123e-05 0.000000e+00 0.000000e+00 3.808760e-04
## 22644 0.000000e+00 3.047814e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 33466 0.000000e+00 0.000000e+00 3.541828e-04 2.135564e-04 1.250113e-05
## 27250 4.122826e-06 1.702380e-04 0.000000e+00 0.000000e+00 3.768088e-04
## 26584 6.707450e-05 0.000000e+00 0.000000e+00 8.151256e-05 7.949957e-04
## 27174 1.472159e-04 2.132196e-03 0.000000e+00 0.000000e+00 7.955449e-04
## 15707 0.000000e+00 4.094686e-05 0.000000e+00 0.000000e+00 6.623285e-04
## 25369 3.087229e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 18507 3.604538e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 32746 2.480735e-04 6.353393e-05 0.000000e+00 0.000000e+00 1.169422e-04
## 2012 0.000000e+00 1.575659e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 11117 0.000000e+00 7.044974e-05 2.482104e-04 0.000000e+00 2.083782e-04
## 16483 1.497710e-03 0.000000e+00 1.279044e-03 0.000000e+00 3.530735e-04
## 22251 1.283226e-03 0.000000e+00 2.452059e-03 0.000000e+00 0.000000e+00
## 12400 0.000000e+00 0.000000e+00 2.475248e-03 0.000000e+00 0.000000e+00
## 6266 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.935098e-04
## 7871 0.000000e+00 0.000000e+00 0.000000e+00 1.067236e-03 0.000000e+00
## 5363 1.828475e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 27584 6.926605e-04 1.911271e-04 1.241575e-03 0.000000e+00 9.763990e-04
## 21314 0.000000e+00 0.000000e+00 0.000000e+00 1.109019e-03 2.112235e-04
## 34938 0.000000e+00 0.000000e+00 0.000000e+00 5.167959e-03 5.277045e-03
## 16622 5.602241e-04 1.114920e-03 3.599189e-04 0.000000e+00 3.748828e-03
## 34589 3.505239e-03 2.694923e-03 2.368519e-03 1.050667e-02 0.000000e+00
## 9704 0.000000e+00 2.486198e-04 3.964059e-04 5.019178e-04 1.012788e-03
## 33296 0.000000e+00 2.366245e-04 0.000000e+00 1.148711e-04 2.092375e-04
## 6902 5.651528e-05 1.601646e-04 5.564183e-05 0.000000e+00 1.202793e-04
## 9249 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15176 0.000000e+00 3.132669e-04 2.411123e-05 0.000000e+00 2.375829e-04
## 34819 1.154991e-03 1.533316e-04 0.000000e+00 7.564297e-04 1.812656e-04
## 8902 0.000000e+00 0.000000e+00 3.921924e-04 4.567011e-04 5.752994e-04
## 23356 0.000000e+00 1.430615e-03 1.158749e-03 0.000000e+00 0.000000e+00
## 13069 3.414964e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 2697 2.002002e-05 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 23265 0.000000e+00 2.647559e-05 2.482413e-04 3.767836e-05 3.753650e-05
## 26500 2.110595e-04 7.889183e-05 0.000000e+00 0.000000e+00 0.000000e+00
## 34218 0.000000e+00 0.000000e+00 0.000000e+00 1.808318e-03 0.000000e+00
## 31535 0.000000e+00 0.000000e+00 0.000000e+00 1.024590e-03 1.858736e-03
## 33063 3.388851e-04 0.000000e+00 0.000000e+00 3.554677e-04 1.437980e-03
## 32315 0.000000e+00 0.000000e+00 0.000000e+00 7.800312e-04 1.752848e-03
## 16590 0.000000e+00 8.742906e-04 0.000000e+00 3.794018e-04 1.748881e-03
## 29705 3.187693e-04 1.341071e-04 0.000000e+00 0.000000e+00 2.481390e-03
## 10533 5.075038e-07 3.218369e-04 0.000000e+00 2.796144e-05 1.966216e-05
## 25347 0.000000e+00 1.955247e-04 0.000000e+00 2.517024e-04 1.072692e-03
## 17038 0.000000e+00 0.000000e+00 0.000000e+00 1.729356e-03 9.212345e-04
## 20141 0.000000e+00 5.862275e-05 9.749011e-04 2.018954e-04 6.190880e-05

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## 18541 1.259050e-03 1.193675e-03 0.000000e+00 0.000000e+00 1.170616e-03
## 25126 0.000000e+00 2.620984e-04 7.430356e-05 2.086405e-04 0.000000e+00
## 1065 0.000000e+00 3.432887e-04 3.000300e-04 5.567999e-04 8.857396e-04
## 2510 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 2.465833e-04
## 26146 0.000000e+00 0.000000e+00 4.970921e-04 0.000000e+00 0.000000e+00
## 28784 0.000000e+00 0.000000e+00 7.055583e-04 0.000000e+00 1.885813e-04
## 22930 1.130490e-05 0.000000e+00 9.945818e-05 8.210626e-05 6.483177e-04
## 2455 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.172333e-03
## 12165 1.128836e-04 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 15018 6.661116e-04 5.108557e-04 3.745783e-04 1.931742e-04 9.231479e-04
## 30743 1.504994e-03 9.593273e-04 0.000000e+00 3.468961e-03 4.142114e-03
## 15413 3.784244e-04 0.000000e+00 9.644126e-05 6.448955e-05 1.012206e-04
## 22876 0.000000e+00 9.698390e-04 2.519287e-03 1.321877e-03 0.000000e+00
## 5973 6.099421e-04 1.925312e-05 1.173709e-03 9.259157e-04 0.000000e+00
## 20147 0.000000e+00 1.713131e-03 2.358206e-03 1.904330e-03 0.000000e+00
## 7964 0.000000e+00 2.302542e-04 1.812689e-03 9.578544e-04 0.000000e+00
## 12555 6.139646e-04 0.000000e+00 0.000000e+00 7.366299e-04 0.000000e+00
## 30066 1.558198e-04 0.000000e+00 1.737105e-04 2.420920e-04 9.536439e-05
## 12484 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00
## 16702 0.000000e+00 0.000000e+00 0.000000e+00 5.724098e-04 0.000000e+00
## 29573 0.000000e+00 8.086963e-04 0.000000e+00 0.000000e+00 0.000000e+00
## 13840 0.000000e+00 0.000000e+00 0.000000e+00 5.042864e-04 6.421068e-04
## 24439 5.084706e-04 2.277904e-03 8.761631e-04 0.000000e+00 3.271821e-03
## 7375 0.000000e+00 9.557190e-04 5.790314e-03 0.000000e+00 1.766252e-03
## 25400 0.000000e+00 0.000000e+00 0.000000e+00 2.092676e-03 1.115727e-03
## 11692 0.000000e+00 1.136364e-02 0.000000e+00 0.000000e+00 0.000000e+00
## 5944 0.000000e+00 0.000000e+00 7.352903e-04 0.000000e+00 0.000000e+00
## 28912 0.000000e+00 0.000000e+00 1.758266e-05 0.000000e+00 6.312079e-05
## 1938 4.957173e-04 4.084133e-04 0.000000e+00 2.998130e-04 5.040242e-04
## 10382 0.000000e+00 0.000000e+00 0.000000e+00 0.000000e+00 1.735821e-04
## 32104 4.118769e-04 1.036896e-03 1.778979e-03 0.000000e+00 3.505389e-03
## 16300 0.000000e+00 0.000000e+00 2.669535e-04 0.000000e+00 0.000000e+00
## 8163 1.662175e-04 5.722783e-04 9.812250e-05 6.931017e-05 1.261790e-03
## 28626 0.000000e+00 0.000000e+00 6.540222e-04 0.000000e+00 9.057087e-04
## 18036 0.000000e+00 3.699087e-04 5.790388e-04 0.000000e+00 0.000000e+00
## 10249 0.000000e+00 7.506051e-04 0.000000e+00 0.000000e+00 9.714051e-04
## 28236 3.097564e-04 1.471836e-04 1.030733e-03 0.000000e+00 1.385044e-04
## 11519 0.000000e+00 0.000000e+00 1.979144e-04 4.044808e-04 5.687880e-04
## 4624 2.502522e-04 4.711792e-04 1.008403e-03 0.000000e+00 0.000000e+00
## 35079 0.000000e+00 1.135389e-04 2.609843e-04 1.676405e-04 3.063143e-04
## 3888 0.000000e+00 7.337021e-04 0.000000e+00 0.000000e+00 1.566830e-04
## 14920 0.000000e+00 0.000000e+00 0.000000e+00 1.288231e-04 0.000000e+00
## 22409 0.000000e+00 4.823032e-04 0.000000e+00 6.049514e-04 0.000000e+00
## 34284 7.875032e-07 8.674908e-04 0.000000e+00 4.060899e-04 0.000000e+00
## 34915 0.000000e+00 3.906563e-03 1.875286e-03 3.405961e-04 1.546392e-03
## 27226 0.000000e+00 9.625604e-04 0.000000e+00 4.004517e-04 0.000000e+00
## 27872 3.343363e-04 0.000000e+00 3.033981e-04 0.000000e+00 5.513365e-03
## 536 0.000000e+00 8.658009e-04 0.000000e+00 1.890359e-03 7.186102e-04
## 23083 0.000000e+00 5.011450e-04 0.000000e+00 8.030819e-06 6.553555e-04
## 7287 0.000000e+00 2.663241e-04 0.000000e+00 3.550915e-04 2.415132e-04
## 26217 3.383674e-04 4.560050e-04 0.000000e+00 1.714562e-04 0.000000e+00
## 27812 3.119115e-04 0.000000e+00 0.000000e+00 0.000000e+00 3.528582e-04
## 18515 3.771420e-04 0.000000e+00 0.000000e+00 1.559810e-04 0.000000e+00
## 7856 1.423661e-04 1.486715e-03 0.000000e+00 1.372589e-03 1.631521e-04

```

| | | | | | | |
|----|-------|--------------|--------------------|--------------------------|--------------|--------------|
| ## | 34274 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 1.189598e-03 | 2.281417e-03 |
| ## | 10074 | 3.705929e-05 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 4.525826e-04 |
| ## | 20567 | 0.000000e+00 | 9.668397e-04 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## | 32026 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## | 34723 | 0.000000e+00 | 3.745318e-03 | 4.471918e-04 | 1.873020e-03 | 0.000000e+00 |
| ## | 23753 | 9.265042e-04 | 0.000000e+00 | 3.061818e-03 | 0.000000e+00 | 0.000000e+00 |
| ## | 26466 | 4.104648e-04 | 0.000000e+00 | 0.000000e+00 | 1.585119e-04 | 4.891027e-04 |
| ## | 14268 | 1.950596e-04 | 2.969305e-04 | 1.133518e-03 | 0.000000e+00 | 0.000000e+00 |
| ## | 31884 | 3.484444e-04 | 0.000000e+00 | 4.912479e-05 | 0.000000e+00 | 7.565678e-04 |
| ## | 722 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 9.133022e-04 | 1.526674e-03 |
| ## | 6739 | 1.046299e-03 | 3.026413e-03 | 0.000000e+00 | 1.477798e-03 | 1.082134e-03 |
| ## | 14540 | 0.000000e+00 | 0.000000e+00 | 1.466523e-04 | 8.955738e-05 | 5.418134e-04 |
| ## | 28505 | 5.383069e-05 | 5.070994e-04 | 4.166667e-04 | 0.000000e+00 | 1.296697e-03 |
| ## | 3550 | 5.427896e-04 | 5.730815e-05 | 2.585319e-05 | 0.000000e+00 | 0.000000e+00 |
| ## | 7776 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## | 35143 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 | 0.000000e+00 |
| ## | 6624 | 6.500959e-04 | 0.000000e+00 | 1.817828e-04 | 0.000000e+00 | 2.603362e-03 |
| ## | | 170 | | names beforeZGA_rpm.mean | | |
| ## | 14406 | 0.000000e+00 | | spata2l | | 5.903009 |
| ## | 25650 | 0.000000e+00 | | mos | | 119.719859 |
| ## | 3537 | 2.066116e-03 | | dck | | 32.628976 |
| ## | 22314 | 0.000000e+00 | | fam101b | | 21.797088 |
| ## | 3639 | 0.000000e+00 | DEPDC7 (1 of many) | | | 15.023130 |
| ## | 1307 | 0.000000e+00 | | btc | | 6.499303 |
| ## | 5417 | 0.000000e+00 | | gpr157 | | 6.849432 |
| ## | 19381 | 1.132075e-02 | CABZ01034698.4 | | | 18.321027 |
| ## | 28279 | 9.090909e-03 | | rab11fip1a | | 33.663403 |
| ## | 7841 | 1.058201e-02 | | mtmr7a | | 8.976496 |
| ## | 2718 | 0.000000e+00 | | coa3b | | 10.975939 |
| ## | 923 | 0.000000e+00 | | atad5b | | 11.189201 |
| ## | 21358 | 5.434783e-03 | | dcaf5 | | 8.410246 |
| ## | 14631 | 0.000000e+00 | | stk11ip | | 11.427144 |
| ## | 27807 | 9.803922e-03 | | ppfia3 | | 5.092366 |
| ## | 11240 | 0.000000e+00 | | sh2d5 | | 94.180339 |
| ## | 34208 | 9.456265e-03 | | uvssa | | 9.831669 |
| ## | 28933 | 0.000000e+00 | | RSBN1 | | 5.364762 |
| ## | 21556 | 0.000000e+00 | | dip2cb | | 42.898068 |
| ## | 25642 | 1.396825e-02 | | morc3a | | 12.628457 |
| ## | 18155 | 0.000000e+00 | | ano10b | | 5.175814 |
| ## | 16721 | 0.000000e+00 | | zgc:113426 | | 13.676138 |
| ## | 32068 | 0.000000e+00 | | slc29a2 | | 67.054371 |
| ## | 10314 | 3.916449e-03 | | rad51 | | 43.525322 |
| ## | 4601 | 0.000000e+00 | | fbxo15 | | 6.631584 |
| ## | 18013 | 0.000000e+00 | | alg13 | | 22.635136 |
| ## | 33514 | 8.625252e-05 | | tnfaip8l1 | | 46.855097 |
| ## | 21830 | 1.157742e-02 | | e2f5 | | 12.597242 |
| ## | 5692 | 0.000000e+00 | | hdlbpb | | 47.132745 |
| ## | 32010 | 0.000000e+00 | | slc25a15a | | 5.990027 |
| ## | 21861 | 5.466184e-03 | | ect2 | | 78.326583 |
| ## | 27845 | 0.000000e+00 | | ppp1r12c | | 5.336875 |
| ## | 3414 | 9.557905e-04 | | cyb5r1 | | 32.549672 |
| ## | 10021 | 0.000000e+00 | | psip1b | | 34.943573 |
| ## | 11349 | 4.109589e-02 | si:ch1073-190k2.1 | | | 7.859828 |
| ## | 17858 | 1.594896e-03 | | afap111b | | 20.297811 |

| | | | | |
|----|-------|--------------|--------------------|-------------|
| ## | 16105 | 0.000000e+00 | usp22 | 28.321218 |
| ## | 18389 | 1.535664e-02 | arl6ip1 | 169.008294 |
| ## | 29080 | 0.000000e+00 | sc:d217 | 8.297257 |
| ## | 33214 | 1.044653e-02 | tgs1 | 30.606986 |
| ## | 28426 | 0.000000e+00 | rassf4 | 7.231108 |
| ## | 11403 | 7.459235e-03 | si:ch211-106e7.2 | 162.831245 |
| ## | 28606 | 0.000000e+00 | rgl3a | 21.888015 |
| ## | 21396 | 1.630656e-03 | dcun1d4 | 48.969559 |
| ## | 23271 | 0.000000e+00 | glsb | 16.066452 |
| ## | 10244 | 0.000000e+00 | rab11fip4b | 5.667397 |
| ## | 7136 | 3.610108e-03 | macc1 | 12.851819 |
| ## | 16347 | 0.000000e+00 | wdr6 | 9.905057 |
| ## | 28161 | 1.121076e-03 | ptpdc1a | 10.484866 |
| ## | 33792 | 6.359895e-03 | trub2 | 38.428420 |
| ## | 34925 | 5.633208e-04 | zgc:162879 | 70.189935 |
| ## | 35220 | 0.000000e+00 | zgc:92594 | 12.410177 |
| ## | 7522 | 0.000000e+00 | mical3a | 9.148490 |
| ## | 11969 | 0.000000e+00 | si:ch211-226h8.4 | 26.873642 |
| ## | 16966 | 0.000000e+00 | zgc:172218 | 26.873642 |
| ## | 26419 | 5.065856e-03 | nptna | 19.700475 |
| ## | 16795 | 0.000000e+00 | zgc:153345 | 23.023568 |
| ## | 7374 | 2.894356e-03 | med19b | 13.457430 |
| ## | 34596 | 0.000000e+00 | ZC3H7B (1 of many) | 11.636163 |
| ## | 15653 | 0.000000e+00 | traf3ip1 | 7.203240 |
| ## | 26777 | 3.759712e-08 | org | 1095.031507 |
| ## | 15354 | 1.798366e-03 | tmem203 | 78.790654 |
| ## | 6170 | 0.000000e+00 | immp1l | 6.682154 |
| ## | 30139 | 0.000000e+00 | si:ch211-241j12.3 | 222.698943 |
| ## | 29735 | 1.065190e-03 | si:ch211-157b11.12 | 65.211403 |
| ## | 17859 | 3.829220e-03 | afap111b | 6.241439 |
| ## | 4616 | 3.603078e-04 | fbxo43 | 528.831983 |
| ## | 20009 | 3.184093e-03 | cdc45 | 123.470648 |
| ## | 14159 | 1.776706e-03 | slc7a6os | 124.977683 |
| ## | 31927 | 1.479629e-04 | slbp2 | 200.035193 |
| ## | 26903 | 0.000000e+00 | paqr5a | 11.419396 |
| ## | 17483 | 0.000000e+00 | znrf3 | 9.849757 |
| ## | 24648 | 0.000000e+00 | kirrelb | 10.232889 |
| ## | 9563 | 3.656307e-03 | pld1a | 7.927501 |
| ## | 16740 | 1.308996e-03 | zgc:114123 | 157.518836 |
| ## | 12272 | 0.000000e+00 | si:ch211-67e16.4 | 11.669302 |
| ## | 16549 | 1.596169e-03 | zdhhc15b | 18.102205 |
| ## | 4602 | 2.677376e-03 | FBX015 (1 of many) | 9.933311 |
| ## | 324 | 0.000000e+00 | ago4 | 30.781447 |
| ## | 14626 | 0.000000e+00 | stil | 79.788026 |
| ## | 16984 | 2.232143e-03 | zgc:173570 | 15.032034 |
| ## | 4525 | 0.000000e+00 | fam49a | 10.393535 |
| ## | 34764 | 2.538552e-04 | zgc:113425 | 68.760156 |
| ## | 9175 | 1.336858e-02 | pef1 | 6.549481 |
| ## | 18958 | 2.865483e-03 | buc2l | 93.998356 |
| ## | 18472 | 6.069355e-03 | asf1ba | 166.201560 |
| ## | 1201 | 0.000000e+00 | birc5b | 141.304040 |
| ## | 1310 | 1.734549e-04 | btg4 | 284.870661 |
| ## | 7839 | 0.000000e+00 | mtmr1b | 5.957843 |
| ## | 26626 | 1.768634e-03 | ocrl | 52.043021 |

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| ## 29253 | 0.000000e+00 | serac1 | 11.874237 |
| ## 14536 | 1.210179e-03 | ssfa2 | 42.092436 |
| ## 14612 | 0.000000e+00 | stat1a | 5.966210 |
| ## 633 | 4.212348e-03 | ap3s2 | 21.713725 |
| ## 10521 | 0.000000e+00 | rem1 | 9.549522 |
| ## 5977 | 1.604528e-05 | hsd3b7 | 11.231404 |
| ## 16708 | 0.000000e+00 | zgc:113293 | 18.362578 |
| ## 34692 | 0.000000e+00 | zgc:110329 | 5.849278 |
| ## 15734 | 3.419375e-04 | trmt12 | 29.400510 |
| ## 27242 | 1.065355e-03 | pgp | 40.531412 |
| ## 6896 | 0.000000e+00 | lmf2a | 20.418563 |
| ## 16079 | 5.272408e-03 | usf1 | 5.050977 |
| ## 30669 | 4.387782e-03 | si:dkey-100n23.5 | 13.778168 |
| ## 3317 | 3.100533e-04 | CU856539.2 | 39.049435 |
| ## 31867 | 8.451323e-03 | si:zf0s-943e10.1 | 162.466302 |
| ## 4083 | 0.000000e+00 | elf2ak3 | 130.920137 |
| ## 2051 | 4.907975e-03 | cc2d1b | 16.434373 |
| ## 34089 | 1.089587e-03 | ulk1a | 56.617892 |
| ## 6701 | 5.911093e-03 | knstrn | 14.136050 |
| ## 1217 | 6.894883e-03 | bmb | 596.208350 |
| ## 21264 | 0.000000e+00 | cyp2x7 | 12.119745 |
| ## 17138 | 0.000000e+00 | zgc:77880 | 66.768657 |
| ## 2071 | 1.566966e-03 | ccdc102a | 40.350963 |
| ## 17798 | 1.962709e-03 | adgrf3b | 13.804617 |
| ## 24921 | 3.750074e-04 | lipg | 166.825097 |
| ## 30974 | 3.654804e-04 | si:dkey-19b23.8 | 97.679543 |
| ## 6662 | 0.000000e+00 | klhl18 | 12.296556 |
| ## 1616 | 4.689332e-03 | ca10a | 18.630849 |
| ## 32049 | 8.398091e-03 | slc25a42 | 12.903738 |
| ## 1259 | 0.000000e+00 | bpgm | 8.766122 |
| ## 19300 | 0.000000e+00 | ca15b | 223.087946 |
| ## 6612 | 1.765225e-03 | kif3a | 14.792518 |
| ## 31425 | 0.000000e+00 | si:dkey-52118.4 | 40.065412 |
| ## 28497 | 0.000000e+00 | rbpms2b | 69.156671 |
| ## 18876 | 6.824244e-03 | brdt | 25.173840 |
| ## 17164 | 8.547009e-04 | zgc:92591 | 9.363832 |
| ## 31053 | 0.000000e+00 | si:dkey-21c1.1 | 26.780110 |
| ## 33972 | 8.211170e-03 | ubald1a | 13.611551 |
| ## 15929 | 0.000000e+00 | ubap2l | 76.017915 |
| ## 15204 | 4.760915e-03 | tinf2 | 49.437347 |
| ## 14986 | 8.729812e-04 | tbpl2 | 33.525106 |
| ## 21377 | 7.403149e-03 | dclre1b | 11.145491 |
| ## 25652 | 1.025641e-02 | moto | 5.299133 |
| ## 2615 | 0.000000e+00 | cln6a | 12.734756 |
| ## 1209 | 1.559476e-03 | blm | 18.297990 |
| ## 33029 | 0.000000e+00 | tbc1d10aa | 18.172239 |
| ## 9851 | 2.449959e-03 | PQLC1 | 19.025074 |
| ## 13672 | 1.146789e-03 | si:dkeyp-26a9.2 | 24.901266 |
| ## 28280 | 0.000000e+00 | rab11fip1b | 37.243481 |
| ## 6578 | 2.945508e-03 | KIAA0895L | 10.090248 |
| ## 15187 | 0.000000e+00 | TIMM21 | 18.735013 |
| ## 32838 | 2.363850e-03 | swt1 | 17.893365 |
| ## 15729 | 0.000000e+00 | trip13 | 34.180430 |
| ## 21340 | 0.000000e+00 | dazl | 220.291627 |

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| ## 18835 | 0.000000e+00 | bmp15 | 71.078195 |
| ## 15169 | 3.616637e-03 | thtpa | 15.275060 |
| ## 10593 | 3.675384e-03 | rhpn2 | 72.606302 |
| ## 35184 | 1.197419e-03 | zgc:73340 | 102.371088 |
| ## 2587 | 0.000000e+00 | cldnd | 2411.836098 |
| ## 7818 | 0.000000e+00 | mtg1 | 22.384497 |
| ## 2091 | 0.000000e+00 | ccdc149b | 12.286305 |
| ## 20213 | 9.980040e-04 | CHCHD5 | 6.808799 |
| ## 33474 | 2.971768e-03 | tmem69 | 9.903735 |
| ## 26174 | 1.819836e-03 | nf1a | 12.087865 |
| ## 10474 | 2.309937e-04 | rbpms2a | 24.757477 |
| ## 17090 | 1.104139e-04 | zgc:56231 | 211.097026 |
| ## 21158 | 6.191950e-03 | CU929037.1 | 6.136748 |
| ## 6223 | 6.396588e-03 | ints6 | 18.495007 |
| ## 15378 | 0.000000e+00 | tmem243a | 28.909961 |
| ## 31889 | 3.961274e-06 | sinup | 49.378870 |
| ## 1012 | 1.979708e-03 | atp6v0d1 | 52.676471 |
| ## 15605 | 0.000000e+00 | tpcn1 | 5.133884 |
| ## 25281 | 6.593952e-04 | march7 | 115.544830 |
| ## 7520 | 0.000000e+00 | mical2b | 6.141535 |
| ## 25994 | 0.000000e+00 | nagk | 7.396280 |
| ## 25541 | 2.006214e-03 | micall2b | 116.501988 |
| ## 6917 | 1.143639e-03 | lnpa | 96.163397 |
| ## 10592 | 1.859088e-03 | rhpn2 | 42.371860 |
| ## 24225 | 0.000000e+00 | im:7138535 | 5.421973 |
| ## 16124 | 2.425206e-03 | uspl1 | 70.355487 |
| ## 4724 | 6.172507e-03 | fkbp1 | 42.511168 |
| ## 29510 | 0.000000e+00 | si:ch1073-416j23.1 | 7.428546 |
| ## 27249 | 0.000000e+00 | phactr4a | 31.098339 |
| ## 25857 | 5.982673e-03 | mxd3 | 51.108729 |
| ## 547 | 1.182069e-03 | ankrd12 | 101.993928 |
| ## 34852 | 2.351097e-03 | zgc:153681 | 17.683586 |
| ## 29788 | 0.000000e+00 | si:ch211-167j6.3 | 45.837075 |
| ## 34996 | 1.661773e-03 | zgc:171727 | 62.481647 |
| ## 6045 | 2.255005e-03 | ice1 | 43.883300 |
| ## 24713 | 1.083603e-02 | kpna2 | 268.678336 |
| ## 10348 | 5.908661e-04 | rangrf | 41.659600 |
| ## 33270 | 2.599090e-03 | tk2 | 14.876904 |
| ## 10634 | 3.023394e-04 | rnasen | 76.522642 |
| ## 20363 | 5.589507e-05 | cldng | 1515.986301 |
| ## 10844 | 0.000000e+00 | rsad1 | 6.762646 |
| ## 18154 | 9.079903e-04 | ano1 | 35.099078 |
| ## 23849 | 4.216520e-05 | hmgcl | 66.649062 |
| ## 15572 | 1.915867e-02 | top2a | 60.786456 |
| ## 33709 | 3.204418e-04 | trim36 | 355.554618 |
| ## 29326 | 3.330699e-03 | sgk1 | 53.754252 |
| ## 30224 | 7.291766e-03 | si:ch211-269i23.2 | 33.887922 |
| ## 30141 | 1.392758e-03 | si:ch211-244b2.3 | 6.680243 |
| ## 28805 | 4.391114e-04 | rogdi | 144.127060 |
| ## 7100 | 1.531073e-04 | luzp1 | 52.104114 |
| ## 35164 | 7.848379e-03 | zgc:66427 | 74.058343 |
| ## 614 | 0.000000e+00 | ap1m1 | 5.809412 |
| ## 7797 | 0.000000e+00 | mt2 | 659.600404 |
| ## 14760 | 0.000000e+00 | sybu | 40.202213 |

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|----|-------|--------------|--------------------|------------|
| ## | 22405 | 8.515452e-04 | fam210aa | 24.605524 |
| ## | 32622 | 9.174954e-04 | ssh2a | 131.779392 |
| ## | 546 | 0.000000e+00 | ankrd12 | 112.346671 |
| ## | 23123 | 0.000000e+00 | gbgt114 | 47.350045 |
| ## | 14704 | 8.185941e-04 | stxbp2 | 42.340555 |
| ## | 20109 | 4.667448e-03 | cenpj | 16.936444 |
| ## | 34646 | 0.000000e+00 | zfpm2b | 15.527978 |
| ## | 515 | 9.638884e-03 | anapc13 | 31.889187 |
| ## | 3114 | 3.455799e-03 | cse11 | 101.512943 |
| ## | 18109 | 8.257658e-04 | ankle2 | 14.409543 |
| ## | 8535 | 7.545374e-03 | nufip2 | 52.629281 |
| ## | 16714 | 7.743363e-03 | zgc:113314 | 6.386074 |
| ## | 9578 | 9.576318e-03 | plekhg2 | 14.691505 |
| ## | 33126 | 1.162791e-03 | tdrkh | 27.072443 |
| ## | 25760 | 2.749267e-03 | msi2b | 10.755955 |
| ## | 21291 | 3.636732e-04 | CYSTM1 (1 of many) | 120.758199 |
| ## | 28779 | 0.000000e+00 | rnf4 | 19.262264 |
| ## | 21669 | 2.304609e-04 | dnd1 | 96.263859 |
| ## | 33803 | 0.000000e+00 | tshz3a | 5.525904 |
| ## | 4484 | 2.897951e-03 | fam175a | 51.287329 |
| ## | 33425 | 1.607364e-03 | tmem234 | 42.225309 |
| ## | 24658 | 4.915347e-03 | klf11a | 15.242148 |
| ## | 25718 | 3.424658e-03 | mrpl48 | 13.811331 |
| ## | 7117 | 3.488372e-03 | lyrm9 | 7.614042 |
| ## | 14333 | 0.000000e+00 | socs3b | 5.970436 |
| ## | 23666 | 9.803922e-03 | hbegfb | 5.662870 |
| ## | 13718 | 0.000000e+00 | si:dkeyp-67f1.1 | 14.518981 |
| ## | 7444 | 3.533569e-03 | mettl6 | 24.162269 |
| ## | 24938 | 2.845045e-03 | lman21b | 36.862223 |
| ## | 8616 | 7.414272e-03 | oip5 | 27.463635 |
| ## | 34542 | 0.000000e+00 | zar1l | 194.485928 |
| ## | 20491 | 1.206573e-04 | coil | 59.722298 |
| ## | 19493 | 1.282051e-03 | CABZ01071909.3 | 9.304763 |
| ## | 15406 | 5.922058e-04 | tmem53 | 80.537008 |
| ## | 2000 | 4.626570e-03 | casp8ap2 | 27.633794 |
| ## | 25230 | 0.000000e+00 | map7d3 | 28.369667 |
| ## | 33439 | 4.032173e-04 | tmem263 | 97.718354 |
| ## | 30219 | 0.000000e+00 | si:ch211-266k8.4 | 6.822429 |
| ## | 33585 | 5.542843e-03 | top3a | 9.932345 |
| ## | 19737 | 8.924145e-03 | casc5 | 22.365986 |
| ## | 20110 | 8.152219e-03 | cenpk | 33.327942 |
| ## | 18473 | 7.039097e-04 | asf1bb | 138.130795 |
| ## | 18396 | 0.000000e+00 | arl8ba | 34.768229 |
| ## | 22649 | 0.000000e+00 | fip111a | 7.624721 |
| ## | 17191 | 4.486317e-04 | zmp:0000001167 | 24.730825 |
| ## | 790 | 3.234191e-03 | arhgef7b | 47.493583 |
| ## | 29812 | 1.056524e-03 | si:ch211-175m2.5 | 18.040469 |
| ## | 24033 | 1.471856e-03 | ids | 25.561455 |
| ## | 12738 | 4.674252e-03 | si:dkey-1612.16 | 53.061926 |
| ## | 4488 | 6.169031e-04 | fam188a | 22.392227 |
| ## | 33643 | 7.790485e-03 | traip | 27.325049 |
| ## | 6287 | 0.000000e+00 | isca2 | 6.650207 |
| ## | 21435 | 5.091630e-03 | ddx49 | 29.740659 |
| ## | 4286 | 0.000000e+00 | ercc4 | 85.430206 |

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| ## 1127 | 4.978663e-03 | bbip1 | 17.554198 |
| ## 3818 | 3.846154e-03 | dnajc9 | 5.716757 |
| ## 33464 | 7.573462e-04 | tmem51a | 59.827992 |
| ## 7465 | 0.000000e+00 | mfsd12a | 15.610981 |
| ## 5608 | 0.000000e+00 | gys1 | 17.974422 |
| ## 28349 | 1.296460e-04 | rad17 | 19.356907 |
| ## 10318 | 3.565279e-03 | rad51c | 30.178868 |
| ## 22483 | 5.068338e-03 | fancd2 | 17.763851 |
| ## 27655 | 7.928058e-04 | plpp5 | 85.984321 |
| ## 18022 | 0.000000e+00 | alkbh2 | 8.071660 |
| ## 28584 | 3.149984e-03 | rfwd3 | 147.911503 |
| ## 35435 | 1.892074e-02 | znf711 | 12.975445 |
| ## 15256 | 1.546078e-03 | tm2d1 | 14.216730 |
| ## 33912 | 3.950555e-03 | tusc2a | 13.772522 |
| ## 9633 | 0.000000e+00 | pms2 | 12.410549 |
| ## 13842 | 1.187895e-02 | siah1 | 32.591410 |
| ## 17430 | 2.028398e-03 | znf687a | 6.854018 |
| ## 814 | 0.000000e+00 | arl4aa | 136.078167 |
| ## 24362 | 6.553238e-03 | itfg1 | 5.453285 |
| ## 1170 | 4.717839e-03 | bcor1l | 21.638114 |
| ## 21583 | 0.000000e+00 | dlgap4a | 28.407577 |
| ## 35418 | 4.643018e-04 | znf592 | 12.785327 |
| ## 25503 | 6.398527e-04 | mgat1a | 71.852704 |
| ## 21176 | 1.423555e-03 | cul5a | 23.953936 |
| ## 32050 | 1.349255e-03 | slc25a42 | 127.900405 |
| ## 23343 | 8.568238e-03 | golim4a | 9.904337 |
| ## 21678 | 1.645165e-04 | dnmt1 | 265.864571 |
| ## 21810 | 0.000000e+00 | dync1li1 | 30.681795 |
| ## 16254 | 2.872188e-03 | vps9d1 | 72.963931 |
| ## 1034 | 0.000000e+00 | atpv0e2 | 20.525486 |
| ## 4577 | 0.000000e+00 | fastkd2 | 12.571113 |
| ## 34622 | 1.466902e-03 | zdhhc24 | 64.740442 |
| ## 17150 | 0.000000e+00 | zgc:91890 | 6.248884 |
| ## 5967 | 2.967511e-03 | HSCB | 22.064137 |
| ## 16877 | 0.000000e+00 | zgc:162592 | 92.096035 |
| ## 15804 | 0.000000e+00 | tssc4 | 55.385245 |
| ## 20150 | 1.388225e-03 | cep85 | 60.886619 |
| ## 18670 | 0.000000e+00 | b4galnt1a | 14.671447 |
| ## 734 | 6.359975e-04 | arhgap10 | 49.191673 |
| ## 9217 | 5.167562e-03 | pgm2l1 | 13.853221 |
| ## 20579 | 9.093881e-03 | cox11 | 7.851813 |
| ## 29930 | 4.264164e-03 | si:ch211-204c21.1 | 58.121115 |
| ## 7289 | 2.422800e-03 | mbip | 30.036192 |
| ## 27257 | 7.693040e-04 | phex | 34.579064 |
| ## 19304 | 0.000000e+00 | ca16b | 7.525698 |
| ## 18352 | 3.241809e-03 | arhgef28 | 26.225742 |
| ## 636 | 6.976744e-03 | ap4m1 | 6.238566 |
| ## 16567 | 0.000000e+00 | zdhhc9 | 13.119398 |
| ## 28910 | 6.124453e-03 | rrad | 36.559702 |
| ## 27262 | 0.000000e+00 | phf2 | 6.110836 |
| ## 11669 | 0.000000e+00 | si:ch211-167b20.8 | 75.697156 |
| ## 12515 | 0.000000e+00 | si:ch73-390p7.2 | 13.653118 |
| ## 25846 | 2.128391e-03 | mvb12a | 58.972655 |
| ## 15114 | 1.538462e-03 | tfr1b | 5.147134 |

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|----|-------|--------------|-------------------|------------|
| ## | 19827 | 0.000000e+00 | ccdc14 | 7.064809 |
| ## | 4189 | 0.000000e+00 | enc3 | 26.335350 |
| ## | 30133 | 6.116198e-04 | si:ch211-241d21.5 | 7.342207 |
| ## | 18921 | 3.502627e-03 | btbd2a | 14.689164 |
| ## | 7243 | 0.000000e+00 | march2 | 8.327316 |
| ## | 16103 | 1.507636e-03 | usp20 | 35.965258 |
| ## | 33352 | 1.700680e-03 | tmem131 | 17.910979 |
| ## | 5841 | 3.431472e-03 | hmmr | 145.350223 |
| ## | 5117 | 0.000000e+00 | gb:eh507706 | 7.052529 |
| ## | 17576 | 0.000000e+00 | abhd10a | 8.525707 |
| ## | 6436 | 1.854926e-03 | katnbl1 | 156.301407 |
| ## | 18865 | 0.000000e+00 | braf | 5.991959 |
| ## | 18834 | 2.680686e-04 | bmi1b | 90.990055 |
| ## | 22484 | 1.185771e-03 | fancf | 23.275133 |
| ## | 10022 | 0.000000e+00 | psip1b | 33.225373 |
| ## | 28796 | 6.101776e-03 | rock2a | 13.628934 |
| ## | 28337 | 0.000000e+00 | RABL6 (1 of many) | 8.671884 |
| ## | 29041 | 2.326425e-03 | samd1a | 33.415904 |
| ## | 19960 | 3.668387e-03 | cd3eap | 62.066441 |
| ## | 2796 | 3.395608e-03 | coq10b | 74.688500 |
| ## | 27553 | 0.000000e+00 | pkmyt1 | 25.089471 |
| ## | 21505 | 0.000000e+00 | dguok | 15.896980 |
| ## | 10853 | 4.702217e-03 | rspry1 | 14.380132 |
| ## | 22339 | 0.000000e+00 | fam129ba | 49.291874 |
| ## | 26253 | 1.247920e-03 | nisch | 23.404064 |
| ## | 3430 | 0.000000e+00 | cyp11a1 | 138.846175 |
| ## | 18418 | 2.302379e-03 | arpc51b | 26.704869 |
| ## | 10319 | 1.110583e-02 | rad52 | 9.791372 |
| ## | 30902 | 1.152547e-05 | si:dkey-180p18.9 | 25.947228 |
| ## | 16843 | 0.000000e+00 | zgc:158257 | 34.981158 |
| ## | 24174 | 7.802341e-03 | il13ra2 | 9.334665 |
| ## | 560 | 0.000000e+00 | ankrd28b | 7.108804 |
| ## | 18226 | 1.400560e-03 | apex2 | 21.732398 |
| ## | 35475 | 8.415914e-03 | znrd1 | 32.420024 |
| ## | 34564 | 1.233348e-04 | zbtb2a | 51.974619 |
| ## | 8888 | 2.251702e-04 | pabpc1l | 121.370494 |
| ## | 11180 | 5.709564e-04 | setdb1a | 126.981881 |
| ## | 17398 | 0.000000e+00 | znf438 | 18.626080 |
| ## | 21604 | 0.000000e+00 | dmxl2 | 9.572413 |
| ## | 34585 | 0.000000e+00 | zbtb8a | 19.687254 |
| ## | 22224 | 2.288330e-03 | esyt2a | 14.372924 |
| ## | 26577 | 6.446414e-03 | nuf2 | 25.588721 |
| ## | 24286 | 3.236246e-03 | ints8 | 7.152925 |
| ## | 7493 | 2.065171e-03 | mgrn1a | 48.597271 |
| ## | 11905 | 1.334636e-04 | si:ch211-215k15.5 | 30.623058 |
| ## | 13089 | 0.000000e+00 | si:dkey-241l7.4 | 14.418308 |
| ## | 23769 | 3.178636e-03 | hic1l | 17.316046 |
| ## | 2816 | 1.227918e-03 | cox15 | 17.514259 |
| ## | 27248 | 0.000000e+00 | phactr4a | 24.569818 |
| ## | 3876 | 2.547771e-03 | dph3 | 26.284472 |
| ## | 15475 | 3.001080e-03 | tmx1 | 57.538838 |
| ## | 25377 | 5.479241e-03 | MCRIP2 | 23.321310 |
| ## | 22210 | 7.194245e-03 | esco1 | 6.733252 |
| ## | 35217 | 2.507676e-03 | zgc:92313 | 203.546738 |

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|----|-------|--------------|---------------------|------------|
| ## | 1067 | 1.176466e-03 | b3galt6 | 23.248964 |
| ## | 5711 | 1.150370e-03 | hells | 64.968875 |
| ## | 15008 | 3.035148e-06 | tceb1a | 33.503265 |
| ## | 23942 | 2.367210e-04 | hsbp1l1 | 31.185441 |
| ## | 7943 | 1.227865e-03 | mylipa | 341.870065 |
| ## | 20804 | 3.720238e-04 | CRACR2A (1 of many) | 25.210095 |
| ## | 22626 | 0.000000e+00 | fhdc3 | 172.702555 |
| ## | 29223 | 0.000000e+00 | senp6b | 17.549022 |
| ## | 29303 | 5.740839e-04 | sfi1 | 19.796026 |
| ## | 3579 | 3.277010e-02 | ddrgk1 | 6.916331 |
| ## | 11255 | 0.000000e+00 | sh3d21 | 40.241950 |
| ## | 9980 | 3.153839e-03 | prr14 | 24.397654 |
| ## | 28393 | 2.728513e-03 | rapgef1a | 7.671225 |
| ## | 24720 | 1.654267e-04 | kpna7 | 75.143312 |
| ## | 32968 | 3.257625e-03 | tacc3 | 104.187345 |
| ## | 2454 | 3.530238e-03 | chic2 | 50.523397 |
| ## | 33486 | 0.000000e+00 | tmem9b | 14.963095 |
| ## | 31574 | 0.000000e+00 | si:dkey-85k15.4 | 10.131087 |
| ## | 11221 | 0.000000e+00 | SGMS1 (1 of many) | 5.263486 |
| ## | 17159 | 0.000000e+00 | zgc:92249 | 5.082348 |
| ## | 21453 | 1.420455e-03 | dennd2c | 11.673151 |
| ## | 32368 | 1.797484e-03 | snrka | 21.708495 |
| ## | 14796 | 6.305170e-04 | synj1 | 12.901493 |
| ## | 5693 | 6.401546e-03 | hdr | 26.381510 |
| ## | 35160 | 1.517263e-03 | zgc:66014 | 47.543108 |
| ## | 12127 | 1.683161e-03 | si:ch211-262i1.5 | 8.018007 |
| ## | 7105 | 0.000000e+00 | lypla1 | 9.580728 |
| ## | 12625 | 6.188332e-03 | si:dkey-121h17.7 | 15.850556 |
| ## | 25375 | 3.059976e-04 | mcph1 | 27.249344 |
| ## | 13512 | 1.885014e-03 | si:dkey-7n6.2 | 8.495993 |
| ## | 15961 | 3.044078e-03 | UBL4B | 66.681638 |
| ## | 16436 | 1.302838e-04 | xiap | 31.938860 |
| ## | 33471 | 0.000000e+00 | tmem60 | 7.471416 |
| ## | 34663 | 0.000000e+00 | zgc:101566 | 8.717196 |
| ## | 10628 | 8.271299e-04 | rnaseh1 | 39.560408 |
| ## | 24467 | 8.291261e-04 | katna1 | 37.498605 |
| ## | 4604 | 2.593532e-03 | fbxo16 | 11.215340 |
| ## | 16236 | 2.369322e-03 | vps37a | 18.882885 |
| ## | 35242 | 2.040816e-03 | zmynd8 | 10.981565 |
| ## | 7807 | 0.000000e+00 | mtbp | 31.319924 |
| ## | 35213 | 7.660666e-04 | zgc:92287 | 201.029560 |
| ## | 35 | 1.374967e-03 | abcc1 | 8.308629 |
| ## | 16779 | 7.930214e-04 | zgc:152968 | 16.129842 |
| ## | 27314 | 0.000000e+00 | pias4b | 52.372602 |
| ## | 20149 | 3.207616e-03 | cep85 | 42.491023 |
| ## | 9309 | 3.237058e-04 | pigw | 24.574473 |
| ## | 18383 | 0.000000e+00 | arl2bp | 40.598920 |
| ## | 28292 | 0.000000e+00 | rab20 | 18.327422 |
| ## | 34283 | 8.544065e-04 | vps26a | 112.541978 |
| ## | 13997 | 0.000000e+00 | slc27a4 | 5.461883 |
| ## | 6847 | 2.487562e-03 | lig4 | 5.196276 |
| ## | 3187 | 4.810813e-04 | ctdsp1 | 40.964610 |
| ## | 18040 | 2.052255e-03 | ambra1b | 26.302024 |
| ## | 12349 | 4.753946e-04 | si:ch73-14h10.2 | 95.466315 |

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|----------|--------------|-------------------|------------|
| ## 8131 | 1.607071e-03 | ndufb5 | 26.309449 |
| ## 21582 | 1.987695e-04 | dlgap4a | 33.715966 |
| ## 18697 | 6.256574e-04 | badb | 16.813688 |
| ## 26415 | 0.000000e+00 | npnl2 | 8.408180 |
| ## 21628 | 0.000000e+00 | dnajb1a | 14.143944 |
| ## 33002 | 9.157509e-04 | taok1b | 13.098412 |
| ## 7308 | 0.000000e+00 | mcf2la | 31.191497 |
| ## 5335 | 0.000000e+00 | gnpda1 | 66.809397 |
| ## 25988 | 0.000000e+00 | nadkb | 24.858420 |
| ## 17502 | 0.000000e+00 | zufsp | 14.534774 |
| ## 28434 | 1.126855e-02 | rbbp4 | 157.775000 |
| ## 28111 | 0.000000e+00 | ptcd2 | 10.573341 |
| ## 3415 | 0.000000e+00 | cyb5r4 | 19.297465 |
| ## 17615 | 0.000000e+00 | acad9 | 7.433193 |
| ## 25433 | 1.352857e-02 | melk | 15.632266 |
| ## 11868 | 5.983201e-05 | si:ch211-212k18.7 | 62.782049 |
| ## 33408 | 2.300341e-03 | tmem199 | 39.030999 |
| ## 1335 | 0.000000e+00 | buc | 719.896337 |
| ## 27830 | 1.269592e-02 | ppm1k | 8.139372 |
| ## 31649 | 5.975386e-03 | si:dkeyp-117h8.4 | 51.058225 |
| ## 16774 | 2.361673e-03 | zgc:152863 | 33.966643 |
| ## 16825 | 1.179071e-02 | zgc:153952 | 72.504645 |
| ## 14213 | 1.460589e-03 | smarcad1a | 75.576129 |
| ## 2805 | 9.542943e-03 | coro2a | 17.414303 |
| ## 22276 | 1.780944e-03 | extl2 | 7.738641 |
| ## 15617 | 3.250704e-04 | TPM1 | 114.442435 |
| ## 18412 | 6.379798e-04 | arntl1a | 45.861314 |
| ## 11115 | 7.401538e-04 | senp2 | 239.542348 |
| ## 4332 | 2.565747e-03 | ethe1 | 8.725569 |
| ## 16136 | 0.000000e+00 | uxs1 | 17.602641 |
| ## 6706 | 7.954928e-03 | krcp | 208.562587 |
| ## 20833 | 0.000000e+00 | creld2 | 5.085020 |
| ## 16181 | 0.000000e+00 | vasna | 6.020789 |
| ## 33125 | 0.000000e+00 | tdrd12 | 9.688886 |
| ## 7915 | 7.346667e-03 | mycb | 42.618389 |
| ## 18930 | 1.225866e-03 | btbd9 | 37.721357 |
| ## 7682 | 0.000000e+00 | mppe2a | 27.009291 |
| ## 15142 | 0.000000e+00 | them4 | 6.743993 |
| ## 18795 | 2.834728e-03 | bet1 | 13.821832 |
| ## 16660 | 0.000000e+00 | zgc:112023 | 12.426515 |
| ## 7286 | 0.000000e+00 | mbd1b | 6.059018 |
| ## 10316 | 2.722323e-03 | rad51ap1 | 14.212122 |
| ## 2267 | 1.179271e-03 | cdca9 | 31.121387 |
| ## 5468 | 0.000000e+00 | gramd4b | 9.467041 |
| ## 21775 | 0.000000e+00 | DTX3 | 9.771787 |
| ## 12497 | 3.120125e-03 | si:ch73-376124.3 | 39.469557 |
| ## 32052 | 1.743679e-03 | slc25a46 | 27.165633 |
| ## 14954 | 4.004577e-03 | tbc1d10b | 15.014101 |
| ## 24670 | 0.000000e+00 | klf7b | 5.046926 |
| ## 22333 | 4.401408e-03 | fam117aa | 11.000621 |
| ## 29339 | 0.000000e+00 | sgpl1 | 38.783047 |
| ## 28323 | 0.000000e+00 | rab4b | 6.029815 |
| ## 18214 | 0.000000e+00 | ap5b1 | 9.712018 |
| ## 34004 | 2.449229e-03 | ube2t | 40.036422 |

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|----|-------|--------------|-------------------|------------|
| ## | 33893 | 1.363242e-03 | tuba4l | 95.386916 |
| ## | 32043 | 5.402939e-03 | slc25a39 | 56.506804 |
| ## | 16781 | 0.000000e+00 | zgc:152986 | 54.676691 |
| ## | 2536 | 0.000000e+00 | cish | 10.319236 |
| ## | 20070 | 1.680672e-03 | cdkn3 | 10.918612 |
| ## | 510 | 1.620089e-03 | amt | 24.076555 |
| ## | 28120 | 4.598210e-04 | ptena | 26.731184 |
| ## | 23954 | 3.811944e-03 | hsdl1 | 7.458755 |
| ## | 16353 | 0.000000e+00 | wdr76 | 60.783299 |
| ## | 17856 | 4.864996e-04 | afap111a | 32.217162 |
| ## | 34108 | 4.065041e-03 | uncx | 6.472922 |
| ## | 34367 | 7.500040e-04 | wdr13 | 19.769469 |
| ## | 34937 | 0.000000e+00 | zgc:163014 | 20.019162 |
| ## | 29647 | 0.000000e+00 | si:ch211-132b12.8 | 656.182700 |
| ## | 32510 | 0.000000e+00 | spg21 | 18.510507 |
| ## | 22666 | 9.652510e-04 | fkrp | 10.109937 |
| ## | 29331 | 2.516515e-03 | sgk3 | 32.807986 |
| ## | 34022 | 0.000000e+00 | ubl3b | 62.874163 |
| ## | 20001 | 1.841621e-03 | cdc42ep4a | 5.903640 |
| ## | 34009 | 4.467944e-04 | ube2z | 43.137934 |
| ## | 21107 | 4.116643e-04 | CU550716.1 | 6.826327 |
| ## | 22416 | 1.627907e-02 | fam214b | 6.797756 |
| ## | 26915 | 5.860730e-04 | pard6a | 31.736192 |
| ## | 1284 | 0.000000e+00 | brf1a | 9.075238 |
| ## | 23699 | 0.000000e+00 | hdac8 | 35.077854 |
| ## | 10490 | 1.114046e-02 | rdh10b | 209.041535 |
| ## | 5963 | 0.000000e+00 | hs3st3b1a | 5.143080 |
| ## | 26024 | 1.281695e-03 | naspl | 446.079465 |
| ## | 21702 | 0.000000e+00 | dock8 | 10.506370 |
| ## | 14693 | 1.702128e-03 | stx3a | 11.287567 |
| ## | 14464 | 0.000000e+00 | sprtn | 29.827823 |
| ## | 32839 | 3.220612e-03 | swt1 | 11.783731 |
| ## | 14404 | 0.000000e+00 | spata2 | 14.458374 |
| ## | 18060 | 8.448622e-04 | anapc11 | 68.341155 |
| ## | 10286 | 1.099130e-03 | rab5b | 16.017286 |
| ## | 21686 | 0.000000e+00 | dnmt3bb.3 | 54.683643 |
| ## | 8371 | 2.254678e-03 | npat | 44.213750 |
| ## | 7372 | 2.383364e-03 | med16 | 37.806552 |
| ## | 10418 | 4.743833e-03 | RB1CC1 | 19.666279 |
| ## | 1592 | 4.226543e-04 | c2cd3 | 17.393174 |
| ## | 32360 | 2.451958e-04 | snapc4 | 14.817757 |
| ## | 34832 | 0.000000e+00 | zgc:153240 | 5.801057 |
| ## | 1740 | 2.851407e-03 | CABZ01069006.1 | 67.375375 |
| ## | 32623 | 1.116160e-02 | ssna1 | 12.401345 |
| ## | 25205 | 0.000000e+00 | map3k5 | 8.167762 |
| ## | 276 | 0.000000e+00 | adob | 14.441131 |
| ## | 28333 | 3.350748e-03 | rabgef1l | 9.224108 |
| ## | 6941 | 0.000000e+00 | lpcat4 | 149.884955 |
| ## | 34867 | 7.395101e-04 | zgc:154061 | 27.252705 |
| ## | 4398 | 0.000000e+00 | f3b | 20.507053 |
| ## | 10273 | 0.000000e+00 | rab3aa | 13.129897 |
| ## | 30810 | 0.000000e+00 | si:dkey-152b24.6 | 41.479289 |
| ## | 15289 | 5.476451e-04 | tmem104 | 33.503993 |
| ## | 7328 | 5.777008e-04 | mcm8 | 11.828864 |

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|----|-------|--------------|--------------------|------------|
| ## | 24568 | 3.289474e-03 | kctd9a | 5.312086 |
| ## | 31035 | 3.018109e-03 | si:dkey-210j14.5 | 6.135209 |
| ## | 121 | 4.839243e-04 | acd | 13.877728 |
| ## | 2108 | 0.000000e+00 | ccdc186 | 52.677488 |
| ## | 20135 | 9.140335e-03 | cep57l1 | 17.955727 |
| ## | 14779 | 4.149378e-03 | syncrip | 5.869736 |
| ## | 35137 | 2.432794e-04 | zgc:195245 | 434.046022 |
| ## | 32025 | 7.039702e-04 | slc25a25a | 315.014673 |
| ## | 24784 | 7.614213e-03 | lamtor3 | 24.018855 |
| ## | 5145 | 2.460025e-03 | gchfr | 6.739655 |
| ## | 20625 | 0.000000e+00 | cpox | 54.893583 |
| ## | 882 | 0.000000e+00 | ascc2 | 13.140019 |
| ## | 18631 | 0.000000e+00 | atxn7l3 | 6.331035 |
| ## | 6872 | 2.864205e-03 | lins1 | 7.114754 |
| ## | 3197 | 1.680262e-04 | cth1 | 648.206216 |
| ## | 3860 | 0.000000e+00 | dok1b | 19.851212 |
| ## | 21642 | 0.000000e+00 | dnajc16l | 12.140938 |
| ## | 6761 | 4.354641e-03 | larp4b | 20.515415 |
| ## | 28748 | 1.085776e-03 | rnf181 | 19.171965 |
| ## | 12038 | 0.000000e+00 | si:ch211-242b18.1 | 5.331557 |
| ## | 25869 | 1.023996e-03 | myclb | 68.711430 |
| ## | 6199 | 7.106936e-04 | ino80db | 134.327622 |
| ## | 21481 | 8.570382e-04 | det1 | 46.406577 |
| ## | 22481 | 0.000000e+00 | fan1 | 8.656740 |
| ## | 26824 | 0.000000e+00 | oxr1b | 14.875688 |
| ## | 5861 | 0.000000e+00 | hnrnpc | 6.470674 |
| ## | 20479 | 9.685064e-03 | coa7 | 11.706953 |
| ## | 25703 | 7.680922e-04 | mrpl18 | 47.252724 |
| ## | 29623 | 7.917656e-04 | si:ch211-127b11.1 | 13.329686 |
| ## | 26503 | 1.243394e-03 | nsfb | 33.571783 |
| ## | 30942 | 5.218397e-03 | si:dkey-192p21.6 | 7.841158 |
| ## | 26156 | 3.499563e-03 | nepro | 16.396556 |
| ## | 18290 | 1.187606e-02 | arhgap11a | 10.700966 |
| ## | 17669 | 1.544882e-03 | acrc | 20.541900 |
| ## | 11202 | 1.762372e-03 | SFT2D2 (1 of many) | 13.867767 |
| ## | 18417 | 3.623095e-04 | arpc5lb | 47.994197 |
| ## | 14660 | 1.678469e-03 | stra13 | 11.527999 |
| ## | 727 | 0.000000e+00 | arfip2a | 51.224722 |
| ## | 32546 | 7.947542e-04 | spsb1 | 522.164864 |
| ## | 30382 | 0.000000e+00 | si:ch211-91p5.3 | 5.456492 |
| ## | 18610 | 4.137931e-03 | atp8b1 | 5.311230 |
| ## | 22209 | 1.565735e-03 | esco1 | 57.854980 |
| ## | 14265 | 0.000000e+00 | snai3 | 9.004166 |
| ## | 24403 | 1.612903e-03 | itprrip | 6.239215 |
| ## | 5209 | 5.090870e-03 | gid8a | 29.929388 |
| ## | 32269 | 0.000000e+00 | smad2 | 12.483071 |
| ## | 25695 | 8.356546e-03 | mrGBP | 14.044374 |
| ## | 2695 | 4.120338e-04 | cnot7 | 30.859714 |
| ## | 26443 | 0.000000e+00 | nr3c1 | 11.240551 |
| ## | 27259 | 1.914287e-03 | phf12a | 8.838234 |
| ## | 11231 | 7.511935e-03 | sh2b1 | 18.237767 |
| ## | 9805 | 1.191831e-03 | ppp1r3da | 45.721984 |
| ## | 7120 | 5.044182e-04 | lysmd2 | 111.319970 |
| ## | 25940 | 0.000000e+00 | myo9b | 28.353500 |

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| ## 8966 | 2.879783e-04 | parn | 1035.796735 |
| ## 18645 | 1.086826e-02 | axin2 | 19.211622 |
| ## 28403 | 9.519847e-03 | raph1a | 11.518386 |
| ## 31657 | 0.000000e+00 | si:dkeyp-121d2.7 | 6.229863 |
| ## 25182 | 0.000000e+00 | map1sa | 23.750197 |
| ## 12299 | 9.954751e-03 | si:ch211-89o9.6 | 19.603991 |
| ## 7125 | 7.803577e-04 | lzic | 20.141247 |
| ## 16452 | 0.000000e+00 | xrcc1 | 68.660034 |
| ## 32384 | 3.518943e-04 | snx10a | 63.150925 |
| ## 20570 | 0.000000e+00 | coq9 | 16.063102 |
| ## 11532 | 4.223865e-03 | si:ch211-140b10.6 | 18.539705 |
| ## 1178 | 4.127967e-03 | becn1 | 12.613988 |
| ## 1475 | 2.834272e-04 | BX548000.1 | 65.906251 |
| ## 33878 | 1.109253e-04 | ttl14 | 226.332794 |
| ## 22441 | 6.816633e-04 | fam49bb | 12.512812 |
| ## 18633 | 5.124844e-03 | aurkb | 172.660904 |
| ## 5219 | 7.139080e-03 | gipc2 | 23.763860 |
| ## 1266 | 5.146933e-03 | brca2 | 23.195593 |
| ## 15650 | 1.878063e-04 | tradd | 93.192958 |
| ## 1249 | 2.796411e-04 | bokb | 155.333546 |
| ## 23166 | 0.000000e+00 | gdpd5a | 10.066297 |
| ## 178 | 0.000000e+00 | adad1 | 6.074531 |
| ## 34147 | 0.000000e+00 | usp10 | 7.520635 |
| ## 23651 | 1.864385e-03 | haus6 | 99.404767 |
| ## 16872 | 2.753330e-04 | zgc:162339 | 64.837944 |
| ## 10544 | 2.279388e-03 | RFX7 (1 of many) | 31.344223 |
| ## 15672 | 0.000000e+00 | trappc5 | 14.453988 |
| ## 11167 | 2.269101e-04 | sesn2 | 32.496316 |
| ## 2368 | 0.000000e+00 | cep162 | 9.374350 |
| ## 3819 | 7.552651e-04 | dnajc9 | 40.577404 |
| ## 23672 | 4.488458e-03 | hbp1 | 8.349195 |
| ## 34815 | 0.000000e+00 | zgc:152977 | 5.939971 |
| ## 9290 | 5.583993e-03 | pias1b | 19.854665 |
| ## 19876 | 0.000000e+00 | ccdc9 | 9.539400 |
| ## 20244 | 3.145701e-04 | chmp7 | 60.236464 |
| ## 28441 | 2.771045e-04 | rbfa | 45.922132 |
| ## 446 | 0.000000e+00 | alg1 | 40.578319 |
| ## 15781 | 0.000000e+00 | tshz1 | 33.422936 |
| ## 11477 | 5.599104e-03 | si:ch211-12h2.6 | 7.931302 |
| ## 27886 | 0.000000e+00 | ppp3cca | 7.306679 |
| ## 27802 | 2.833261e-03 | ppdpfb | 210.867945 |
| ## 22853 | 2.412545e-03 | frmd4ba | 30.038326 |
| ## 7732 | 0.000000e+00 | mrs2 | 39.846571 |
| ## 16574 | 2.738491e-03 | zfand2a | 46.435210 |
| ## 16578 | 2.243383e-03 | zfand6 | 240.701871 |
| ## 11054 | 0.000000e+00 | sec22ba | 15.377741 |
| ## 22445 | 0.000000e+00 | fam57ba | 54.950795 |
| ## 14036 | 0.000000e+00 | slc35a3a | 6.371438 |
| ## 7317 | 7.482458e-03 | mcl1b | 27.705709 |
| ## 11721 | 4.470776e-05 | si:ch211-191a24.4 | 42.587525 |
| ## 456 | 5.512104e-04 | alkbh1 | 12.502393 |
| ## 20233 | 0.000000e+00 | chek2 | 86.935529 |
| ## 8796 | 5.843293e-05 | osbp12b | 57.283364 |
| ## 15041 | 2.621183e-04 | tldr6 | 91.513806 |

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| ## 1164 | 3.404715e-03 | bco1 | 6.986131 |
| ## 31512 | 1.311467e-03 | si:dkey-73n10.1 | 90.364001 |
| ## 27603 | 0.000000e+00 | pld6 | 14.290714 |
| ## 11955 | 3.873659e-03 | si:ch211-225g23.1 | 28.233252 |
| ## 20358 | 2.968827e-03 | cldnd1a | 17.031428 |
| ## 34183 | 6.821282e-04 | usp48 | 18.039709 |
| ## 1126 | 0.000000e+00 | baz2ba | 9.555964 |
| ## 17930 | 5.352961e-03 | ajuba | 22.511174 |
| ## 34835 | 6.250000e-03 | zgc:153292 | 9.606582 |
| ## 20819 | 1.565558e-03 | creb3l2 | 15.743576 |
| ## 25115 | 6.757258e-04 | m6pr | 28.088795 |
| ## 26979 | 0.000000e+00 | pbxip1b | 7.345896 |
| ## 34192 | 0.000000e+00 | ust | 9.000101 |
| ## 18886 | 6.218081e-04 | brip1 | 65.389032 |
| ## 23817 | 4.163197e-04 | hivep1 | 23.884791 |
| ## 32267 | 0.000000e+00 | smad2 | 34.830199 |
| ## 18061 | 3.814225e-03 | anapc15 | 45.678199 |
| ## 10566 | 3.506489e-04 | rhbdd1 | 13.209283 |
| ## 6957 | 4.075701e-04 | lrch1 | 13.811957 |
| ## 20174 | 7.471980e-04 | cfap97 | 31.823814 |
| ## 18846 | 7.744434e-03 | bmpr1ab | 8.020762 |
| ## 6054 | 2.276863e-03 | idh1 | 32.893732 |
| ## 21392 | 5.439710e-04 | dcun1d1 | 49.176732 |
| ## 7853 | 0.000000e+00 | mtus1a | 83.129439 |
| ## 837 | 6.413187e-03 | arpc5b | 11.381846 |
| ## 24059 | 5.662514e-03 | ift88 | 6.425058 |
| ## 22332 | 0.000000e+00 | fam114a2 | 35.239061 |
| ## 14277 | 0.000000e+00 | sncb | 14.410963 |
| ## 466 | 4.727434e-03 | alms1 | 42.879700 |
| ## 17004 | 1.008058e-03 | zgc:174160 | 17.055009 |
| ## 15085 | 0.000000e+00 | tescb | 8.078927 |
| ## 7714 | 6.529561e-04 | mrpl40 | 28.554671 |
| ## 997 | 0.000000e+00 | atp2a3 | 8.918556 |
| ## 10707 | 1.156539e-03 | rnmtl1b | 17.838749 |
| ## 7584 | 1.160093e-03 | mlh1 | 9.051380 |
| ## 5302 | 2.233116e-03 | gnal | 6.277594 |
| ## 22134 | 2.688205e-03 | epc2 | 62.771892 |
| ## 16080 | 4.683153e-03 | usf1 | 27.826523 |
| ## 561 | 1.664914e-03 | ankrd28b | 91.368550 |
| ## 841 | 2.740719e-03 | arpp21 | 43.536689 |
| ## 15557 | 3.022557e-04 | tom1 | 65.492288 |
| ## 9769 | 0.000000e+00 | ppip5k1b | 7.302662 |
| ## 14635 | 4.737288e-04 | stk17b | 73.584307 |
| ## 7077 | 4.494912e-04 | lsm1 | 41.784365 |
| ## 28513 | 5.000578e-03 | rcbtb1 | 17.929923 |
| ## 29619 | 0.000000e+00 | si:ch211-126c2.4 | 23.557500 |
| ## 821 | 1.039861e-02 | armc10 | 5.128352 |
| ## 15813 | 0.000000e+00 | ttc1 | 7.105853 |
| ## 27860 | 0.000000e+00 | ppp1r35 | 25.795692 |
| ## 24292 | 1.246537e-02 | ip6k2a | 18.630361 |
| ## 20584 | 9.966453e-03 | cox20 | 23.504271 |
| ## 8834 | 0.000000e+00 | otud7b | 12.073797 |
| ## 4225 | 9.775171e-03 | epc1a | 45.328777 |
| ## 17401 | 3.711994e-03 | znf507 | 23.099042 |

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| ## | 18377 | 3.665219e-03 | arl14ep | 104.129023 |
| ## | 15027 | 0.000000e+00 | tctn2 | 8.209708 |
| ## | 30045 | 2.468110e-03 | si:ch211-223m11.2 | 22.238258 |
| ## | 34281 | 0.000000e+00 | vps18 | 21.097825 |
| ## | 25048 | 6.772437e-03 | lrrcc1 | 16.519589 |
| ## | 1023 | 5.855491e-03 | atp6v1h | 36.013276 |
| ## | 6394 | 3.746777e-04 | josd2 | 9.696962 |
| ## | 3862 | 0.000000e+00 | dok6 | 6.656433 |
| ## | 1617 | 1.978239e-03 | ca10a | 20.080712 |
| ## | 27356 | 3.207698e-03 | pik3c3 | 10.327489 |
| ## | 5881 | 2.290090e-04 | hook1 | 25.091462 |
| ## | 18373 | 9.083594e-03 | arid4a | 117.683781 |
| ## | 12989 | 1.242236e-03 | si:dkey-223p19.2 | 7.947365 |
| ## | 11994 | 8.489674e-04 | si:ch211-230g15.5 | 25.344089 |
| ## | 15376 | 0.000000e+00 | tmem238b | 8.785709 |
| ## | 10941 | 0.000000e+00 | sap130a | 19.477476 |
| ## | 32237 | 2.645503e-03 | slco5a2 | 10.916370 |
| ## | 18931 | 5.301963e-04 | btbd9 | 23.990148 |
| ## | 4735 | 2.199950e-03 | flj110111 | 20.746844 |
| ## | 32697 | 4.562422e-03 | stard7 | 30.794364 |
| ## | 33713 | 0.000000e+00 | trim37 | 47.118013 |
| ## | 33641 | 1.294302e-03 | traf4b | 14.229721 |
| ## | 22652 | 0.000000e+00 | fjx1 | 16.139510 |
| ## | 34436 | 0.000000e+00 | wrn | 5.149663 |
| ## | 9916 | 1.437049e-04 | prkcbb | 37.698333 |
| ## | 4730 | 7.185488e-04 | flcn | 29.334414 |
| ## | 35175 | 5.128205e-03 | zgc:66474 | 13.949931 |
| ## | 20011 | 4.570503e-03 | cdc7 | 41.525071 |
| ## | 10732 | 4.384810e-04 | rpain | 115.183711 |
| ## | 33802 | 0.000000e+00 | tsg101b | 32.426945 |
| ## | 11061 | 3.091232e-04 | sec23b | 42.625087 |
| ## | 24304 | 0.000000e+00 | IQCA1L | 5.056089 |
| ## | 25231 | 0.000000e+00 | map7d3 | 8.138610 |
| ## | 18684 | 5.724098e-03 | b4galt7 | 32.244973 |
| ## | 35096 | 0.000000e+00 | zgc:193690 | 12.918948 |
| ## | 8245 | 0.000000e+00 | ngef | 15.246019 |
| ## | 3721 | 0.000000e+00 | dixdc1b | 15.119678 |
| ## | 22354 | 0.000000e+00 | fam151b | 5.060478 |
| ## | 31156 | 1.269841e-03 | si:dkey-243i1.1 | 23.000611 |
| ## | 10809 | 1.179357e-03 | rps6kal | 44.325236 |
| ## | 16636 | 3.678241e-03 | zgc:110063 | 13.658608 |
| ## | 14643 | 3.925967e-03 | stk36 | 16.871712 |
| ## | 18829 | 0.000000e+00 | bloc1s6 | 9.646437 |
| ## | 5885 | 1.479183e-04 | hook2 | 171.337558 |
| ## | 32382 | 6.376361e-04 | snupn | 93.448502 |
| ## | 6584 | 7.896611e-03 | kif11 | 62.964014 |
| ## | 25116 | 0.000000e+00 | m6pr | 5.485085 |
| ## | 11573 | 0.000000e+00 | si:ch211-150o23.3 | 6.740713 |
| ## | 16402 | 2.560819e-03 | wnt8a | 7.815424 |
| ## | 25161 | 0.000000e+00 | maml3 | 17.100082 |
| ## | 11287 | 3.032903e-03 | shdb | 79.538400 |
| ## | 8783 | 5.600000e-03 | oraov1 | 11.208647 |
| ## | 32108 | 8.046671e-04 | slc35f2 | 42.587238 |
| ## | 23101 | 0.000000e+00 | gas8 | 5.154539 |

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| ## 9786 | 1.009887e-03 | ppp1r14aa | 79.296664 |
| ## 4618 | 2.733734e-03 | fbxo44 | 17.527593 |
| ## 7642 | 0.000000e+00 | mon1bb | 5.586598 |
| ## 9136 | 4.376464e-04 | pdia4 | 82.825995 |
| ## 27762 | 5.616543e-03 | polr3f | 50.217946 |
| ## 22560 | 0.000000e+00 | fcho2 | 48.327923 |
| ## 34171 | 7.323625e-04 | usp32 | 44.768142 |
| ## 8964 | 1.223039e-03 | park7 | 50.555915 |
| ## 20940 | 5.517231e-03 | csnk1da | 49.858344 |
| ## 9642 | 4.572474e-04 | pnpla8 | 22.215938 |
| ## 26942 | 0.000000e+00 | pars2 | 18.370763 |
| ## 27956 | 0.000000e+00 | prkag2a | 23.732123 |
| ## 15257 | 1.856082e-03 | tm2d2 | 53.304773 |
| ## 20125 | 1.318755e-03 | cep152 | 106.387834 |
| ## 4759 | 1.291193e-04 | fmn2b | 111.743806 |
| ## 9176 | 0.000000e+00 | pel12 | 9.494184 |
| ## 2024 | 0.000000e+00 | cbl | 11.574522 |
| ## 16303 | 0.000000e+00 | wasla | 52.324152 |
| ## 18765 | 2.178254e-03 | bcl2l1 | 35.894959 |
| ## 22238 | 0.000000e+00 | evla | 27.847309 |
| ## 3634 | 0.000000e+00 | dennd4b | 19.195873 |
| ## 5577 | 9.203808e-03 | gtf3c6 | 8.902762 |
| ## 5780 | 6.020470e-03 | hira | 21.354241 |
| ## 20100 | 4.091653e-03 | celf3a | 7.783565 |
| ## 9186 | 0.000000e+00 | pex1 | 33.949527 |
| ## 2092 | 0.000000e+00 | ccdc15 | 11.103334 |
| ## 5357 | 7.772712e-03 | gorab | 26.654800 |
| ## 21603 | 8.347245e-04 | dmxl2 | 11.087637 |
| ## 4216 | 0.000000e+00 | entpd6 | 5.519066 |
| ## 22280 | 1.586415e-03 | eya4 | 5.541670 |
| ## 3085 | 3.035034e-04 | cry1bb | 58.110486 |
| ## 4555 | 1.500599e-03 | fancg | 31.078715 |
| ## 4689 | 8.108108e-04 | fhdc2 | 39.182963 |
| ## 25601 | 1.454545e-03 | mlx | 9.998368 |
| ## 6560 | 5.564503e-03 | kdm6a | 38.269387 |
| ## 10733 | 1.939255e-04 | rpain | 194.629890 |
| ## 30698 | 0.000000e+00 | si:dkey-10f21.4 | 21.406686 |
| ## 13793 | 0.000000e+00 | si:dkeyp-98a7.3 | 10.800134 |
| ## 30574 | 1.811442e-03 | si:ch73-335121.4 | 6.821677 |
| ## 30223 | 1.019644e-02 | si:ch211-269i23.2 | 15.659175 |
| ## 28728 | 1.825928e-03 | rnf11b | 24.286977 |
| ## 32047 | 1.295900e-03 | slc25a40 | 19.155884 |
| ## 31153 | 0.000000e+00 | si:dkey-24117.6 | 15.408110 |
| ## 21715 | 3.718969e-03 | dpcd | 27.236802 |
| ## 3389 | 0.000000e+00 | cx44.2 | 33.920475 |
| ## 32395 | 2.551736e-04 | snx1a | 35.251473 |
| ## 29482 | 2.419009e-03 | si:ch1073-228h2.2 | 12.845549 |
| ## 32517 | 0.000000e+00 | spice1 | 11.009364 |
| ## 23467 | 4.694836e-03 | grb2a | 8.240581 |
| ## 16866 | 0.000000e+00 | zgc:162183 | 24.280960 |
| ## 27359 | 0.000000e+00 | pik3cd | 13.289732 |
| ## 15115 | 4.114857e-04 | tfr1b | 33.066949 |
| ## 22446 | 5.708063e-04 | fam57ba | 59.332367 |
| ## 10238 | 7.925758e-04 | rab11ba | 97.562231 |

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| ## 16630 | 0.000000e+00 | zgc:109889 | 5.648089 |
| ## 30784 | 1.669811e-03 | si:dkey-12e7.1 | 7.492046 |
| ## 34278 | 1.919386e-03 | vps13d | 5.988636 |
| ## 14609 | 0.000000e+00 | stard8 | 45.474686 |
| ## 33373 | 1.121705e-04 | tmem161b | 54.352200 |
| ## 16730 | 1.629634e-04 | zgc:113984 | 85.009766 |
| ## 24394 | 1.348436e-03 | itm2cb | 34.044504 |
| ## 14321 | 2.146153e-04 | snx4 | 87.746486 |
| ## 6046 | 0.000000e+00 | ice2 | 15.136664 |
| ## 25418 | 0.000000e+00 | mef2d | 16.595466 |
| ## 21236 | 2.816901e-03 | cylda | 6.733851 |
| ## 5712 | 1.552079e-03 | helq | 19.913588 |
| ## 28786 | 4.938905e-03 | rnf8 | 74.625846 |
| ## 22559 | 3.625699e-03 | fcho2 | 23.217898 |
| ## 27524 | 1.201201e-03 | pip5k1bb | 11.452197 |
| ## 23589 | 3.678461e-03 | gtf2f1 | 68.604743 |
| ## 14910 | 3.892565e-03 | taf8 | 17.323216 |
| ## 32354 | 0.000000e+00 | snapc1a | 5.128892 |
| ## 10818 | 1.194624e-03 | rpz2 | 54.153003 |
| ## 5506 | 1.385797e-03 | grinab | 136.258805 |
| ## 24679 | 1.428519e-03 | klhl11 | 46.595245 |
| ## 25604 | 0.000000e+00 | mlycd | 10.338273 |
| ## 7329 | 1.028930e-03 | mcm9 | 17.738479 |
| ## 23049 | 0.000000e+00 | galcb | 13.999569 |
| ## 35049 | 0.000000e+00 | zgc:173856 | 46.963449 |
| ## 27646 | 9.164705e-03 | plk4 | 18.722278 |
| ## 31667 | 5.313496e-04 | si:dkeyp-1a11.3 | 23.451662 |
| ## 2047 | 1.267427e-03 | cbx8b | 14.414623 |
| ## 20556 | 0.000000e+00 | commd8 | 25.825275 |
| ## 28817 | 1.143731e-04 | rpa1 | 77.352961 |
| ## 5511 | 0.000000e+00 | gripap1 | 7.937408 |
| ## 7305 | 2.382884e-04 | mcee | 9.273830 |
| ## 17873 | 0.000000e+00 | agap1 | 6.746960 |
| ## 15457 | 0.000000e+00 | tmprss4b | 22.686317 |
| ## 16490 | 4.395654e-03 | ythdc1 | 5.060425 |
| ## 18407 | 1.248450e-03 | arnt | 23.253602 |
| ## 4619 | 2.158326e-03 | FBX046 | 71.790371 |
| ## 14713 | 1.097173e-05 | styxl1 | 5.847004 |
| ## 35002 | 3.354579e-04 | zgc:171901 | 27.432074 |
| ## 32815 | 0.000000e+00 | surf4l | 16.843708 |
| ## 23469 | 3.881586e-03 | grb2b | 53.369927 |
| ## 28029 | 1.409447e-03 | prr11 | 200.868638 |
| ## 5142 | 0.000000e+00 | gcfc2 | 51.285485 |
| ## 15181 | 0.000000e+00 | ticam1 | 11.917378 |
| ## 21684 | 0.000000e+00 | dnmt3bb.2 | 31.684176 |
| ## 34299 | 1.106558e-03 | vsig10 | 37.581024 |
| ## 32550 | 5.635863e-03 | spsb4b | 61.839999 |
| ## 6610 | 2.573340e-03 | kif2c | 71.420567 |
| ## 20554 | 2.758380e-03 | commd4 | 8.459994 |
| ## 20319 | 0.000000e+00 | ckap5 | 7.204776 |
| ## 9592 | 4.514595e-03 | plk1 | 534.014564 |
| ## 9557 | 8.554320e-04 | plcg2 | 10.813829 |
| ## 34008 | 0.000000e+00 | ube2z | 14.591256 |
| ## 35412 | 0.000000e+00 | znf451 | 34.012831 |

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| ## 16481 | 0.000000e+00 | ykt6 | 70.574026 |
| ## 10497 | 0.000000e+00 | RDM1 | 27.359292 |
| ## 6364 | 1.902267e-03 | jade1 | 41.778853 |
| ## 9917 | 0.000000e+00 | prkcda | 112.764973 |
| ## 9260 | 1.120720e-03 | phkg2 | 47.870889 |
| ## 28177 | 7.419880e-04 | ptpn4a | 17.901944 |
| ## 518 | 0.000000e+00 | angel1 | 14.836094 |
| ## 15563 | 3.415722e-03 | tonsl | 35.186243 |
| ## 23590 | 1.278280e-03 | gtf2h1 | 37.326067 |
| ## 635 | 5.402964e-04 | ap4e1 | 24.492719 |
| ## 18532 | 1.212831e-03 | atl2 | 75.727811 |
| ## 32816 | 3.782148e-03 | surf6 | 40.756454 |
| ## 32311 | 4.407140e-03 | smim14 | 99.504809 |
| ## 7324 | 0.000000e+00 | mcm6 | 24.047742 |
| ## 18592 | 1.723398e-04 | atp6ap2 | 37.593687 |
| ## 10777 | 2.053388e-03 | rpp40 | 5.765827 |
| ## 27042 | 1.196236e-03 | pcgf1 | 28.723030 |
| ## 27909 | 0.000000e+00 | prc1b | 13.196775 |
| ## 16255 | 1.860308e-05 | vps9d1 | 88.235740 |
| ## 15172 | 0.000000e+00 | thumpd3 | 5.425329 |
| ## 6879 | 2.296332e-03 | lipin2 | 82.224794 |
| ## 13224 | 0.000000e+00 | si:dkey-286j15.3 | 15.184594 |
| ## 12796 | 9.513865e-04 | si:dkey-182g1.2 | 109.929335 |
| ## 13003 | 0.000000e+00 | si:dkey-229e3.2 | 7.722681 |
| ## 26506 | 1.269036e-02 | ns11 | 9.845907 |
| ## 24613 | 3.614616e-04 | kif13bb | 66.534865 |
| ## 14186 | 0.000000e+00 | slf1 | 8.028727 |
| ## 3736 | 1.296346e-04 | dlg5a | 21.414936 |
| ## 17828 | 0.000000e+00 | adob | 7.305074 |
| ## 20377 | 1.238003e-03 | clk2b | 105.376446 |
| ## 34258 | 2.887629e-04 | vhl | 15.126987 |
| ## 3588 | 0.000000e+00 | ddx28 | 29.337381 |
| ## 21651 | 3.100775e-03 | dnajc3a | 6.995198 |
| ## 14437 | 3.470657e-04 | spire1a | 44.346507 |
| ## 25548 | 6.474452e-05 | midlip1l | 755.508456 |
| ## 25808 | 1.563567e-03 | mtmr8 | 19.156169 |
| ## 34960 | 0.000000e+00 | zgc:163143 | 10.121060 |
| ## 34139 | 2.708845e-04 | use1 | 36.753571 |
| ## 9532 | 0.000000e+00 | pla2g4f.2 | 8.472517 |
| ## 12312 | 6.879082e-04 | si:ch73-103b11.2 | 61.009030 |
| ## 12354 | 4.705275e-04 | si:ch73-15b2.5 | 48.957409 |
| ## 18124 | 0.000000e+00 | ankrd44 | 10.002605 |
| ## 26254 | 4.844240e-03 | nit2 | 8.497307 |
| ## 16313 | 5.150510e-03 | wdr11 | 8.264982 |
| ## 5884 | 0.000000e+00 | hook2 | 12.864941 |
| ## 24278 | 0.000000e+00 | insra | 34.389090 |
| ## 33646 | 9.140768e-04 | trak2 | 6.877916 |
| ## 6842 | 0.000000e+00 | lhx8a | 34.780482 |
| ## 144 | 0.000000e+00 | ACSF3 | 9.191133 |
| ## 28737 | 1.698963e-03 | rnf144ab | 18.550450 |
| ## 34406 | 1.276266e-03 | whsc1l1 | 78.768456 |
| ## 31052 | 1.584596e-03 | si:dkey-21c1.1 | 13.861082 |
| ## 15930 | 0.000000e+00 | ubap2l | 8.249733 |
| ## 32165 | 0.000000e+00 | slc51a | 11.660004 |

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| ## 11359 | 9.655212e-04 | si:ch1073-228b5.2 | 9.215851 |
| ## 24614 | 1.931789e-04 | kif15 | 13.497611 |
| ## 26128 | 3.617945e-04 | NDUFC1 | 35.366781 |
| ## 29636 | 2.172151e-04 | si:ch211-129c21.1 | 8.610415 |
| ## 5233 | 0.000000e+00 | gkup | 16.296954 |
| ## 1051 | 7.671526e-04 | atxn7l2b | 91.033366 |
| ## 9595 | 4.648202e-03 | plk3 | 246.590648 |
| ## 14724 | 1.661130e-03 | sulf2a | 8.236133 |
| ## 17558 | 0.000000e+00 | abcd3a | 34.788521 |
| ## 23463 | 0.000000e+00 | grb10a | 28.134871 |
| ## 17480 | 1.109068e-03 | znhit3 | 16.051704 |
| ## 33861 | 2.421284e-04 | ttc32 | 34.040888 |
| ## 24923 | 1.268714e-03 | lipia | 24.424601 |
| ## 7777 | 0.000000e+00 | msi2a | 7.032556 |
| ## 3764 | 5.010634e-04 | dna2 | 51.504926 |
| ## 27629 | 2.504174e-03 | plekhg5a | 9.931411 |
| ## 27066 | 1.001001e-03 | pcsk5b | 7.815327 |
| ## 15839 | 1.429597e-03 | ttf2 | 56.419511 |
| ## 28110 | 0.000000e+00 | ptcd1 | 48.816347 |
| ## 11747 | 3.398058e-03 | si:ch211-195b15.8 | 12.007882 |
| ## 31772 | 5.316876e-03 | si:dkeyp-82a1.6 | 7.294675 |
| ## 7037 | 0.000000e+00 | lrrc61 | 9.758161 |
| ## 26624 | 1.453921e-03 | ociad1 | 123.227931 |
| ## 15145 | 3.207507e-03 | thg1l | 10.727353 |
| ## 35481 | 5.020115e-05 | zp2l1 | 24.818791 |
| ## 6134 | 0.000000e+00 | il15l | 5.472353 |
| ## 7028 | 4.056795e-03 | lrrc47 | 6.144858 |
| ## 19511 | 0.000000e+00 | CABZ01077218.1 | 6.506032 |
| ## 2458 | 8.298396e-04 | chkb | 41.299471 |
| ## 3062 | 5.704170e-03 | crkl | 34.008445 |
| ## 32359 | 0.000000e+00 | snapc4 | 8.897263 |
| ## 30427 | 0.000000e+00 | si:ch73-138n13.1 | 31.806508 |
| ## 6407 | 0.000000e+00 | kank1a | 89.062603 |
| ## 33300 | 6.908141e-04 | tm7sf3 | 39.015989 |
| ## 28014 | 0.000000e+00 | prpf3 | 7.705126 |
| ## 25554 | 0.000000e+00 | mier1b | 63.670533 |
| ## 17634 | 3.458517e-03 | acbd5a | 16.351977 |
| ## 30927 | 2.912887e-04 | si:dkey-188i13.7 | 15.494192 |
| ## 5609 | 4.342798e-03 | gys1 | 14.900559 |
| ## 18468 | 6.808693e-04 | asb8 | 51.733869 |
| ## 28746 | 7.191051e-04 | rnf175 | 28.497257 |
| ## 14830 | 0.000000e+00 | sytl4 | 28.217003 |
| ## 23354 | 5.963085e-03 | gpaa1 | 7.067518 |
| ## 32041 | 1.714686e-03 | slc25a38b | 76.224145 |
| ## 27324 | 6.339654e-04 | pif1 | 236.536297 |
| ## 8446 | 2.325581e-03 | nrd1a | 5.218880 |
| ## 27924 | 2.537775e-03 | prdm9 | 56.716403 |
| ## 9289 | 1.128668e-03 | pias1b | 22.618435 |
| ## 6329 | 4.137360e-04 | itgb6 | 23.712461 |
| ## 732 | 1.293688e-03 | arhgap1 | 88.155811 |
| ## 28785 | 0.000000e+00 | rnf7 | 51.743937 |
| ## 32284 | 2.460904e-03 | smarcb1a | 77.058368 |
| ## 9567 | 1.822399e-03 | plekha1a | 44.649174 |
| ## 4503 | 5.694728e-03 | fam210ab | 5.118914 |

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| ## 34058 | 5.887112e-04 | uevld | 28.595380 |
| ## 4548 | 0.000000e+00 | fam89a | 6.222531 |
| ## 15805 | 1.103022e-03 | tssc4 | 101.478528 |
| ## 19687 | 4.419134e-04 | camsap1a | 77.731338 |
| ## 26918 | 5.341068e-03 | pard6gb | 33.120129 |
| ## 27274 | 1.489019e-03 | phf23a | 36.349670 |
| ## 28289 | 1.121076e-03 | rab15 | 11.095796 |
| ## 23345 | 0.000000e+00 | golp31 | 5.919631 |
| ## 15842 | 0.000000e+00 | tti2 | 13.980250 |
| ## 32822 | 1.294489e-03 | suv420h2 | 13.426048 |
| ## 18617 | 2.476839e-05 | atpaf2 | 40.133159 |
| ## 20370 | 4.222436e-04 | clec16a | 23.574913 |
| ## 6914 | 0.000000e+00 | lmx1a | 46.776558 |
| ## 15581 | 0.000000e+00 | tox3 | 5.387655 |
| ## 275 | 6.717708e-03 | adoa | 8.247299 |
| ## 5768 | 0.000000e+00 | hif1aa | 8.021398 |
| ## 28249 | 1.132717e-03 | pvr13b | 40.890276 |
| ## 6687 | 5.996173e-04 | klhl8 | 41.902909 |
| ## 30296 | 0.000000e+00 | si:ch211-286b5.4 | 18.917395 |
| ## 19921 | 3.387993e-04 | ccnh | 54.286674 |
| ## 23821 | 1.250000e-03 | hivep3b | 10.925948 |
| ## 25743 | 5.625879e-03 | mrps33 | 19.200895 |
| ## 14600 | 5.182018e-04 | stap2a | 58.656019 |
| ## 33033 | 1.946144e-03 | tbc1d17 | 26.391943 |
| ## 16780 | 0.000000e+00 | zgc:152986 | 172.105245 |
| ## 14906 | 2.567543e-04 | taf6l | 76.566623 |
| ## 5860 | 4.727019e-03 | hnrnpc | 21.116396 |
| ## 15691 | 2.438875e-04 | trim13 | 17.520590 |
| ## 3610 | 1.031356e-03 | dedd1 | 26.752647 |
| ## 5406 | 1.049318e-03 | gpn3 | 14.003029 |
| ## 35051 | 2.528451e-03 | zgc:174164 | 7.698976 |
| ## 25397 | 2.566056e-03 | med13b | 139.723337 |
| ## 6230 | 0.000000e+00 | ipo8 | 24.635576 |
| ## 29228 | 1.787761e-03 | sepsecs | 67.978342 |
| ## 20606 | 0.000000e+00 | cpeb1b | 57.757558 |
| ## 6237 | 8.802817e-03 | iqcc | 5.647728 |
| ## 8932 | 3.882478e-03 | pan3 | 46.877848 |
| ## 17498 | 0.000000e+00 | zswim7 | 13.084260 |
| ## 18423 | 1.416636e-03 | arrdc1a | 54.805991 |
| ## 3962 | 0.000000e+00 | dynlt3 | 5.052560 |
| ## 4475 | 2.355027e-03 | fam168b | 44.550642 |
| ## 10493 | 6.020067e-03 | rdh14a | 12.589662 |
| ## 16310 | 0.000000e+00 | wcp | 5.928223 |
| ## 2798 | 7.245635e-04 | coq6 | 8.767642 |
| ## 28781 | 1.534854e-03 | rnf41 | 73.665239 |
| ## 16518 | 2.182442e-03 | zbtb3 | 60.178106 |
| ## 35142 | 0.000000e+00 | zgc:55781 | 19.740283 |
| ## 14742 | 4.035758e-03 | suv39h1a | 21.352267 |
| ## 21646 | 5.701508e-04 | dnajc2 | 48.478952 |
| ## 16509 | 9.191176e-03 | zbtb1 | 6.353920 |
| ## 34977 | 0.000000e+00 | zgc:171474 | 51.381472 |
| ## 17123 | 2.120192e-04 | zgc:77112 | 340.113440 |
| ## 4625 | 1.080097e-03 | fbxw11b | 236.362212 |
| ## 945 | 1.221044e-04 | atg4b | 21.066463 |

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|----|-------|--------------|-------------------|------------|
| ## | 8938 | 0.000000e+00 | pank2 | 8.694891 |
| ## | 4160 | 1.450677e-03 | elp6 | 19.142285 |
| ## | 32528 | 0.000000e+00 | spop | 92.325352 |
| ## | 32000 | 0.000000e+00 | slc24a4a | 31.905358 |
| ## | 33167 | 0.000000e+00 | tex261 | 86.036208 |
| ## | 18023 | 2.613893e-03 | alkbh8 | 25.678954 |
| ## | 6770 | 0.000000e+00 | lcmt2 | 16.687176 |
| ## | 35470 | 6.944444e-03 | znhit1 | 10.945466 |
| ## | 8983 | 2.974119e-04 | pask | 107.960127 |
| ## | 25709 | 4.388583e-03 | mrpl22 | 21.214553 |
| ## | 7565 | 0.000000e+00 | mkln1 | 43.732900 |
| ## | 7960 | 3.098373e-04 | myo18ab | 53.501633 |
| ## | 4155 | 5.403726e-04 | elovl7a | 150.588215 |
| ## | 15592 | 9.124088e-04 | tp53i11b | 9.470647 |
| ## | 8844 | 0.000000e+00 | otx1b | 81.532184 |
| ## | 15338 | 0.000000e+00 | tmem184a | 55.277418 |
| ## | 16775 | 2.085833e-04 | zgc:152938 | 35.274324 |
| ## | 17439 | 0.000000e+00 | znf970 | 13.644480 |
| ## | 35027 | 0.000000e+00 | zgc:173545 | 30.382333 |
| ## | 15086 | 0.000000e+00 | TESK1 (1 of many) | 49.650440 |
| ## | 25674 | 1.261258e-04 | mppe1 | 32.842981 |
| ## | 15647 | 2.298130e-03 | tpx2 | 467.761305 |
| ## | 29319 | 1.563957e-03 | sgf29 | 46.214839 |
| ## | 6181 | 0.000000e+00 | impdh1a | 8.423269 |
| ## | 23790 | 2.118449e-03 | hirip3 | 78.949046 |
| ## | 27742 | 0.000000e+00 | polh | 16.514126 |
| ## | 35485 | 0.000000e+00 | zp3d.2 | 17.278602 |
| ## | 17110 | 8.038585e-04 | zgc:65997 | 17.057131 |
| ## | 1015 | 2.039329e-03 | atp6v1aa | 115.940322 |
| ## | 28180 | 0.000000e+00 | ptpn4b | 32.327858 |
| ## | 14368 | 0.000000e+00 | sox13 | 8.288613 |
| ## | 11397 | 1.312885e-04 | si:ch211-103b1.2 | 128.642539 |
| ## | 4620 | 1.546376e-02 | fbxo5 | 154.436953 |
| ## | 7145 | 0.000000e+00 | mafgb | 5.289360 |
| ## | 19949 | 8.540312e-05 | ccz1 | 61.881783 |
| ## | 12045 | 0.000000e+00 | si:ch211-242f23.8 | 22.435481 |
| ## | 26779 | 0.000000e+00 | ormdl3 | 5.155285 |
| ## | 16171 | 7.545297e-03 | vamp5 | 8.007593 |
| ## | 27824 | 9.685230e-03 | ppm1ab | 5.038684 |
| ## | 8474 | 2.780827e-03 | nsd1a | 16.891225 |
| ## | 20463 | 4.409171e-03 | cntln | 7.361992 |
| ## | 30131 | 0.000000e+00 | si:ch211-241b2.4 | 13.780681 |
| ## | 8233 | 1.427627e-03 | nfs1 | 185.235024 |
| ## | 9197 | 3.869282e-04 | pex3 | 19.122672 |
| ## | 104 | 0.000000e+00 | acad8 | 24.903035 |
| ## | 23132 | 1.379310e-03 | gcdhb | 9.402230 |
| ## | 15220 | 7.541893e-04 | tk1 | 32.380668 |
| ## | 32262 | 1.221838e-03 | slx1b | 24.222277 |
| ## | 32505 | 0.000000e+00 | spen | 24.059536 |
| ## | 11533 | 9.027881e-04 | si:ch211-140b10.6 | 65.697196 |
| ## | 15492 | 6.971070e-04 | tnfsf10l4 | 18.585140 |
| ## | 947 | 9.984253e-05 | atg4da | 25.799463 |
| ## | 10625 | 2.619220e-04 | rmnd5b | 70.637371 |
| ## | 5659 | 1.949149e-03 | haus3 | 46.703736 |

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| ## 32984 | 7.888323e-04 | taf3 | 48.815668 |
| ## 8387 | 0.000000e+00 | npm2a | 17.394371 |
| ## 136 | 7.838746e-03 | acox1 | 6.318463 |
| ## 23594 | 1.809416e-04 | gtf3c4 | 30.234502 |
| ## 2431 | 1.032834e-02 | chac1 | 112.720714 |
| ## 16426 | 7.446016e-04 | wwc3 | 39.853905 |
| ## 15987 | 0.000000e+00 | uckl1b | 55.828938 |
| ## 15871 | 1.721422e-03 | tubgcp5 | 48.910024 |
| ## 35490 | 0.000000e+00 | zpr1 | 19.237219 |
| ## 25455 | 7.966858e-04 | mettl21a | 40.356416 |
| ## 34653 | 9.850419e-04 | zfyve28 | 15.285136 |
| ## 3696 | 0.000000e+00 | dhx40 | 7.535605 |
| ## 12556 | 5.818264e-05 | si:ch73-95l15.5 | 146.620166 |
| ## 637 | 1.096491e-03 | ap5m1 | 13.146758 |
| ## 3990 | 0.000000e+00 | eci1 | 79.864065 |
| ## 33758 | 6.181901e-04 | trmt61b | 5.184078 |
| ## 2476 | 0.000000e+00 | chordc1b | 18.981833 |
| ## 9977 | 7.017485e-04 | prpsap2 | 109.798605 |
| ## 14634 | 0.000000e+00 | stk17a | 11.427850 |
| ## 268 | 3.205420e-04 | adipor1a | 71.636308 |
| ## 26899 | 2.421308e-03 | papss2a | 6.043250 |
| ## 13090 | 0.000000e+00 | si:dkey-24l17.5 | 9.591052 |
| ## 9191 | 0.000000e+00 | pex14 | 28.084310 |
| ## 15424 | 3.214389e-04 | tmem70 | 78.608683 |
| ## 1713 | 9.243641e-04 | CABZ01058650.1 | 18.570138 |
| ## 33046 | 0.000000e+00 | TBC1D8B | 28.476182 |
| ## 25235 | 0.000000e+00 | map9 | 7.526465 |
| ## 24646 | 2.534532e-03 | kifap3a | 13.223573 |
| ## 11209 | 0.000000e+00 | sfxn5b | 8.240678 |
| ## 27251 | 0.000000e+00 | phactr4b | 39.790761 |
| ## 105 | 0.000000e+00 | acadl | 50.927913 |
| ## 19690 | 0.000000e+00 | camsap1b | 22.071354 |
| ## 10366 | 0.000000e+00 | rapgef5b | 7.790594 |
| ## 34931 | 6.469439e-04 | zgc:162969 | 76.071651 |
| ## 2245 | 3.541390e-03 | cdc37l1 | 16.026903 |
| ## 16314 | 0.000000e+00 | wdr11 | 8.650004 |
| ## 5305 | 5.261508e-04 | gnao1a | 34.545966 |
| ## 22068 | 8.945909e-04 | eml2 | 125.619319 |
| ## 29690 | 1.875257e-04 | si:ch211-145c1.1 | 140.665044 |
| ## 29285 | 0.000000e+00 | setd4 | 68.990335 |
| ## 33219 | 1.029714e-03 | thap4 | 19.692213 |
| ## 22241 | 2.164502e-03 | evx1 | 8.134367 |
| ## 33472 | 0.000000e+00 | tmem63a | 20.028425 |
| ## 7437 | 0.000000e+00 | METTL18 | 7.075394 |
| ## 34711 | 0.000000e+00 | zgc:112148 | 6.549393 |
| ## 18359 | 2.131620e-03 | arhgef6 | 11.474800 |
| ## 26246 | 2.874958e-03 | nipal3 | 10.438602 |
| ## 5232 | 0.000000e+00 | gk5 | 8.026413 |
| ## 26416 | 0.000000e+00 | npnl3 | 5.607503 |
| ## 31030 | 0.000000e+00 | si:dkey-20d21.12 | 6.643708 |
| ## 18307 | 8.382230e-04 | arhgap32a | 12.442795 |
| ## 34839 | 1.851852e-03 | zgc:153352 | 15.352831 |
| ## 15857 | 4.477924e-04 | ttyh2l | 13.953372 |
| ## 2214 | 4.333924e-03 | cd151l | 17.429253 |

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| ## 16304 | 2.312868e-03 | waslb | 56.600132 |
| ## 5556 | 0.000000e+00 | gsto2 | 28.065807 |
| ## 15943 | 9.005711e-04 | ube2f | 45.871180 |
| ## 4756 | 0.000000e+00 | flvcr2b | 11.481561 |
| ## 14985 | 3.855930e-03 | tbpl1 | 72.184622 |
| ## 27059 | 3.386364e-05 | pcnt | 77.214229 |
| ## 18825 | 0.000000e+00 | bloc1s1 | 29.794198 |
| ## 1981 | 2.690583e-03 | carkd | 6.522321 |
| ## 24252 | 5.240175e-03 | ino80 | 8.775994 |
| ## 28937 | 4.660667e-03 | rsf1b.1 | 22.207937 |
| ## 21469 | 1.906130e-03 | depdc1a | 136.946189 |
| ## 35376 | 1.921182e-03 | znf143b | 34.767095 |
| ## 34221 | 9.854134e-04 | vav2 | 51.459870 |
| ## 27078 | 0.000000e+00 | pcyt2 | 5.335794 |
| ## 25568 | 7.944929e-04 | minpp1b | 15.976463 |
| ## 8157 | 1.226879e-03 | neil3 | 70.872075 |
| ## 355 | 0.000000e+00 | AIFM2 | 12.245895 |
| ## 25388 | 2.238349e-03 | mdm4 | 81.008561 |
| ## 2256 | 0.000000e+00 | cdc42ep2 | 15.178152 |
| ## 12399 | 0.000000e+00 | si:ch73-221f6.1 | 5.223560 |
| ## 14554 | 0.000000e+00 | ssx2ipa | 74.672817 |
| ## 15797 | 0.000000e+00 | tspan36 | 211.404468 |
| ## 17760 | 1.287830e-03 | adat3 | 11.134732 |
| ## 5557 | 1.685282e-04 | gstp1 | 272.041011 |
| ## 15455 | 2.196864e-05 | tmprss4a | 137.525647 |
| ## 34174 | 1.087179e-03 | usp37 | 334.889704 |
| ## 32666 | 2.569043e-03 | st6gal2b | 10.000912 |
| ## 15950 | 3.512188e-03 | ube2ia | 93.863148 |
| ## 35225 | 3.600694e-03 | zgc:92907 | 6.221688 |
| ## 13852 | 5.060126e-05 | siva1 | 753.815120 |
| ## 120 | 1.851541e-06 | accs | 50.363382 |
| ## 2443 | 3.832569e-03 | chek1 | 90.110429 |
| ## 24345 | 0.000000e+00 | isca1 | 9.913362 |
| ## 34814 | 0.000000e+00 | zgc:152951 | 12.502482 |
| ## 19915 | 2.610966e-03 | ccnd2a | 6.847729 |
| ## 27734 | 1.788909e-03 | pola2 | 42.981602 |
| ## 1097 | 2.772828e-03 | b9d2 | 37.473606 |
| ## 27748 | 1.565443e-03 | polr1d | 39.225585 |
| ## 5656 | 1.779865e-03 | harbi1 | 26.949178 |
| ## 5453 | 2.096436e-03 | gps2 | 37.083551 |
| ## 6107 | 0.000000e+00 | IGLON5 | 8.111259 |
| ## 3512 | 7.936508e-04 | dapk1 | 22.422904 |
| ## 32307 | 5.170425e-03 | smg6 | 9.238214 |
| ## 4120 | 5.771785e-03 | EIF5 | 12.630822 |
| ## 34891 | 3.176628e-04 | zgc:158494 | 29.835353 |
| ## 21550 | 6.372600e-03 | dido1 | 176.823852 |
| ## 16532 | 6.674658e-03 | zc3h11a | 118.609215 |
| ## 9731 | 4.470183e-04 | ppan | 107.121814 |
| ## 31828 | 4.838539e-04 | si:rp71-46j2.7 | 36.138602 |
| ## 13008 | 0.000000e+00 | si:dkey-230p4.1 | 12.507761 |
| ## 30168 | 3.218473e-04 | si:ch211-251f6.6 | 29.774028 |
| ## 4158 | 0.000000e+00 | elp5 | 13.084055 |
| ## 34795 | 3.218473e-04 | zgc:136254 | 29.785511 |
| ## 5661 | 2.296739e-03 | hax1 | 17.272085 |

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| ## | 29364 | 8.503401e-04 | sh3gl2a | 9.108308 |
| ## | 33007 | 2.301522e-04 | taok3a | 49.302502 |
| ## | 16709 | 2.912172e-03 | zgc:113294 | 6.032739 |
| ## | 21099 | 4.431899e-03 | CU467646.5 | 10.313908 |
| ## | 23359 | 3.089694e-03 | gpatch11 | 18.983128 |
| ## | 25367 | 1.320007e-03 | mcm10 | 48.292696 |
| ## | 13863 | 0.000000e+00 | skap2 | 6.131009 |
| ## | 20247 | 0.000000e+00 | chordc1a | 9.608214 |
| ## | 23002 | 4.894199e-03 | g2e3 | 89.219903 |
| ## | 13079 | 0.000000e+00 | si:dkey-240e12.6 | 14.074372 |
| ## | 3122 | 1.434084e-03 | csnk1db | 168.841798 |
| ## | 34394 | 1.241722e-03 | wdr83 | 19.303631 |
| ## | 10423 | 1.544799e-03 | rbbp8 | 16.323924 |
| ## | 34168 | 1.253686e-04 | usp30 | 52.370462 |
| ## | 35397 | 5.020703e-03 | znf367 | 104.642246 |
| ## | 29353 | 7.369197e-04 | sh2d4a | 8.652345 |
| ## | 35007 | 6.165625e-04 | zgc:171977 | 30.290162 |
| ## | 5740 | 1.575762e-03 | herpud1 | 76.351552 |
| ## | 29730 | 1.884780e-03 | si:ch211-156j22.4 | 77.747956 |
| ## | 20454 | 0.000000e+00 | cnpy1 | 38.040231 |
| ## | 33965 | 7.861140e-04 | uba3 | 136.312046 |
| ## | 21434 | 1.103843e-02 | ddx49 | 22.677726 |
| ## | 9 | 0.000000e+00 | aars2 | 8.247594 |
| ## | 15555 | 9.517021e-04 | tollip | 70.361500 |
| ## | 4434 | 1.646536e-03 | fam122b | 98.995063 |
| ## | 14315 | 6.129443e-04 | snx29 | 29.234463 |
| ## | 20636 | 0.000000e+00 | cpt2 | 11.952732 |
| ## | 18878 | 3.211168e-03 | brf2 | 14.677500 |
| ## | 876 | 7.842843e-04 | asb3 | 44.626811 |
| ## | 17492 | 0.000000e+00 | zp3b | 66.670916 |
| ## | 15686 | 2.502867e-03 | triap1 | 24.173015 |
| ## | 19939 | 0.000000e+00 | ccser2a | 45.084879 |
| ## | 28102 | 2.511510e-03 | psmf1 | 27.212807 |
| ## | 9661 | 0.000000e+00 | pold3 | 53.828975 |
| ## | 4725 | 1.637794e-03 | fkbp1 | 24.508743 |
| ## | 3590 | 9.006304e-04 | ddx31 | 20.735136 |
| ## | 6892 | 0.000000e+00 | lmbrd2b | 18.744148 |
| ## | 25392 | 0.000000e+00 | me1 | 8.798659 |
| ## | 34290 | 2.288611e-03 | vps45 | 19.989024 |
| ## | 3872 | 1.898779e-03 | dpf2 | 13.428667 |
| ## | 26248 | 0.000000e+00 | nipbla | 60.277054 |
| ## | 30337 | 2.594212e-03 | si:ch211-59o9.10 | 52.432415 |
| ## | 22657 | 1.562500e-03 | FKBP15 (1 of many) | 22.776876 |
| ## | 30315 | 0.000000e+00 | si:ch211-40k21.5 | 26.335176 |
| ## | 5803 | 1.305889e-04 | hk2 | 51.323502 |
| ## | 33946 | 2.307489e-03 | tysnd1 | 12.179051 |
| ## | 5306 | 0.000000e+00 | gnao1a | 34.061172 |
| ## | 8226 | 5.179837e-03 | nfkb2 | 37.188284 |
| ## | 14255 | 3.095943e-03 | smu1a | 14.865745 |
| ## | 2527 | 5.706134e-03 | cinp | 7.626949 |
| ## | 32628 | 2.310938e-04 | ssr2 | 165.739977 |
| ## | 10456 | 1.871008e-03 | rbm4.1 | 18.219674 |
| ## | 20309 | 4.596192e-03 | cisd1 | 16.759791 |
| ## | 18523 | 2.406739e-03 | atg3 | 16.225521 |

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| ## 8029 | 2.124435e-03 | naf1 | 29.977924 |
| ## 1071 | 5.879164e-04 | b3glcta | 7.569997 |
| ## 9990 | 2.933503e-04 | prrg2 | 217.147732 |
| ## 5338 | 8.836886e-03 | gnpnat1 | 12.134056 |
| ## 19907 | 1.496118e-02 | ccnb1 | 183.968125 |
| ## 4765 | 1.600726e-03 | fmr1 | 40.965627 |
| ## 33259 | 0.000000e+00 | timmdc1 | 36.326193 |
| ## 31024 | 0.000000e+00 | si:dkey-208k4.2 | 61.701028 |
| ## 34206 | 3.339219e-04 | uvrag | 20.083592 |
| ## 7026 | 1.167202e-03 | lrrc42 | 39.930058 |
| ## 12502 | 6.681514e-03 | si:ch73-37h15.2 | 16.116257 |
| ## 27635 | 2.322308e-04 | plekhm2 | 23.267740 |
| ## 3411 | 5.379960e-03 | cyb561a3a | 10.358959 |
| ## 18847 | 0.000000e+00 | bmpr1ba | 48.823593 |
| ## 20211 | 5.376459e-03 | chchd4a | 61.528648 |
| ## 28275 | 1.597181e-03 | qtrt1 | 48.012083 |
| ## 9901 | 0.000000e+00 | prkab1b | 32.791656 |
| ## 26636 | 1.165954e-03 | ogfrl2 | 13.140205 |
| ## 7830 | 2.679860e-03 | mtm1 | 26.446377 |
| ## 5046 | 0.000000e+00 | gabpb2b | 13.311115 |
| ## 29388 | 6.792655e-04 | shcbp1 | 84.823103 |
| ## 14116 | 0.000000e+00 | slc48a1b | 63.829986 |
| ## 21175 | 1.356983e-03 | cul5a | 16.030862 |
| ## 21548 | 1.170968e-02 | dido1 | 7.383909 |
| ## 27835 | 0.000000e+00 | ppme1 | 165.793422 |
| ## 32400 | 0.000000e+00 | snx25 | 13.717519 |
| ## 3559 | 7.448828e-03 | dcun1d3 | 101.456850 |
| ## 5533 | 1.358696e-03 | gse1 | 7.549630 |
| ## 2079 | 6.064015e-04 | ccdc126 | 25.819718 |
| ## 615 | 2.963449e-05 | ap1m2 | 66.572125 |
| ## 31401 | 3.690037e-03 | si:dkey-46a10.3 | 28.312986 |
| ## 24284 | 1.276324e-03 | ints5 | 24.306278 |
| ## 26066 | 0.000000e+00 | nck2a | 38.400815 |
| ## 7795 | 1.303781e-03 | msx1b | 9.294773 |
| ## 24674 | 4.867894e-03 | klhdc4 | 25.247161 |
| ## 28893 | 8.852169e-04 | rps6ka3a | 33.863168 |
| ## 29221 | 3.241182e-03 | senp3a | 43.481565 |
| ## 26180 | 3.528468e-03 | nfatc2ip | 56.203842 |
| ## 10374 | 0.000000e+00 | rarga | 5.399430 |
| ## 7696 | 0.000000e+00 | mrm1 | 12.971422 |
| ## 9225 | 0.000000e+00 | phax | 61.043073 |
| ## 33350 | 8.086253e-03 | tmem126a | 6.834809 |
| ## 28250 | 0.000000e+00 | pvr13b | 195.252091 |
| ## 9873 | 2.539895e-03 | prelid1a | 60.432578 |
| ## 8637 | 0.000000e+00 | olfm2a | 8.690496 |
| ## 9669 | 0.000000e+00 | poll | 44.824046 |
| ## 28324 | 1.179205e-04 | rab7 | 7.592273 |
| ## 4517 | 0.000000e+00 | fam45a | 14.133160 |
| ## 9703 | 9.883051e-04 | pop4 | 37.007347 |
| ## 6762 | 4.135723e-03 | larp4b | 54.658528 |
| ## 15380 | 4.487464e-03 | tmem243b | 8.174064 |
| ## 2037 | 1.188119e-02 | cbx1a | 8.482734 |
| ## 25409 | 2.119709e-03 | med4 | 43.541322 |
| ## 32493 | 3.270993e-04 | spata13 | 68.507907 |

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| ## 24801 | 1.194398e-03 | laspl | 66.784913 |
| ## 18685 | 3.846154e-03 | b4galt7 | 9.562878 |
| ## 2633 | 0.000000e+00 | cltcb | 6.115890 |
| ## 2145 | 0.000000e+00 | ccdc88c | 35.248829 |
| ## 27168 | 0.000000e+00 | pdzd8 | 24.886590 |
| ## 25739 | 1.232862e-03 | mrps30 | 100.826949 |
| ## 18725 | 1.055424e-03 | baz1a | 63.912866 |
| ## 29406 | 8.637236e-03 | shrprbck1r | 6.288012 |
| ## 2797 | 4.949312e-03 | coq10b | 176.481996 |
| ## 25181 | 0.000000e+00 | map11c3c | 801.655363 |
| ## 5741 | 2.624672e-03 | herpud2 | 7.010942 |
| ## 25124 | 4.641165e-03 | mad211 | 82.904305 |
| ## 34709 | 0.000000e+00 | zgc:112056 | 29.181987 |
| ## 33859 | 7.672985e-04 | ttc3 | 38.013797 |
| ## 5862 | 2.053470e-03 | hnrnpc | 106.081087 |
| ## 19808 | 7.587253e-03 | cbx6a | 6.710244 |
| ## 14479 | 2.445595e-03 | sra1 | 28.067704 |
| ## 32428 | 1.759103e-03 | sorbs3 | 8.400265 |
| ## 1333 | 1.180056e-03 | bub1ba | 25.270685 |
| ## 15559 | 9.761388e-03 | tomm40l | 5.961332 |
| ## 34123 | 1.466407e-04 | uqcc3 | 27.621880 |
| ## 16777 | 2.314071e-03 | zgc:152938 | 15.424618 |
| ## 25100 | 0.000000e+00 | lyrm4 | 7.174891 |
| ## 16663 | 1.792176e-03 | zgc:112083 | 79.023195 |
| ## 17707 | 4.772957e-03 | acvr2aa | 18.479158 |
| ## 15351 | 2.451406e-04 | tmem198b | 51.610178 |
| ## 19074 | 8.341664e-04 | BX470218.1 | 46.532843 |
| ## 4897 | 0.000000e+00 | fpgs | 43.072987 |
| ## 7475 | 0.000000e+00 | mfsd6l | 7.595602 |
| ## 34643 | 5.398847e-03 | zfpm2a | 7.558235 |
| ## 31212 | 1.559362e-03 | si:dkey-261j15.2 | 18.311879 |
| ## 557 | 1.199526e-03 | ankrd22 | 54.672118 |
| ## 16221 | 0.000000e+00 | vldlr | 155.568682 |
| ## 4864 | 1.317123e-02 | foxq1b | 5.545961 |
| ## 22320 | 1.926452e-03 | fam107b | 47.862260 |
| ## 22808 | 0.000000e+00 | foxp1a | 35.338664 |
| ## 7569 | 0.000000e+00 | mknk2a | 179.491898 |
| ## 25162 | 0.000000e+00 | man1b1a | 7.489640 |
| ## 33333 | 8.577312e-04 | tmem106c | 51.198769 |
| ## 33423 | 9.003380e-03 | tmem223 | 11.447462 |
| ## 17545 | 0.000000e+00 | abcb8 | 8.978559 |
| ## 8488 | 1.304970e-03 | nsun4 | 13.232838 |
| ## 12514 | 9.695444e-04 | si:ch73-389k6.1 | 13.319424 |
| ## 34391 | 2.735978e-04 | wdr73 | 28.852230 |
| ## 32560 | 7.666488e-04 | spty2d1 | 70.589159 |
| ## 5538 | 1.182883e-03 | gsk3ab | 95.541227 |
| ## 20059 | 6.663807e-03 | cdk7 | 39.369081 |
| ## 27759 | 4.136029e-03 | polr3b | 13.332122 |
| ## 6374 | 7.218592e-04 | jak2b | 90.287621 |
| ## 14968 | 1.001502e-03 | tbc1d31 | 24.027288 |
| ## 21343 | 1.224742e-03 | dbf4b | 24.948918 |
| ## 10191 | 6.807352e-04 | pycrl | 12.690260 |
| ## 7585 | 1.303936e-03 | mlh3 | 7.218254 |
| ## 15668 | 4.636511e-04 | trappc13 | 35.826471 |

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| ## 25755 | 0.000000e+00 | msi2b | 11.213512 |
| ## 32219 | 0.000000e+00 | slc9a8 | 16.459552 |
| ## 24672 | 0.000000e+00 | klhdc10 | 39.999229 |
| ## 22877 | 0.000000e+00 | fto | 8.933623 |
| ## 11556 | 9.309253e-04 | si:ch211-14817.4 | 33.028711 |
| ## 30235 | 7.556354e-03 | si:ch211-272n13.3 | 6.500464 |
| ## 31195 | 0.000000e+00 | si:dkey-258f14.3 | 30.676439 |
| ## 8519 | 2.055498e-03 | nucb2b | 8.967017 |
| ## 20582 | 5.786782e-05 | cox17 | 214.229188 |
| ## 35259 | 0.000000e+00 | znf1015 | 11.934551 |
| ## 23300 | 5.069936e-03 | gna11b | 50.505730 |
| ## 3027 | 0.000000e+00 | crata | 12.196522 |
| ## 3865 | 3.581120e-04 | dopey2 | 11.619565 |
| ## 15752 | 0.000000e+00 | trpc5b | 8.130256 |
| ## 462 | 1.439029e-02 | alkbh4 | 10.187003 |
| ## 2367 | 2.056555e-03 | cep135 | 11.672018 |
| ## 34023 | 0.000000e+00 | ubl7a | 38.542875 |
| ## 13796 | 3.150812e-04 | si:dkeyp-98a7.8 | 43.533098 |
| ## 13149 | 1.663721e-03 | si:dkey-25o16.4 | 67.306967 |
| ## 15182 | 0.000000e+00 | tigarb | 7.491251 |
| ## 34569 | 2.021836e-03 | zbtb39 | 12.780229 |
| ## 24634 | 1.072393e-04 | kif4 | 318.020592 |
| ## 34003 | 2.000973e-03 | ube2s | 217.073795 |
| ## 9125 | 1.154716e-03 | pde6d | 40.317268 |
| ## 14430 | 0.000000e+00 | sphk2 | 17.740325 |
| ## 35241 | 1.106195e-03 | zmynd19 | 13.854382 |
| ## 13395 | 3.882951e-04 | si:dkey-57h18.1 | 6.428976 |
| ## 2074 | 5.777008e-04 | ccdc115 | 11.561211 |
| ## 12300 | 2.641898e-03 | si:ch211-89o9.6 | 16.747575 |
| ## 23013 | 0.000000e+00 | gabaryl2 | 33.896705 |
| ## 21087 | 8.056519e-03 | CU326366.2 | 12.149183 |
| ## 23219 | 4.477095e-04 | gig2o | 31.854248 |
| ## 4510 | 5.253451e-03 | fam214a | 5.780645 |
| ## 24181 | 0.000000e+00 | il1rapl1a | 8.070241 |
| ## 32287 | 0.000000e+00 | smarcc1b | 42.355699 |
| ## 5660 | 1.397095e-03 | haus4 | 30.979770 |
| ## 22047 | 6.646726e-04 | emc9 | 14.225943 |
| ## 6559 | 2.531646e-03 | kdm6a | 8.071651 |
| ## 24157 | 0.000000e+00 | ikbke | 12.432040 |
| ## 33733 | 4.636069e-04 | trioa | 13.940170 |
| ## 31556 | 5.793743e-04 | si:dkey-7j14.6 | 25.911715 |
| ## 32973 | 9.885170e-04 | taf1 | 75.193906 |
| ## 16552 | 1.017141e-03 | zdhhc18b | 142.441245 |
| ## 10470 | 1.006711e-02 | rbmx2 | 13.658150 |
| ## 6590 | 0.000000e+00 | kif19 | 6.696866 |
| ## 19659 | 6.966721e-04 | calm3a | 59.522542 |
| ## 4483 | 4.692633e-04 | fam174b | 13.395654 |
| ## 16169 | 9.290073e-05 | vamp4 | 36.693825 |
| ## 8949 | 1.034777e-02 | papd4 | 14.855925 |
| ## 530 | 5.349288e-04 | ankdd1a | 7.254915 |
| ## 17047 | 4.738089e-03 | zgc:193538 | 16.998947 |
| ## 27210 | 1.285844e-03 | pfkfb4a | 22.221594 |
| ## 16440 | 8.091406e-03 | xkrx | 47.038376 |
| ## 10109 | 0.000000e+00 | ptpmt1 | 7.297320 |

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| ## 34617 | 1.366101e-03 | zdhhc20b | 26.194184 |
| ## 17464 | 0.000000e+00 | znf989 | 10.531724 |
| ## 32996 | 0.000000e+00 | tanc1a | 14.867044 |
| ## 9184 | 0.000000e+00 | pet100 | 16.292135 |
| ## 30206 | 8.289583e-04 | si:ch211-263m18.4 | 24.487754 |
| ## 25602 | 0.000000e+00 | mlx | 6.925210 |
| ## 4126 | 5.099439e-04 | EIF5B | 77.330629 |
| ## 29942 | 2.048549e-04 | si:ch211-207i20.2 | 42.090893 |
| ## 25236 | 7.569942e-04 | mapk1 | 31.157135 |
| ## 28579 | 4.193657e-03 | rfg | 18.451635 |
| ## 6925 | 1.392982e-03 | lonrf1l | 78.535296 |
| ## 32184 | 0.000000e+00 | slc6a16b | 6.794814 |
| ## 7548 | 2.063983e-02 | mis18a | 13.037900 |
| ## 8108 | 1.485078e-04 | ndrg1b | 73.409262 |
| ## 17115 | 9.250694e-04 | zgc:66313 | 10.867241 |
| ## 18387 | 1.580664e-03 | arl5a | 38.709322 |
| ## 24953 | 2.727047e-03 | lmo7b | 22.805699 |
| ## 5950 | 0.000000e+00 | hps4 | 15.875747 |
| ## 18711 | 0.000000e+00 | baiap211b | 131.859819 |
| ## 25693 | 0.000000e+00 | mrGBP | 86.856539 |
| ## 25488 | 2.449479e-03 | mfhas1 | 9.372366 |
| ## 14652 | 1.349528e-03 | stn1 | 8.326351 |
| ## 10968 | 0.000000e+00 | SBF2 | 7.778900 |
| ## 20212 | 6.223545e-04 | chchd4b | 33.858326 |
| ## 3106 | 8.554320e-04 | crygn1 | 6.608903 |
| ## 33318 | 4.075327e-03 | tmco1 | 65.793578 |
| ## 16671 | 2.624331e-03 | zgc:112255 | 20.396350 |
| ## 5690 | 6.451548e-04 | hddc2 | 51.001843 |
| ## 33736 | 0.000000e+00 | trip10a | 38.929332 |
| ## 9798 | 1.208246e-03 | ppp1r26 | 21.505919 |
| ## 19825 | 5.319149e-03 | ccdc130 | 5.397601 |
| ## 22035 | 1.450212e-02 | elovl6l | 53.374385 |
| ## 34439 | 7.893010e-03 | wsb1 | 21.549000 |
| ## 4654 | 0.000000e+00 | FGD4 (1 of many) | 67.249901 |
| ## 948 | 0.000000e+00 | atg5 | 59.053597 |
| ## 7382 | 2.464572e-03 | med29 | 17.409885 |
| ## 4537 | 3.309569e-04 | fam69aa | 19.033971 |
| ## 1198 | 0.000000e+00 | bin2b | 44.938257 |
| ## 18813 | 0.000000e+00 | bin1b | 9.361928 |
| ## 16172 | 1.371245e-04 | vamp8 | 10.072354 |
| ## 8784 | 1.001606e-03 | orc1 | 95.286776 |
| ## 5579 | 1.012334e-03 | gtpbp10 | 6.366485 |
| ## 35090 | 8.058369e-04 | zgc:175066 | 31.299560 |
| ## 4227 | 2.937008e-03 | epcam | 894.138774 |
| ## 17074 | 3.512559e-03 | zgc:194981 | 7.506502 |
| ## 2673 | 7.436019e-04 | cnih1 | 24.189095 |
| ## 25159 | 5.688147e-03 | maml1 | 14.063725 |
| ## 21393 | 1.048768e-03 | dcun1d2a | 15.643592 |
| ## 26083 | 2.690700e-04 | ndel1b | 178.628498 |
| ## 28469 | 0.000000e+00 | rbm33a | 5.413135 |
| ## 11223 | 1.419636e-04 | sgol1 | 45.782718 |
| ## 9513 | 2.747264e-04 | pkma | 348.499746 |
| ## 16335 | 0.000000e+00 | wdr47b | 45.071607 |
| ## 14471 | 6.682237e-04 | sptlc1 | 68.075540 |

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|----|-------|--------------|------------------|------------|
| ## | 22644 | 3.465299e-04 | figla | 20.014922 |
| ## | 33466 | 3.993610e-04 | tmem55ba | 39.871851 |
| ## | 27250 | 4.783719e-04 | phactr4b | 39.890882 |
| ## | 26584 | 1.941345e-03 | nup153 | 199.717710 |
| ## | 27174 | 0.000000e+00 | pel1a | 6.198459 |
| ## | 15707 | 6.689110e-04 | trim35-29 | 88.125042 |
| ## | 25369 | 6.665524e-04 | mcm31 | 79.934863 |
| ## | 18507 | 0.000000e+00 | atf7b | 80.206373 |
| ## | 32746 | 2.538458e-03 | strumpellin | 30.828336 |
| ## | 2012 | 3.376254e-05 | cat | 126.409061 |
| ## | 11117 | 1.897533e-03 | senp6a | 24.995544 |
| ## | 16483 | 1.810244e-03 | yme111a | 61.010090 |
| ## | 22251 | 0.000000e+00 | exo1 | 37.198405 |
| ## | 12400 | 0.000000e+00 | si:ch73-221f6.3 | 6.679697 |
| ## | 6266 | 4.709765e-04 | irf6 | 324.469411 |
| ## | 7871 | 0.000000e+00 | mus81 | 12.566406 |
| ## | 5363 | 0.000000e+00 | gosr1 | 72.751049 |
| ## | 27584 | 2.224399e-04 | plcb3 | 27.988879 |
| ## | 21314 | 4.052479e-05 | dab2 | 208.551813 |
| ## | 34938 | 1.281553e-02 | zgc:163030 | 13.665811 |
| ## | 16622 | 1.524390e-03 | zgc:103499 | 7.756393 |
| ## | 34589 | 6.413956e-03 | ZC3H12A | 10.470929 |
| ## | 9704 | 1.096835e-03 | pop7 | 36.313319 |
| ## | 33296 | 9.378732e-04 | tm2d3 | 94.463341 |
| ## | 6902 | 0.000000e+00 | lmnl3 | 199.365863 |
| ## | 9249 | 0.000000e+00 | phf3 | 8.511560 |
| ## | 15176 | 1.538584e-04 | thy1 | 388.220056 |
| ## | 34819 | 0.000000e+00 | zgc:153012 | 16.546395 |
| ## | 8902 | 2.134899e-04 | pafah1b1b | 34.167926 |
| ## | 23356 | 7.993605e-04 | gpank1 | 5.295743 |
| ## | 13069 | 1.340782e-03 | si:dkey-23f9.4 | 40.834586 |
| ## | 2697 | 2.604167e-03 | cnp | 10.902416 |
| ## | 23265 | 1.670868e-03 | glrx5 | 46.710257 |
| ## | 26500 | 0.000000e+00 | nsdhl | 19.279680 |
| ## | 34218 | 0.000000e+00 | vars2 | 10.716504 |
| ## | 31535 | 7.574325e-03 | si:dkey-7814.14 | 7.325459 |
| ## | 33063 | 2.527894e-03 | tbrg4 | 15.796470 |
| ## | 32315 | 2.554278e-03 | smim7 | 9.325160 |
| ## | 16590 | 4.616109e-03 | zfyve27 | 20.560398 |
| ## | 29705 | 9.475679e-04 | si:ch211-14a17.6 | 22.946214 |
| ## | 10533 | 2.689884e-04 | retsat1 | 169.718735 |
| ## | 25347 | 2.223854e-03 | mbtps1 | 55.062650 |
| ## | 17038 | 5.020936e-04 | zgc:175136 | 15.386129 |
| ## | 20141 | 3.498542e-03 | cep70 | 8.973825 |
| ## | 18541 | 0.000000e+00 | ATP11B | 31.056573 |
| ## | 25126 | 4.640371e-04 | madd | 92.457384 |
| ## | 1065 | 8.087343e-04 | b3galt2 | 17.564624 |
| ## | 2510 | 1.539778e-03 | chst2a | 31.150936 |
| ## | 26146 | 4.612645e-04 | nek4 | 28.202236 |
| ## | 28784 | 1.144801e-04 | rnf6 | 15.279445 |
| ## | 22930 | 1.065693e-03 | ftr67 | 47.500805 |
| ## | 2455 | 0.000000e+00 | chid1 | 5.609425 |
| ## | 12165 | 1.470588e-03 | si:ch211-275j6.5 | 8.146537 |
| ## | 15018 | 3.794181e-03 | tchp | 26.256882 |

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| ## 30743 | 1.720429e-03 | si:dkey-119f1.1 | 21.771434 |
| ## 15413 | 7.528734e-04 | tmem57a | 81.112941 |
| ## 22876 | 0.000000e+00 | fto | 5.421991 |
| ## 5973 | 2.120433e-03 | hsd17b8 | 13.170022 |
| ## 20147 | 0.000000e+00 | cep83 | 10.893303 |
| ## 7964 | 0.000000e+00 | myo1cb | 8.269782 |
| ## 12555 | 0.000000e+00 | si:ch73-95l15.3 | 14.954033 |
| ## 30066 | 1.246039e-03 | si:ch211-227n13.3 | 69.252749 |
| ## 12484 | 1.925385e-03 | si:ch73-367f21.4 | 8.343977 |
| ## 16702 | 1.313523e-04 | zgc:113263 | 27.691739 |
| ## 29573 | 1.053140e-03 | si:ch211-116o3.5 | 30.982876 |
| ## 13840 | 7.824726e-04 | siae | 9.038561 |
| ## 24439 | 1.822600e-03 | jmjd7 | 8.810966 |
| ## 7375 | 7.662437e-04 | med20 | 14.818590 |
| ## 25400 | 3.816794e-03 | med18 | 8.269124 |
| ## 11692 | 0.000000e+00 | si:ch211-173p18.3 | 5.739529 |
| ## 5944 | 0.000000e+00 | hpd1 | 15.059064 |
| ## 28912 | 0.000000e+00 | rrbp1a | 86.048267 |
| ## 1938 | 5.706134e-04 | camsap3 | 26.252650 |
| ## 10382 | 1.034126e-03 | rasa1b | 10.487559 |
| ## 32104 | 1.008403e-02 | slc35d1a | 15.013102 |
| ## 16300 | 0.000000e+00 | wash1 | 28.420277 |
| ## 8163 | 3.076937e-03 | nek2 | 59.557039 |
| ## 28626 | 1.068822e-04 | rgs17 | 9.942192 |
| ## 18036 | 0.000000e+00 | ambra1a | 13.216358 |
| ## 10249 | 1.076528e-03 | rab18a | 24.366681 |
| ## 28236 | 6.061723e-05 | pus7l | 14.021614 |
| ## 11519 | 2.279806e-04 | si:ch211-137a8.2 | 83.047187 |
| ## 4624 | 1.203245e-03 | fbxw10 | 19.685760 |
| ## 35079 | 3.808593e-04 | zgc:174906 | 80.342130 |
| ## 3888 | 0.000000e+00 | dpp9 | 44.201608 |
| ## 14920 | 2.622607e-04 | tanc2a | 29.540315 |
| ## 22409 | 1.446893e-03 | fam212ab | 61.793869 |
| ## 34284 | 0.000000e+00 | vps26b1 | 33.052448 |
| ## 34915 | 1.255371e-02 | zgc:162472 | 13.799708 |
| ## 27226 | 8.654964e-04 | pgam1a | 101.706730 |
| ## 27872 | 9.495549e-03 | ppp2r3b | 18.515187 |
| ## 536 | 1.531394e-03 | ankhb | 7.384611 |
| ## 23083 | 3.508342e-04 | gapvd1 | 31.317848 |
| ## 7287 | 3.574289e-03 | mbd1b | 57.039115 |
| ## 26217 | 5.391016e-04 | nhej1 | 49.468161 |
| ## 27812 | 6.548788e-04 | ppfibp1b | 16.363707 |
| ## 18515 | 6.827083e-04 | atg101 | 67.835041 |
| ## 7856 | 6.614167e-03 | mtus1b | 44.023060 |
| ## 34274 | 0.000000e+00 | vps11 | 9.651678 |
| ## 10074 | 1.198358e-03 | PTDSS2 | 89.310901 |
| ## 20567 | 0.000000e+00 | coq4 | 6.172467 |
| ## 32026 | 1.028085e-02 | slc25a27 | 8.147622 |
| ## 34723 | 0.000000e+00 | zgc:112496 | 10.456324 |
| ## 23753 | 2.698802e-03 | hexdc | 13.213002 |
| ## 26466 | 3.897020e-05 | nrbp2a | 43.103705 |
| ## 14268 | 0.000000e+00 | snap23.1 | 61.533130 |
| ## 31884 | 1.269600e-03 | sin3aa | 31.069923 |
| ## 722 | 8.967491e-04 | arf6a | 45.974306 |

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|----|-------|-------------------|-----------|-------------------|-----------|
| ## | 6739 | 1.363399e-03 | | lactb | 78.840193 |
| ## | 14540 | 0.000000e+00 | | SSH3 | 34.143104 |
| ## | 28505 | 5.643341e-04 | | rca2.1 | 12.878130 |
| ## | 3550 | 0.000000e+00 | | dcp1a | 31.009746 |
| ## | 7776 | 2.815032e-04 | | msi2a | 16.315279 |
| ## | 35143 | 0.000000e+00 | | zgc:55943 | 54.569371 |
| ## | 6624 | 2.365076e-03 | | kin | 26.382916 |
| ## | | afterZGA_rpm.mean | | allRPM foldChange | category |
| ## | 14406 | 0.5700667 | 2.815516 | 10.354944 | maternal |
| ## | 25650 | 11.7737062 | 57.224718 | 10.168409 | maternal |
| ## | 3537 | 3.4546680 | 15.738587 | 9.444895 | maternal |
| ## | 22314 | 2.5209394 | 10.637213 | 8.646415 | maternal |
| ## | 3639 | 2.6221096 | 7.843592 | 5.729406 | maternal |
| ## | 1307 | 1.2070693 | 3.435378 | 5.384366 | maternal |
| ## | 5417 | 1.3091636 | 3.641908 | 5.231914 | maternal |
| ## | 19381 | 3.5217457 | 9.753022 | 5.202257 | maternal |
| ## | 28279 | 6.4995505 | 17.936962 | 5.179343 | maternal |
| ## | 7841 | 1.7533753 | 4.794689 | 5.119552 | maternal |
| ## | 2718 | 2.2052062 | 5.898146 | 4.977285 | maternal |
| ## | 923 | 2.2603772 | 6.019882 | 4.950147 | maternal |
| ## | 21358 | 1.7009845 | 4.525937 | 4.944340 | maternal |
| ## | 14631 | 2.3163059 | 6.152448 | 4.933348 | maternal |
| ## | 27807 | 1.0892155 | 2.774752 | 4.675260 | maternal |
| ## | 11240 | 21.3023656 | 51.987828 | 4.421121 | maternal |
| ## | 34208 | 2.2554031 | 5.445410 | 4.359163 | maternal |
| ## | 28933 | 1.2321769 | 2.972213 | 4.353890 | maternal |
| ## | 21556 | 10.0421038 | 23.876194 | 4.271821 | maternal |
| ## | 25642 | 2.9676320 | 7.035348 | 4.255398 | maternal |
| ## | 18155 | 1.2270503 | 2.889688 | 4.218095 | maternal |
| ## | 16721 | 3.2584488 | 7.644844 | 4.197131 | maternal |
| ## | 32068 | 16.1258445 | 37.569434 | 4.158193 | maternal |
| ## | 10314 | 10.5717754 | 24.446953 | 4.117125 | maternal |
| ## | 4601 | 1.6332687 | 3.737822 | 4.060314 | maternal |
| ## | 18013 | 5.6409861 | 12.796418 | 4.012620 | maternal |
| ## | 33514 | 11.7660307 | 26.540374 | 3.982235 | maternal |
| ## | 21830 | 3.1641524 | 7.135980 | 3.981237 | maternal |
| ## | 5692 | 11.8716429 | 26.718423 | 3.970196 | maternal |
| ## | 32010 | 1.5321453 | 3.409148 | 3.909569 | maternal |
| ## | 21861 | 20.1979331 | 44.673154 | 3.877950 | maternal |
| ## | 27845 | 1.3939131 | 3.054108 | 3.828700 | maternal |
| ## | 3414 | 8.5202781 | 18.637918 | 3.820259 | maternal |
| ## | 10021 | 9.2257292 | 20.054295 | 3.787622 | maternal |
| ## | 11349 | 2.0811509 | 4.514278 | 3.776674 | maternal |
| ## | 17858 | 5.3891447 | 11.666478 | 3.766425 | maternal |
| ## | 16105 | 7.5236169 | 16.280502 | 3.764309 | maternal |
| ## | 18389 | 45.0114006 | 97.220619 | 3.754789 | maternal |
| ## | 29080 | 2.2212426 | 4.779564 | 3.735412 | maternal |
| ## | 33214 | 8.2219880 | 17.647250 | 3.722577 | maternal |
| ## | 28426 | 1.9913757 | 4.197579 | 3.631212 | maternal |
| ## | 11403 | 45.1049854 | 94.673937 | 3.610050 | maternal |
| ## | 28606 | 6.1034334 | 12.749573 | 3.586181 | maternal |
| ## | 21396 | 13.6868483 | 28.542726 | 3.577855 | maternal |
| ## | 23271 | 4.4918454 | 9.365364 | 3.576804 | maternal |
| ## | 10244 | 1.5925267 | 3.308262 | 3.558745 | maternal |

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|----------|-------------|------------|-------------------|
| ## 7136 | 3.6223930 | 7.508467 | 3.547881 maternal |
| ## 16347 | 2.8125630 | 5.798876 | 3.521719 maternal |
| ## 28161 | 2.9925672 | 6.147219 | 3.503636 maternal |
| ## 33792 | 11.0127812 | 22.556208 | 3.489438 maternal |
| ## 34925 | 20.2408411 | 41.272038 | 3.467738 maternal |
| ## 35220 | 3.5911007 | 7.304396 | 3.455814 maternal |
| ## 7522 | 2.6726822 | 5.399338 | 3.422962 maternal |
| ## 11969 | 7.8623572 | 15.867109 | 3.418013 maternal |
| ## 16966 | 7.8623572 | 15.867109 | 3.418013 maternal |
| ## 26419 | 5.7817926 | 11.642291 | 3.407330 maternal |
| ## 16795 | 6.7589665 | 13.607220 | 3.406374 maternal |
| ## 7374 | 3.9511054 | 7.953768 | 3.405991 maternal |
| ## 34596 | 3.4449721 | 6.893895 | 3.377723 maternal |
| ## 15653 | 2.1432915 | 4.273796 | 3.360831 maternal |
| ## 26777 | 328.2368947 | 651.097784 | 3.336101 maternal |
| ## 15354 | 23.6956722 | 46.893559 | 3.325107 maternal |
| ## 6170 | 2.0140886 | 3.979590 | 3.317706 maternal |
| ## 30139 | 67.2113101 | 132.679787 | 3.313415 maternal |
| ## 29735 | 19.6985445 | 38.861853 | 3.310468 maternal |
| ## 17859 | 1.8967683 | 3.726103 | 3.290565 maternal |
| ## 4616 | 161.7489465 | 316.310225 | 3.269462 maternal |
| ## 20009 | 37.8309553 | 73.889773 | 3.263746 maternal |
| ## 14159 | 38.3473788 | 74.823297 | 3.259093 maternal |
| ## 31927 | 61.5247315 | 119.844926 | 3.251297 maternal |
| ## 26903 | 3.5374270 | 6.856151 | 3.228164 maternal |
| ## 17483 | 3.0856653 | 5.933704 | 3.192102 maternal |
| ## 24648 | 3.2114062 | 6.167820 | 3.186420 maternal |
| ## 9563 | 2.5080110 | 4.789902 | 3.160872 maternal |
| ## 16740 | 49.9872973 | 95.263735 | 3.151177 maternal |
| ## 12272 | 3.7359634 | 7.076316 | 3.123505 maternal |
| ## 16549 | 5.8116177 | 10.986602 | 3.114831 maternal |
| ## 4602 | 3.1975469 | 6.033658 | 3.106541 maternal |
| ## 324 | 9.9100265 | 18.697993 | 3.106091 maternal |
| ## 14626 | 25.7351900 | 48.494279 | 3.100347 maternal |
| ## 16984 | 4.8663803 | 9.146656 | 3.088956 maternal |
| ## 4525 | 3.3757124 | 6.330585 | 3.078916 maternal |
| ## 34764 | 22.3342534 | 41.882002 | 3.078686 maternal |
| ## 9175 | 2.1304493 | 3.991094 | 3.074225 maternal |
| ## 18958 | 30.8000632 | 57.409870 | 3.051888 maternal |
| ## 18472 | 54.7690013 | 101.687973 | 3.034592 maternal |
| ## 1201 | 46.7855170 | 86.582790 | 3.020252 maternal |
| ## 1310 | 94.7370151 | 174.793287 | 3.006963 maternal |
| ## 7839 | 1.9832512 | 3.656763 | 3.004079 maternal |
| ## 26626 | 17.4968672 | 32.042616 | 2.974419 maternal |
| ## 29253 | 4.0107805 | 7.321709 | 2.960580 maternal |
| ## 14536 | 14.2257914 | 25.959115 | 2.958882 maternal |
| ## 14612 | 2.0191203 | 3.681053 | 2.954856 maternal |
| ## 633 | 7.3864476 | 13.418985 | 2.939671 maternal |
| ## 10521 | 3.2629778 | 5.909944 | 2.926628 maternal |
| ## 5977 | 3.8432864 | 6.954073 | 2.922344 maternal |
| ## 16708 | 6.2877761 | 11.371903 | 2.920361 maternal |
| ## 34692 | 2.0141293 | 3.628929 | 2.904122 maternal |
| ## 15734 | 10.1330378 | 18.245658 | 2.901451 maternal |
| ## 27242 | 13.9839481 | 25.161828 | 2.898424 maternal |

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|----------|-------------|-------------|-------------------|
| ## 6896 | 7.0482156 | 12.677836 | 2.896983 maternal |
| ## 16079 | 1.7451081 | 3.137053 | 2.894363 maternal |
| ## 30669 | 4.7769270 | 8.566923 | 2.884316 maternal |
| ## 3317 | 13.5628145 | 24.294023 | 2.879154 maternal |
| ## 31867 | 56.4672762 | 101.098445 | 2.877176 maternal |
| ## 4083 | 45.5380859 | 81.488423 | 2.874959 maternal |
| ## 2051 | 5.7286197 | 10.236305 | 2.868819 maternal |
| ## 34089 | 19.7389018 | 35.266898 | 2.868341 maternal |
| ## 6701 | 4.9356465 | 8.809501 | 2.864073 maternal |
| ## 1217 | 208.4649791 | 371.725346 | 2.859993 maternal |
| ## 21264 | 4.2437124 | 7.559937 | 2.855930 maternal |
| ## 17138 | 23.4612504 | 41.695948 | 2.845912 maternal |
| ## 2071 | 14.1948357 | 25.207942 | 2.842651 maternal |
| ## 17798 | 4.8609018 | 8.626677 | 2.839929 maternal |
| ## 24921 | 58.9082299 | 104.346911 | 2.831949 maternal |
| ## 30974 | 34.6150730 | 61.168534 | 2.821879 maternal |
| ## 6662 | 4.3616511 | 7.702664 | 2.819243 maternal |
| ## 1616 | 6.6145795 | 11.674061 | 2.816634 maternal |
| ## 32049 | 4.6010042 | 8.096892 | 2.804548 maternal |
| ## 1259 | 3.1257742 | 5.500658 | 2.804464 maternal |
| ## 19300 | 79.5571050 | 139.991144 | 2.804123 maternal |
| ## 6612 | 5.2770500 | 9.283563 | 2.803179 maternal |
| ## 31425 | 14.3039530 | 25.150883 | 2.801003 maternal |
| ## 28497 | 24.7016208 | 43.419536 | 2.799681 maternal |
| ## 18876 | 8.9959516 | 15.807694 | 2.798352 maternal |
| ## 17164 | 3.3470305 | 5.880421 | 2.797654 maternal |
| ## 31053 | 9.5742781 | 16.818839 | 2.797089 maternal |
| ## 33972 | 4.8794578 | 8.556129 | 2.789562 maternal |
| ## 15929 | 27.3035659 | 47.814871 | 2.784175 maternal |
| ## 15204 | 17.8535825 | 31.152009 | 2.769043 maternal |
| ## 14986 | 12.1374971 | 21.142806 | 2.762110 maternal |
| ## 21377 | 4.0352560 | 7.029039 | 2.762028 maternal |
| ## 25652 | 1.9200315 | 3.342811 | 2.759920 maternal |
| ## 2615 | 4.6252407 | 8.039773 | 2.753317 maternal |
| ## 1209 | 6.6614864 | 11.561067 | 2.746833 maternal |
| ## 33029 | 6.6299225 | 11.489845 | 2.740943 maternal |
| ## 9851 | 6.9462862 | 12.032092 | 2.738884 maternal |
| ## 13672 | 9.1051024 | 15.756119 | 2.734869 maternal |
| ## 28280 | 13.6576403 | 23.588521 | 2.726934 maternal |
| ## 6578 | 3.7003575 | 6.390838 | 2.726831 maternal |
| ## 15187 | 6.8951935 | 11.880381 | 2.717112 maternal |
| ## 32838 | 6.5932085 | 11.351169 | 2.713909 maternal |
| ## 15729 | 12.6161409 | 21.695842 | 2.709262 maternal |
| ## 21340 | 81.3393203 | 139.845555 | 2.708304 maternal |
| ## 18835 | 26.2467512 | 45.123149 | 2.708076 maternal |
| ## 15169 | 5.6560868 | 9.706181 | 2.700641 maternal |
| ## 10593 | 26.9542491 | 46.176166 | 2.693687 maternal |
| ## 35184 | 38.0474200 | 65.131069 | 2.690618 maternal |
| ## 2587 | 898.2294726 | 1535.537525 | 2.685100 maternal |
| ## 7818 | 8.3561590 | 14.262828 | 2.678802 maternal |
| ## 2091 | 4.5888045 | 7.829858 | 2.677452 maternal |
| ## 20213 | 2.5455246 | 4.340588 | 2.674812 maternal |
| ## 33474 | 3.7042992 | 6.314588 | 2.673579 maternal |
| ## 26174 | 4.5279103 | 7.711049 | 2.669634 maternal |

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|----------|-------------|------------|----------|----------|
| ## 10474 | 9.2749676 | 15.793919 | 2.669279 | maternal |
| ## 17090 | 79.0900070 | 134.671910 | 2.669073 | maternal |
| ## 21158 | 2.3000507 | 3.915502 | 2.668092 | maternal |
| ## 6223 | 6.9384952 | 11.804395 | 2.665565 | maternal |
| ## 15378 | 10.9014347 | 18.483972 | 2.651941 | maternal |
| ## 31889 | 18.6444678 | 31.585269 | 2.648446 | maternal |
| ## 1012 | 19.9208965 | 33.712717 | 2.644282 | maternal |
| ## 15605 | 1.9442394 | 3.287248 | 2.640562 | maternal |
| ## 25281 | 43.7596992 | 73.985018 | 2.640439 | maternal |
| ## 7520 | 2.3267162 | 3.932956 | 2.639572 | maternal |
| ## 25994 | 2.8089138 | 4.740436 | 2.633146 | maternal |
| ## 25541 | 44.2670037 | 74.681734 | 2.631802 | maternal |
| ## 6917 | 36.6916641 | 61.732394 | 2.620851 | maternal |
| ## 10592 | 16.2193806 | 27.230951 | 2.612422 | maternal |
| ## 24225 | 2.0755134 | 3.484549 | 2.612352 | maternal |
| ## 16124 | 26.9363617 | 45.218099 | 2.611915 | maternal |
| ## 4724 | 16.2966542 | 27.334344 | 2.608583 | maternal |
| ## 29510 | 2.8502813 | 4.777972 | 2.606250 | maternal |
| ## 27249 | 11.9489914 | 20.011875 | 2.602591 | maternal |
| ## 25857 | 19.6835368 | 32.915197 | 2.596522 | maternal |
| ## 547 | 39.4426733 | 65.780044 | 2.585878 | maternal |
| ## 34852 | 6.8431707 | 11.407556 | 2.584122 | maternal |
| ## 29788 | 17.7679869 | 29.586550 | 2.579756 | maternal |
| ## 34996 | 24.2680120 | 40.357963 | 2.574650 | maternal |
| ## 6045 | 17.1286449 | 28.393763 | 2.561983 | maternal |
| ## 24713 | 104.8835479 | 173.849774 | 2.561682 | maternal |
| ## 10348 | 16.3078275 | 26.982258 | 2.554577 | maternal |
| ## 33270 | 5.8265955 | 9.637252 | 2.553276 | maternal |
| ## 10634 | 29.9748456 | 49.573918 | 2.552895 | maternal |
| ## 20363 | 594.1935524 | 982.316815 | 2.551334 | maternal |
| ## 10844 | 2.6513637 | 4.382430 | 2.550629 | maternal |
| ## 18154 | 13.7763304 | 22.754329 | 2.547781 | maternal |
| ## 23849 | 26.1694445 | 43.213494 | 2.546828 | maternal |
| ## 15572 | 23.8933227 | 39.427273 | 2.544077 | maternal |
| ## 33709 | 139.7812623 | 230.633202 | 2.543650 | maternal |
| ## 29326 | 21.1922855 | 34.902587 | 2.536501 | maternal |
| ## 30224 | 13.3748044 | 22.011907 | 2.533713 | maternal |
| ## 30141 | 2.6399524 | 4.341127 | 2.530440 | maternal |
| ## 28805 | 56.9975371 | 93.683652 | 2.528654 | maternal |
| ## 7100 | 20.6270273 | 33.880537 | 2.526012 | maternal |
| ## 35164 | 29.3290113 | 48.162414 | 2.525088 | maternal |
| ## 614 | 2.3018491 | 3.778718 | 2.523802 | maternal |
| ## 7797 | 262.2490358 | 429.554875 | 2.515168 | maternal |
| ## 14760 | 15.9886688 | 26.183845 | 2.514419 | maternal |
| ## 22405 | 9.7888061 | 16.027424 | 2.513639 | maternal |
| ## 32622 | 52.4360900 | 85.843796 | 2.513143 | maternal |
| ## 546 | 44.7332492 | 73.202058 | 2.511480 | maternal |
| ## 23123 | 18.8753158 | 30.864676 | 2.508570 | maternal |
| ## 14704 | 16.8879346 | 27.604828 | 2.507148 | maternal |
| ## 20109 | 6.7560707 | 11.042544 | 2.506848 | maternal |
| ## 34646 | 6.1942843 | 10.124261 | 2.506824 | maternal |
| ## 515 | 12.7501204 | 20.808675 | 2.501089 | maternal |
| ## 3114 | 40.6117521 | 66.254359 | 2.499595 | maternal |
| ## 18109 | 5.7694865 | 9.407405 | 2.497543 | maternal |

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|----------|------------|------------|-------------------|
| ## 8535 | 21.0865510 | 34.367700 | 2.495870 maternal |
| ## 16714 | 2.5591267 | 4.170473 | 2.495411 maternal |
| ## 9578 | 5.9021142 | 9.602910 | 2.489194 maternal |
| ## 33126 | 10.8875734 | 17.702255 | 2.486545 maternal |
| ## 25760 | 4.3296499 | 7.035463 | 2.484255 maternal |
| ## 21291 | 48.6909344 | 79.035046 | 2.480096 maternal |
| ## 28779 | 7.7777719 | 12.613348 | 2.476579 maternal |
| ## 21669 | 38.8730253 | 63.037587 | 2.476367 maternal |
| ## 33803 | 2.2318936 | 3.618845 | 2.475881 maternal |
| ## 4484 | 20.7213862 | 33.591257 | 2.475092 maternal |
| ## 33425 | 17.0639129 | 27.658185 | 2.474538 maternal |
| ## 24658 | 6.1678574 | 9.988611 | 2.471222 maternal |
| ## 25718 | 5.5888918 | 9.050972 | 2.471211 maternal |
| ## 7117 | 3.0961525 | 4.998422 | 2.459195 maternal |
| ## 14333 | 2.4362828 | 3.924347 | 2.450633 maternal |
| ## 23666 | 2.3147082 | 3.724460 | 2.446472 maternal |
| ## 13718 | 5.9475312 | 9.556563 | 2.441178 maternal |
| ## 7444 | 9.9054991 | 15.908350 | 2.439278 maternal |
| ## 24938 | 15.2092747 | 24.326306 | 2.423667 maternal |
| ## 8616 | 11.3403993 | 18.129130 | 2.421752 maternal |
| ## 34542 | 80.3653918 | 128.416144 | 2.420021 maternal |
| ## 20491 | 24.6808982 | 39.435172 | 2.419778 maternal |
| ## 19493 | 3.8529028 | 6.148423 | 2.415001 maternal |
| ## 15406 | 33.3560495 | 53.221716 | 2.414465 maternal |
| ## 2000 | 11.4500257 | 18.264244 | 2.413426 maternal |
| ## 25230 | 11.7570539 | 18.751838 | 2.412991 maternal |
| ## 33439 | 40.5109002 | 64.598249 | 2.412150 maternal |
| ## 30219 | 2.8288128 | 4.510335 | 2.411764 maternal |
| ## 33585 | 4.1183872 | 6.566370 | 2.411707 maternal |
| ## 19737 | 9.2810435 | 14.790493 | 2.409857 maternal |
| ## 20110 | 13.8395481 | 22.045187 | 2.408167 maternal |
| ## 18473 | 57.3776158 | 91.378954 | 2.407399 maternal |
| ## 18396 | 14.4484283 | 23.004134 | 2.406368 maternal |
| ## 22649 | 3.1690171 | 5.045103 | 2.406021 maternal |
| ## 17191 | 10.2980590 | 16.375013 | 2.401504 maternal |
| ## 790 | 19.7849514 | 31.451744 | 2.400490 maternal |
| ## 29812 | 7.5302678 | 11.955616 | 2.395727 maternal |
| ## 24033 | 10.6733357 | 16.942018 | 2.394889 maternal |
| ## 12738 | 22.1766728 | 35.180990 | 2.392691 maternal |
| ## 4488 | 9.3644719 | 14.849843 | 2.391190 maternal |
| ## 33643 | 11.4516554 | 18.135189 | 2.386122 maternal |
| ## 6287 | 2.7889148 | 4.414722 | 2.384514 maternal |
| ## 21435 | 12.5000266 | 19.759240 | 2.379248 maternal |
| ## 4286 | 35.9067046 | 56.758705 | 2.379227 maternal |
| ## 1127 | 7.3897022 | 11.669490 | 2.375495 maternal |
| ## 3818 | 2.4091466 | 3.801825 | 2.372939 maternal |
| ## 33464 | 25.2377941 | 39.802088 | 2.370571 maternal |
| ## 7465 | 6.5986813 | 10.393334 | 2.365773 maternal |
| ## 5608 | 7.6118968 | 11.975065 | 2.361359 maternal |
| ## 28349 | 8.2145212 | 12.906052 | 2.356425 maternal |
| ## 10318 | 12.8149275 | 20.126060 | 2.354978 maternal |
| ## 22483 | 7.5488312 | 11.849892 | 2.353192 maternal |
| ## 27655 | 36.5431919 | 57.360509 | 2.352950 maternal |
| ## 18022 | 3.4308580 | 5.384880 | 2.352665 maternal |

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|----------|-------------|------------|-------------------|
| ## 28584 | 62.8797330 | 98.682583 | 2.352292 maternal |
| ## 35435 | 5.5223534 | 8.660497 | 2.349622 maternal |
| ## 15256 | 6.0534142 | 9.490600 | 2.348547 maternal |
| ## 33912 | 5.8667567 | 9.195500 | 2.347553 maternal |
| ## 9633 | 5.2872926 | 8.286559 | 2.347241 maternal |
| ## 13842 | 13.9086154 | 21.775055 | 2.343253 maternal |
| ## 17430 | 2.9256866 | 4.579721 | 2.342704 maternal |
| ## 814 | 58.1055194 | 90.936108 | 2.341915 maternal |
| ## 24362 | 2.3321213 | 3.646296 | 2.338337 maternal |
| ## 1170 | 9.2660416 | 14.475335 | 2.335206 maternal |
| ## 21583 | 12.1736047 | 19.008962 | 2.333539 maternal |
| ## 35418 | 5.4877806 | 8.560432 | 2.329781 maternal |
| ## 25503 | 30.9187417 | 48.154094 | 2.323921 maternal |
| ## 21176 | 10.3159925 | 16.058284 | 2.322020 maternal |
| ## 32050 | 55.0842534 | 85.743686 | 2.321905 maternal |
| ## 23343 | 4.2667897 | 6.640494 | 2.321262 maternal |
| ## 21678 | 114.5962709 | 178.288187 | 2.320011 maternal |
| ## 21810 | 13.2320462 | 20.579309 | 2.318749 maternal |
| ## 16254 | 31.4726185 | 48.942645 | 2.318331 maternal |
| ## 1034 | 8.8663980 | 13.775488 | 2.314975 maternal |
| ## 4577 | 5.4314246 | 8.437609 | 2.314515 maternal |
| ## 34622 | 27.9979525 | 43.468474 | 2.312328 maternal |
| ## 17150 | 2.7052519 | 4.197308 | 2.309909 maternal |
| ## 5967 | 9.5539413 | 14.821392 | 2.309428 maternal |
| ## 16877 | 39.8835640 | 61.867762 | 2.309122 maternal |
| ## 15804 | 24.0232528 | 37.228302 | 2.305485 maternal |
| ## 20150 | 26.4292121 | 40.937594 | 2.303762 maternal |
| ## 18670 | 6.3692418 | 9.864907 | 2.303484 maternal |
| ## 734 | 21.3727042 | 33.085954 | 2.301612 maternal |
| ## 9217 | 6.0244286 | 9.320762 | 2.299508 maternal |
| ## 20579 | 3.4154090 | 5.283369 | 2.298938 maternal |
| ## 29930 | 25.2836432 | 39.109947 | 2.298763 maternal |
| ## 7289 | 13.0665473 | 20.211661 | 2.298709 maternal |
| ## 27257 | 15.0455207 | 23.270171 | 2.298296 maternal |
| ## 19304 | 3.2773167 | 5.066109 | 2.296299 maternal |
| ## 18352 | 11.4243142 | 17.656494 | 2.295608 maternal |
| ## 636 | 2.7207400 | 4.201930 | 2.292967 maternal |
| ## 16567 | 5.7260089 | 8.839015 | 2.291194 maternal |
| ## 28910 | 15.9702635 | 24.639501 | 2.289236 maternal |
| ## 27262 | 2.6729525 | 4.120482 | 2.286174 maternal |
| ## 11669 | 33.1112105 | 51.042135 | 2.286149 maternal |
| ## 12515 | 5.9780672 | 9.209668 | 2.283868 maternal |
| ## 25846 | 25.8347411 | 39.787547 | 2.282688 maternal |
| ## 15114 | 2.2575822 | 3.474236 | 2.279932 maternal |
| ## 19827 | 3.1012678 | 4.770127 | 2.278039 maternal |
| ## 4189 | 11.5639920 | 17.783511 | 2.277358 maternal |
| ## 30133 | 3.2280384 | 4.960320 | 2.274510 maternal |
| ## 18921 | 6.4615241 | 9.925794 | 2.273328 maternal |
| ## 7243 | 3.6631522 | 5.627011 | 2.273265 maternal |
| ## 16103 | 15.8290149 | 24.307433 | 2.272110 maternal |
| ## 33352 | 7.8863372 | 12.107239 | 2.271140 maternal |
| ## 5841 | 64.0126584 | 98.260054 | 2.270648 maternal |
| ## 5117 | 3.1090784 | 4.769479 | 2.268366 maternal |
| ## 17576 | 3.7605146 | 5.766911 | 2.267165 maternal |

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|----------|-------------|------------|-------------------|
| ## 6436 | 69.0258251 | 105.773438 | 2.264390 maternal |
| ## 18865 | 2.6476333 | 4.055770 | 2.263138 maternal |
| ## 18834 | 40.2243138 | 61.599363 | 2.262066 maternal |
| ## 22484 | 10.2957785 | 15.760770 | 2.260648 maternal |
| ## 10022 | 14.7165859 | 22.509760 | 2.257682 maternal |
| ## 28796 | 6.0388697 | 9.234686 | 2.256868 maternal |
| ## 28337 | 3.8457600 | 5.877812 | 2.254921 maternal |
| ## 29041 | 14.8288379 | 22.654971 | 2.253441 maternal |
| ## 19960 | 27.5462512 | 42.081068 | 2.253172 maternal |
| ## 2796 | 33.1783596 | 50.656314 | 2.251121 maternal |
| ## 27553 | 11.1473279 | 17.017704 | 2.250716 maternal |
| ## 21505 | 7.0679713 | 10.785449 | 2.249157 maternal |
| ## 10853 | 6.3947366 | 9.757008 | 2.248745 maternal |
| ## 22339 | 21.9227697 | 33.446603 | 2.248433 maternal |
| ## 26253 | 10.4129432 | 15.882889 | 2.247594 maternal |
| ## 3430 | 61.7962703 | 94.238336 | 2.246837 maternal |
| ## 18418 | 11.8918023 | 18.128883 | 2.245654 maternal |
| ## 10319 | 4.3694364 | 6.652357 | 2.240878 maternal |
| ## 30902 | 11.5835360 | 17.631406 | 2.240009 maternal |
| ## 16843 | 15.6219974 | 23.773223 | 2.239224 maternal |
| ## 24174 | 4.1717806 | 6.345627 | 2.237573 maternal |
| ## 560 | 3.1771251 | 4.832569 | 2.237496 maternal |
| ## 18226 | 9.7166015 | 14.775884 | 2.236625 maternal |
| ## 35475 | 14.4967369 | 22.043384 | 2.236367 maternal |
| ## 34564 | 23.2625239 | 35.351827 | 2.234264 maternal |
| ## 8888 | 54.4000720 | 82.598144 | 2.231072 maternal |
| ## 11180 | 56.9249316 | 86.422595 | 2.230690 maternal |
| ## 17398 | 8.3529228 | 12.678463 | 2.229888 maternal |
| ## 21604 | 4.2964848 | 6.517928 | 2.227964 maternal |
| ## 34585 | 8.8452036 | 13.410278 | 2.225755 maternal |
| ## 22224 | 6.4577730 | 9.790468 | 2.225678 maternal |
| ## 26577 | 11.5016682 | 17.433059 | 2.224783 maternal |
| ## 24286 | 3.2185162 | 4.875109 | 2.222429 maternal |
| ## 7493 | 21.9287642 | 33.157609 | 2.216143 maternal |
| ## 11905 | 13.8186796 | 20.894207 | 2.216063 maternal |
| ## 13089 | 6.5169069 | 9.843813 | 2.212447 maternal |
| ## 23769 | 7.8344859 | 11.826722 | 2.210234 maternal |
| ## 2816 | 7.9252060 | 11.962702 | 2.209944 maternal |
| ## 27248 | 11.1221051 | 16.784300 | 2.209098 maternal |
| ## 3876 | 11.9141385 | 17.964805 | 2.206158 maternal |
| ## 15475 | 26.0830823 | 39.327611 | 2.205983 maternal |
| ## 25377 | 10.5722895 | 15.940298 | 2.205890 maternal |
| ## 22210 | 3.0570484 | 4.604924 | 2.202534 maternal |
| ## 35217 | 92.4237446 | 139.212374 | 2.202321 maternal |
| ## 1067 | 10.5578540 | 15.901479 | 2.202054 maternal |
| ## 5711 | 29.5066263 | 44.438099 | 2.201840 maternal |
| ## 15008 | 15.2238265 | 22.920432 | 2.200712 maternal |
| ## 23942 | 14.1726852 | 21.335951 | 2.200390 maternal |
| ## 7943 | 155.4333611 | 233.933026 | 2.199464 maternal |
| ## 20804 | 11.4636777 | 17.251643 | 2.199128 maternal |
| ## 22626 | 78.7088453 | 118.285144 | 2.194195 maternal |
| ## 29223 | 7.9990187 | 12.020073 | 2.193897 maternal |
| ## 29303 | 9.0302997 | 13.563237 | 2.192178 maternal |
| ## 3579 | 3.1560387 | 4.739320 | 2.191460 maternal |

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|----------|------------|------------|-------------------|
| ## 11255 | 18.3661508 | 27.577014 | 2.191093 maternal |
| ## 9980 | 11.1413309 | 16.722941 | 2.189833 maternal |
| ## 28393 | 3.5034247 | 5.258288 | 2.189636 maternal |
| ## 24720 | 34.3309896 | 51.515125 | 2.188790 maternal |
| ## 32968 | 47.6624493 | 71.462405 | 2.185942 maternal |
| ## 2454 | 23.1319786 | 34.665207 | 2.184136 maternal |
| ## 33486 | 6.8529847 | 10.267768 | 2.183442 maternal |
| ## 31574 | 4.6404702 | 6.952309 | 2.183203 maternal |
| ## 11221 | 2.4141483 | 3.613869 | 2.180266 maternal |
| ## 17159 | 2.3320640 | 3.490078 | 2.179335 maternal |
| ## 21453 | 5.3567378 | 8.016280 | 2.179153 maternal |
| ## 32368 | 9.9627854 | 14.908347 | 2.178958 maternal |
| ## 14796 | 5.9259634 | 8.863028 | 2.177113 maternal |
| ## 5693 | 12.1200588 | 18.124880 | 2.176682 maternal |
| ## 35160 | 21.8523592 | 32.669517 | 2.175651 maternal |
| ## 12127 | 3.6858502 | 5.509916 | 2.175348 maternal |
| ## 7105 | 4.4071755 | 6.585513 | 2.173893 maternal |
| ## 12625 | 7.3002703 | 10.900391 | 2.171229 maternal |
| ## 25375 | 12.5528209 | 18.740831 | 2.170775 maternal |
| ## 13512 | 3.9169932 | 5.844993 | 2.169009 maternal |
| ## 15961 | 30.7435487 | 45.875376 | 2.168964 maternal |
| ## 16436 | 14.7260303 | 21.973537 | 2.168871 maternal |
| ## 33471 | 3.4480134 | 5.142078 | 2.166875 maternal |
| ## 34663 | 4.0242949 | 6.000253 | 2.166142 maternal |
| ## 10628 | 18.2658506 | 27.231980 | 2.165813 maternal |
| ## 24467 | 17.3211840 | 25.816940 | 2.164899 maternal |
| ## 4604 | 5.1854615 | 7.724358 | 2.162843 maternal |
| ## 16236 | 8.7423177 | 13.012030 | 2.159940 maternal |
| ## 35242 | 5.0845979 | 7.567532 | 2.159771 maternal |
| ## 7807 | 14.5102456 | 21.588005 | 2.158470 maternal |
| ## 35213 | 93.2890039 | 138.653448 | 2.154912 maternal |
| ## 35 | 3.8560039 | 5.730794 | 2.154725 maternal |
| ## 16779 | 7.4868554 | 11.126008 | 2.154422 maternal |
| ## 27314 | 24.3113192 | 36.126596 | 2.154248 maternal |
| ## 20149 | 19.7276744 | 29.312242 | 2.153879 maternal |
| ## 9309 | 11.4128178 | 16.954567 | 2.153235 maternal |
| ## 18383 | 18.8630914 | 28.015019 | 2.152294 maternal |
| ## 28292 | 8.5152991 | 12.646719 | 2.152293 maternal |
| ## 34283 | 52.3035819 | 77.667117 | 2.151707 maternal |
| ## 13997 | 2.5423239 | 3.771612 | 2.148382 maternal |
| ## 6847 | 2.4190690 | 3.588419 | 2.148048 maternal |
| ## 3187 | 19.0802383 | 28.294711 | 2.146965 maternal |
| ## 18040 | 12.2543694 | 18.169171 | 2.146338 maternal |
| ## 12349 | 44.5261073 | 65.974616 | 2.144053 maternal |
| ## 8131 | 12.2710702 | 18.181967 | 2.144022 maternal |
| ## 21582 | 15.7256789 | 23.300536 | 2.144007 maternal |
| ## 18697 | 7.8504303 | 11.624434 | 2.141754 maternal |
| ## 26415 | 3.9303584 | 5.815757 | 2.139291 maternal |
| ## 21628 | 6.6226604 | 9.789517 | 2.135689 maternal |
| ## 33002 | 6.1340972 | 9.066440 | 2.135345 maternal |
| ## 7308 | 14.6102309 | 21.591817 | 2.134908 maternal |
| ## 5335 | 31.3070952 | 46.255433 | 2.134002 maternal |
| ## 25988 | 11.6539245 | 17.213712 | 2.133051 maternal |
| ## 17502 | 6.8145667 | 10.065180 | 2.132898 maternal |

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|----------|-------------|------------|----------|----------|
| ## 28434 | 73.9747888 | 109.259088 | 2.132821 | maternal |
| ## 28111 | 4.9589822 | 7.322923 | 2.132160 | maternal |
| ## 3415 | 9.0624314 | 13.371919 | 2.129392 | maternal |
| ## 17615 | 3.4909751 | 5.150856 | 2.129260 | maternal |
| ## 25433 | 7.3469852 | 10.835524 | 2.127712 | maternal |
| ## 11868 | 29.5294877 | 43.530566 | 2.126080 | maternal |
| ## 33408 | 18.3626817 | 27.065131 | 2.125561 | maternal |
| ## 1335 | 338.9920125 | 499.372781 | 2.123638 | maternal |
| ## 27830 | 3.8333525 | 5.646413 | 2.123304 | maternal |
| ## 31649 | 24.0467205 | 35.419986 | 2.123293 | maternal |
| ## 16774 | 16.0026525 | 23.566438 | 2.122563 | maternal |
| ## 16825 | 34.1653209 | 50.308194 | 2.122171 | maternal |
| ## 14213 | 35.6131366 | 52.439660 | 2.122142 | maternal |
| ## 2805 | 8.2065298 | 12.083487 | 2.122006 | maternal |
| ## 22276 | 3.6496156 | 5.371311 | 2.120399 | maternal |
| ## 15617 | 53.9947719 | 79.446419 | 2.119510 | maternal |
| ## 18412 | 21.6796303 | 31.861392 | 2.115410 | maternal |
| ## 11115 | 113.2915920 | 166.449805 | 2.114388 | maternal |
| ## 4332 | 4.1335732 | 6.067045 | 2.110902 | maternal |
| ## 16136 | 8.3466143 | 12.243889 | 2.108956 | maternal |
| ## 6706 | 98.9522621 | 145.103978 | 2.107709 | maternal |
| ## 20833 | 2.4134140 | 3.538301 | 2.106982 | maternal |
| ## 16181 | 2.8575879 | 4.189462 | 2.106948 | maternal |
| ## 33125 | 4.5986664 | 6.741917 | 2.106890 | maternal |
| ## 7915 | 20.2302502 | 29.656835 | 2.106666 | maternal |
| ## 18930 | 17.9157336 | 26.254944 | 2.105488 | maternal |
| ## 7682 | 12.8329640 | 18.801944 | 2.104681 | maternal |
| ## 15142 | 3.2071881 | 4.696369 | 2.102775 | maternal |
| ## 18795 | 6.5739096 | 9.625666 | 2.102528 | maternal |
| ## 16660 | 5.9134837 | 8.655813 | 2.101387 | maternal |
| ## 7286 | 2.8836593 | 4.220653 | 2.101156 | maternal |
| ## 10316 | 6.7642994 | 9.900225 | 2.101049 | maternal |
| ## 2267 | 14.8245122 | 21.686354 | 2.099319 | maternal |
| ## 5468 | 4.5101793 | 6.597279 | 2.099039 | maternal |
| ## 21775 | 4.6585068 | 6.811467 | 2.097622 | maternal |
| ## 12497 | 18.8184521 | 27.513654 | 2.097386 | maternal |
| ## 32052 | 12.9541264 | 18.937919 | 2.097064 | maternal |
| ## 14954 | 7.1598009 | 10.466875 | 2.097000 | maternal |
| ## 24670 | 2.4067894 | 3.518426 | 2.096954 | maternal |
| ## 22333 | 5.2486937 | 7.670558 | 2.095878 | maternal |
| ## 29339 | 18.5064691 | 27.043975 | 2.095648 | maternal |
| ## 28323 | 2.8795186 | 4.205959 | 2.094036 | maternal |
| ## 18214 | 4.6390337 | 6.775027 | 2.093543 | maternal |
| ## 34004 | 19.1318080 | 27.933751 | 2.092663 | maternal |
| ## 33893 | 45.5959688 | 66.560578 | 2.092003 | maternal |
| ## 32043 | 27.0337665 | 39.443467 | 2.090231 | maternal |
| ## 16781 | 26.1751873 | 38.175820 | 2.088875 | maternal |
| ## 2536 | 4.9401539 | 7.205030 | 2.088849 | maternal |
| ## 20070 | 5.2281199 | 7.624117 | 2.088439 | maternal |
| ## 510 | 11.5481914 | 16.823292 | 2.084877 | maternal |
| ## 28120 | 12.8538608 | 18.696944 | 2.079623 | maternal |
| ## 23954 | 3.5954207 | 5.222088 | 2.074515 | maternal |
| ## 16353 | 29.3334665 | 42.575501 | 2.072149 | maternal |
| ## 17856 | 15.5521263 | 22.568984 | 2.071560 | maternal |

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|----------|-------------|------------|-------------------|
| ## 34108 | 3.1322743 | 4.538863 | 2.066525 maternal |
| ## 34367 | 9.5669743 | 13.862762 | 2.066429 maternal |
| ## 34937 | 9.6880506 | 14.037992 | 2.066377 maternal |
| ## 29647 | 317.5957714 | 460.158689 | 2.066094 maternal |
| ## 32510 | 8.9740213 | 12.989384 | 2.062677 maternal |
| ## 22666 | 4.9025577 | 7.095139 | 2.062176 maternal |
| ## 29331 | 15.9181107 | 23.029637 | 2.061048 maternal |
| ## 34022 | 30.5358616 | 44.151989 | 2.059027 maternal |
| ## 20001 | 2.8691919 | 4.146854 | 2.057597 maternal |
| ## 34009 | 20.9784532 | 30.308761 | 2.056297 maternal |
| ## 21107 | 3.3216430 | 4.797300 | 2.055106 maternal |
| ## 22416 | 3.3093254 | 4.778138 | 2.054121 maternal |
| ## 26915 | 15.4505550 | 22.307665 | 2.054049 maternal |
| ## 1284 | 4.4233532 | 6.382041 | 2.051665 maternal |
| ## 23699 | 17.1004487 | 24.669882 | 2.051283 maternal |
| ## 10490 | 101.9630500 | 147.048728 | 2.050170 maternal |
| ## 5963 | 2.5098761 | 3.618593 | 2.049137 maternal |
| ## 26024 | 217.6918461 | 313.855054 | 2.049133 maternal |
| ## 21702 | 5.1278676 | 7.392500 | 2.048877 maternal |
| ## 14693 | 5.5149358 | 7.945517 | 2.046727 maternal |
| ## 14464 | 14.5947977 | 21.008703 | 2.043730 maternal |
| ## 32839 | 5.7682557 | 8.301087 | 2.042859 maternal |
| ## 14404 | 7.0788672 | 10.186028 | 2.042470 maternal |
| ## 18060 | 33.4790811 | 48.157849 | 2.041309 maternal |
| ## 10286 | 7.8465933 | 11.286885 | 2.041304 maternal |
| ## 21686 | 26.7966458 | 38.538539 | 2.040690 maternal |
| ## 8371 | 21.6712272 | 31.162816 | 2.040205 maternal |
| ## 7372 | 18.5342701 | 26.648915 | 2.039819 maternal |
| ## 10418 | 9.6626273 | 13.874691 | 2.035293 maternal |
| ## 1592 | 8.5634702 | 12.281240 | 2.031089 maternal |
| ## 32360 | 7.2990353 | 10.464813 | 2.030098 maternal |
| ## 34832 | 2.8597808 | 4.098213 | 2.028497 maternal |
| ## 1740 | 33.2356023 | 47.610244 | 2.027205 maternal |
| ## 32623 | 6.1264243 | 8.768496 | 2.024239 maternal |
| ## 25205 | 4.0384181 | 5.777089 | 2.022515 maternal |
| ## 276 | 7.1487793 | 10.219243 | 2.020083 maternal |
| ## 28333 | 4.5674815 | 6.528166 | 2.019517 maternal |
| ## 6941 | 74.2256147 | 106.082179 | 2.019316 maternal |
| ## 34867 | 13.4967966 | 19.288758 | 2.019198 maternal |
| ## 4398 | 10.1698432 | 14.522353 | 2.016457 maternal |
| ## 10273 | 6.5113797 | 9.298124 | 2.016454 maternal |
| ## 30810 | 20.5777108 | 29.378375 | 2.015739 maternal |
| ## 15289 | 16.6232390 | 23.730925 | 2.015491 maternal |
| ## 7328 | 5.8742139 | 8.381435 | 2.013693 maternal |
| ## 24568 | 2.6393390 | 3.764706 | 2.012658 maternal |
| ## 31035 | 3.0489530 | 4.348429 | 2.012235 maternal |
| ## 121 | 6.9000897 | 9.838043 | 2.011239 maternal |
| ## 2108 | 26.1961963 | 37.346214 | 2.010883 maternal |
| ## 20135 | 8.9295381 | 12.730039 | 2.010824 maternal |
| ## 14779 | 2.9192088 | 4.161536 | 2.010728 maternal |
| ## 35137 | 215.9104895 | 307.757029 | 2.010305 maternal |
| ## 32025 | 156.8233965 | 223.430250 | 2.008722 maternal |
| ## 24784 | 11.9577211 | 17.036093 | 2.008648 maternal |
| ## 5145 | 3.3584792 | 4.782132 | 2.006758 maternal |

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|----------|-------------|------------|-------------------|
| ## 20625 | 27.3611611 | 38.953760 | 2.006259 maternal |
| ## 882 | 6.5498004 | 9.324629 | 2.006171 maternal |
| ## 18631 | 3.1559212 | 4.492811 | 2.006081 maternal |
| ## 6872 | 3.5473978 | 5.049443 | 2.005626 maternal |
| ## 3197 | 323.2903442 | 460.097027 | 2.005028 maternal |
| ## 3860 | 9.9099151 | 14.095724 | 2.003167 maternal |
| ## 21642 | 6.0683108 | 8.625206 | 2.000711 maternal |
| ## 6761 | 10.2565668 | 14.576082 | 2.000222 maternal |
| ## 28748 | 9.5907325 | 13.624936 | 1.999009 maternal |
| ## 12038 | 2.6672515 | 3.789064 | 1.998895 maternal |
| ## 25869 | 34.4133366 | 48.854639 | 1.996651 maternal |
| ## 6199 | 67.2773598 | 95.509049 | 1.996624 maternal |
| ## 21481 | 23.2460272 | 32.997838 | 1.996323 maternal |
| ## 22481 | 4.3377026 | 6.156245 | 1.995697 maternal |
| ## 26824 | 7.4569065 | 10.580604 | 1.994887 maternal |
| ## 5861 | 3.2445697 | 4.602929 | 1.994309 maternal |
| ## 20479 | 5.8750742 | 8.330602 | 1.992648 maternal |
| ## 25703 | 23.7217885 | 33.629551 | 1.991955 maternal |
| ## 29623 | 6.6979356 | 9.490252 | 1.990119 maternal |
| ## 26503 | 16.8840901 | 23.910487 | 1.988368 maternal |
| ## 30942 | 3.9442596 | 5.585059 | 1.987992 maternal |
| ## 26156 | 8.2500530 | 11.680159 | 1.987449 maternal |
| ## 18290 | 5.3876988 | 7.624864 | 1.986185 maternal |
| ## 17669 | 10.3432424 | 14.637414 | 1.986021 maternal |
| ## 11202 | 6.9835827 | 9.882187 | 1.985767 maternal |
| ## 18417 | 24.1759258 | 34.204671 | 1.985206 maternal |
| ## 14660 | 5.8082890 | 8.216588 | 1.984749 maternal |
| ## 727 | 25.8246281 | 36.519405 | 1.983561 maternal |
| ## 32546 | 263.6815607 | 372.516636 | 1.980286 maternal |
| ## 30382 | 2.7556029 | 3.892819 | 1.980144 maternal |
| ## 18610 | 2.6830580 | 3.789657 | 1.979544 maternal |
| ## 22209 | 29.2331406 | 41.284442 | 1.979089 maternal |
| ## 14265 | 4.5591038 | 6.430709 | 1.974986 maternal |
| ## 24403 | 3.1605021 | 4.456802 | 1.974122 maternal |
| ## 5209 | 15.1661943 | 21.382276 | 1.973428 maternal |
| ## 32269 | 6.3282389 | 8.919747 | 1.972598 maternal |
| ## 25695 | 7.1237757 | 10.037712 | 1.971479 maternal |
| ## 2695 | 15.6571882 | 22.058252 | 1.970961 maternal |
| ## 26443 | 5.7031940 | 8.034713 | 1.970922 maternal |
| ## 27259 | 4.4860809 | 6.318566 | 1.970146 maternal |
| ## 11231 | 9.2612379 | 13.040829 | 1.969258 maternal |
| ## 9805 | 23.2329990 | 32.702045 | 1.967976 maternal |
| ## 7120 | 56.6657979 | 79.678081 | 1.964500 maternal |
| ## 25940 | 14.4350320 | 20.295439 | 1.964215 maternal |
| ## 8966 | 527.6892525 | 741.629245 | 1.962891 maternal |
| ## 18645 | 9.7948012 | 13.759778 | 1.961410 maternal |
| ## 28403 | 5.8757431 | 8.251593 | 1.960328 maternal |
| ## 31657 | 3.1799460 | 4.464122 | 1.959110 maternal |
| ## 25182 | 12.1301010 | 17.022773 | 1.957955 maternal |
| ## 12299 | 10.0164642 | 14.053318 | 1.957177 maternal |
| ## 7125 | 10.2951918 | 14.440899 | 1.956374 maternal |
| ## 16452 | 35.1161588 | 49.239896 | 1.955226 maternal |
| ## 32384 | 32.3136890 | 45.297788 | 1.954309 maternal |
| ## 20570 | 8.2241775 | 11.524777 | 1.953156 maternal |

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|----------|-------------|------------|-------------------|
| ## 11532 | 9.4942251 | 13.302848 | 1.952735 maternal |
| ## 1178 | 6.4604833 | 9.051433 | 1.952484 maternal |
| ## 1475 | 33.7565054 | 47.293241 | 1.952401 maternal |
| ## 33878 | 115.9450456 | 162.424097 | 1.952070 maternal |
| ## 22441 | 6.4101796 | 8.979709 | 1.952022 maternal |
| ## 18633 | 88.5561182 | 123.968660 | 1.949734 maternal |
| ## 5219 | 12.2067099 | 17.072878 | 1.946787 maternal |
| ## 1266 | 11.9149238 | 16.664679 | 1.946768 maternal |
| ## 15650 | 47.8813169 | 66.959903 | 1.946332 maternal |
| ## 1249 | 79.8282709 | 111.619966 | 1.945846 maternal |
| ## 23166 | 5.1780765 | 7.236274 | 1.944022 maternal |
| ## 178 | 3.1248058 | 4.366795 | 1.943971 maternal |
| ## 34147 | 3.8717541 | 5.408125 | 1.942436 maternal |
| ## 23651 | 51.1881956 | 71.489910 | 1.941947 maternal |
| ## 16872 | 33.3936277 | 46.633340 | 1.941626 maternal |
| ## 10544 | 16.1468628 | 22.545751 | 1.941196 maternal |
| ## 15672 | 7.4461048 | 10.396793 | 1.941148 maternal |
| ## 11167 | 16.7424474 | 23.375655 | 1.940954 maternal |
| ## 2368 | 4.8322869 | 6.744735 | 1.939941 maternal |
| ## 3819 | 20.9176231 | 29.195425 | 1.939867 maternal |
| ## 23672 | 4.3047246 | 6.007660 | 1.939542 maternal |
| ## 34815 | 3.0655201 | 4.275815 | 1.937672 maternal |
| ## 9290 | 10.2501570 | 14.294161 | 1.937011 maternal |
| ## 19876 | 4.9254071 | 6.868141 | 1.936774 maternal |
| ## 20244 | 31.1250339 | 43.382478 | 1.935306 maternal |
| ## 28441 | 23.7637051 | 33.093569 | 1.932448 maternal |
| ## 446 | 21.0151684 | 29.252284 | 1.930906 maternal |
| ## 15781 | 17.3112437 | 24.095114 | 1.930707 maternal |
| ## 11477 | 4.1080407 | 5.717835 | 1.930678 maternal |
| ## 27886 | 3.7846307 | 5.267598 | 1.930619 maternal |
| ## 27802 | 109.3370845 | 152.086921 | 1.928604 maternal |
| ## 22853 | 15.5761477 | 21.665486 | 1.928482 maternal |
| ## 7732 | 20.6668896 | 28.742545 | 1.928039 maternal |
| ## 16574 | 24.1075257 | 33.508656 | 1.926171 maternal |
| ## 16578 | 124.9820884 | 173.706208 | 1.925891 maternal |
| ## 11054 | 7.9866250 | 11.098674 | 1.925437 maternal |
| ## 22445 | 28.5435468 | 39.662388 | 1.925157 maternal |
| ## 14036 | 3.3124235 | 4.600429 | 1.923497 maternal |
| ## 7317 | 14.4055785 | 20.005633 | 1.923262 maternal |
| ## 11721 | 22.1689625 | 30.766252 | 1.921043 maternal |
| ## 456 | 6.5085903 | 9.032297 | 1.920907 maternal |
| ## 20233 | 45.2669046 | 62.811589 | 1.920510 maternal |
| ## 8796 | 29.8277312 | 41.387998 | 1.920473 maternal |
| ## 15041 | 47.6590667 | 66.124220 | 1.920176 maternal |
| ## 1164 | 3.6406944 | 5.049299 | 1.918901 maternal |
| ## 31512 | 47.1052407 | 65.319455 | 1.918343 maternal |
| ## 27603 | 7.4508130 | 10.330771 | 1.918007 maternal |
| ## 11955 | 14.7220069 | 20.410952 | 1.917758 maternal |
| ## 20358 | 8.8813294 | 12.312950 | 1.917667 maternal |
| ## 34183 | 9.4102533 | 13.043708 | 1.917027 maternal |
| ## 1126 | 4.9859502 | 6.910166 | 1.916578 maternal |
| ## 17930 | 11.7479397 | 16.279828 | 1.916181 maternal |
| ## 34835 | 5.0152635 | 6.948450 | 1.915469 maternal |
| ## 20819 | 8.2267989 | 11.391758 | 1.913694 maternal |

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|----------|------------|-----------|-------------------|
| ## 25115 | 14.6880676 | 20.330479 | 1.912355 maternal |
| ## 26979 | 3.8430755 | 5.317947 | 1.911463 maternal |
| ## 34192 | 4.7096687 | 6.516166 | 1.910984 maternal |
| ## 18886 | 34.2457393 | 47.358705 | 1.909406 maternal |
| ## 23817 | 12.5102236 | 17.299515 | 1.909222 maternal |
| ## 32267 | 18.2510367 | 25.231737 | 1.908396 maternal |
| ## 18061 | 23.9560275 | 33.102205 | 1.906752 maternal |
| ## 10566 | 6.9343693 | 9.576438 | 1.904900 maternal |
| ## 6957 | 7.2530459 | 10.014693 | 1.904297 maternal |
| ## 20174 | 16.7226987 | 23.081063 | 1.903031 maternal |
| ## 18846 | 4.2148395 | 5.817333 | 1.902982 maternal |
| ## 6054 | 17.2908095 | 23.860461 | 1.902382 maternal |
| ## 21392 | 25.8560801 | 35.675302 | 1.901941 maternal |
| ## 7853 | 43.7284354 | 60.318332 | 1.901038 maternal |
| ## 837 | 5.9880947 | 8.259148 | 1.900746 maternal |
| ## 24059 | 3.3803238 | 4.662317 | 1.900723 maternal |
| ## 22332 | 18.5401686 | 25.571281 | 1.900687 maternal |
| ## 14277 | 7.5869958 | 10.460245 | 1.899429 maternal |
| ## 466 | 22.5757449 | 31.124779 | 1.899370 maternal |
| ## 17004 | 8.9801743 | 12.380105 | 1.899185 maternal |
| ## 15085 | 4.2575560 | 5.866554 | 1.897550 maternal |
| ## 7714 | 15.0554924 | 20.739357 | 1.896628 maternal |
| ## 997 | 4.7030859 | 6.478021 | 1.896320 maternal |
| ## 10707 | 9.4231597 | 12.966566 | 1.893075 maternal |
| ## 7584 | 4.7818037 | 6.579520 | 1.892880 maternal |
| ## 5302 | 3.3181396 | 4.564226 | 1.891902 maternal |
| ## 22134 | 33.1840220 | 45.642073 | 1.891630 maternal |
| ## 16080 | 14.7230674 | 20.240312 | 1.889995 maternal |
| ## 561 | 48.3489471 | 66.462464 | 1.889773 maternal |
| ## 841 | 23.0384395 | 31.669282 | 1.889741 maternal |
| ## 15557 | 34.6588007 | 47.641321 | 1.889629 maternal |
| ## 9769 | 3.8658369 | 5.312921 | 1.889025 maternal |
| ## 14635 | 38.9735045 | 53.546474 | 1.888060 maternal |
| ## 7077 | 22.1358444 | 30.408906 | 1.887634 maternal |
| ## 28513 | 9.4996151 | 13.049218 | 1.887437 maternal |
| ## 29619 | 12.4822196 | 17.145496 | 1.887285 maternal |
| ## 821 | 2.7173314 | 3.732498 | 1.887275 maternal |
| ## 15813 | 3.7662481 | 5.172398 | 1.886719 maternal |
| ## 27860 | 13.6776406 | 18.779978 | 1.885975 maternal |
| ## 24292 | 9.8806534 | 13.564741 | 1.885539 maternal |
| ## 20584 | 12.4711084 | 17.116651 | 1.884698 maternal |
| ## 8834 | 6.4074238 | 8.793265 | 1.884345 maternal |
| ## 4225 | 24.0562711 | 33.013116 | 1.884281 maternal |
| ## 17401 | 12.2670864 | 16.827910 | 1.883010 maternal |
| ## 18377 | 55.3098745 | 75.865305 | 1.882648 maternal |
| ## 15027 | 4.3608833 | 5.981441 | 1.882579 maternal |
| ## 30045 | 11.8182766 | 16.205637 | 1.881684 maternal |
| ## 34281 | 11.2143617 | 15.375820 | 1.881322 maternal |
| ## 25048 | 8.7870794 | 12.042873 | 1.879986 maternal |
| ## 1023 | 19.1688037 | 26.261213 | 1.878744 maternal |
| ## 6394 | 5.1616061 | 7.071230 | 1.878671 maternal |
| ## 3862 | 3.5443259 | 4.854687 | 1.878053 maternal |
| ## 1617 | 10.6995419 | 14.649508 | 1.876782 maternal |
| ## 27356 | 5.5038781 | 7.534872 | 1.876402 maternal |

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|----------|------------|------------|-------------------|
| ## 5881 | 13.3735212 | 18.307391 | 1.876205 maternal |
| ## 18373 | 62.7305977 | 85.868780 | 1.876019 maternal |
| ## 12989 | 4.2396071 | 5.800768 | 1.874552 maternal |
| ## 11994 | 13.5205764 | 18.498898 | 1.874483 maternal |
| ## 15376 | 4.6874287 | 6.413020 | 1.874313 maternal |
| ## 10941 | 10.3920689 | 14.217503 | 1.874264 maternal |
| ## 32237 | 5.8246555 | 7.968535 | 1.874166 maternal |
| ## 18931 | 12.8145681 | 17.520076 | 1.872100 maternal |
| ## 4735 | 11.0890126 | 15.155468 | 1.870937 maternal |
| ## 32697 | 16.4625861 | 22.497019 | 1.870567 maternal |
| ## 33713 | 25.1900585 | 34.422881 | 1.870500 maternal |
| ## 33641 | 7.6076791 | 10.395907 | 1.870442 maternal |
| ## 22652 | 8.6352302 | 11.794927 | 1.869031 maternal |
| ## 34436 | 2.7564630 | 3.764126 | 1.868214 maternal |
| ## 9916 | 20.1865073 | 27.559907 | 1.867501 maternal |
| ## 4730 | 15.7089126 | 21.445966 | 1.867374 maternal |
| ## 35175 | 7.4713577 | 10.199178 | 1.867121 maternal |
| ## 20011 | 22.2460351 | 30.363524 | 1.866628 maternal |
| ## 10732 | 61.7139342 | 84.227524 | 1.866413 maternal |
| ## 33802 | 17.3844414 | 23.718127 | 1.865285 maternal |
| ## 11061 | 22.8873002 | 31.197947 | 1.862390 maternal |
| ## 24304 | 2.7154811 | 3.701000 | 1.861950 maternal |
| ## 25231 | 4.3764890 | 5.960540 | 1.859621 maternal |
| ## 18684 | 17.3422215 | 23.617064 | 1.859333 maternal |
| ## 35096 | 6.9484322 | 9.462334 | 1.859261 maternal |
| ## 8245 | 8.2001313 | 11.166821 | 1.859241 maternal |
| ## 3721 | 8.1332710 | 11.074916 | 1.858991 maternal |
| ## 22354 | 2.7237008 | 3.707607 | 1.857942 maternal |
| ## 31156 | 12.3803891 | 16.852061 | 1.857826 maternal |
| ## 10809 | 23.8757310 | 32.486049 | 1.856498 maternal |
| ## 16636 | 7.3591303 | 10.011542 | 1.856008 maternal |
| ## 14643 | 9.0935488 | 12.368565 | 1.855350 maternal |
| ## 18829 | 5.2002420 | 7.072324 | 1.854998 maternal |
| ## 5885 | 92.4308776 | 125.654743 | 1.853683 maternal |
| ## 32382 | 50.4155024 | 68.534660 | 1.853567 maternal |
| ## 6584 | 33.9769493 | 46.182029 | 1.853139 maternal |
| ## 25116 | 2.9599027 | 4.023137 | 1.853130 maternal |
| ## 11573 | 3.6375645 | 4.944153 | 1.853084 maternal |
| ## 16402 | 4.2176259 | 5.732488 | 1.853039 maternal |
| ## 25161 | 9.2332510 | 12.545601 | 1.852011 maternal |
| ## 11287 | 42.9483375 | 58.354680 | 1.851955 maternal |
| ## 8783 | 6.0530245 | 8.223813 | 1.851743 maternal |
| ## 32108 | 23.0092042 | 31.252587 | 1.850878 maternal |
| ## 23101 | 2.7862875 | 3.783446 | 1.849967 maternal |
| ## 9786 | 42.8808315 | 58.213814 | 1.849233 maternal |
| ## 4618 | 9.4799392 | 12.868425 | 1.848914 maternal |
| ## 7642 | 3.0224724 | 4.102104 | 1.848354 maternal |
| ## 9136 | 44.8154092 | 60.819866 | 1.848159 maternal |
| ## 27762 | 27.1894837 | 36.885678 | 1.846962 maternal |
| ## 22560 | 26.1878125 | 35.509964 | 1.845436 maternal |
| ## 34171 | 24.2612027 | 32.895704 | 1.845257 maternal |
| ## 8964 | 27.3981706 | 37.148800 | 1.845230 maternal |
| ## 20940 | 27.0218662 | 36.637225 | 1.845111 maternal |
| ## 9642 | 12.0461128 | 16.328145 | 1.844241 maternal |

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|----------|-------------|------------|-------------------|
| ## 26942 | 9.9635429 | 13.503425 | 1.843798 maternal |
| ## 27956 | 12.8763100 | 17.447179 | 1.843084 maternal |
| ## 15257 | 28.9426089 | 39.200362 | 1.841740 maternal |
| ## 20125 | 57.7938784 | 78.254491 | 1.840815 maternal |
| ## 4759 | 60.7107589 | 82.198358 | 1.840593 maternal |
| ## 9176 | 5.1603689 | 6.985133 | 1.839827 maternal |
| ## 2024 | 6.2921418 | 8.516302 | 1.839520 maternal |
| ## 16303 | 28.4453132 | 38.499561 | 1.839465 maternal |
| ## 18765 | 19.5217045 | 26.415706 | 1.838721 maternal |
| ## 22238 | 15.1455037 | 20.493632 | 1.838652 maternal |
| ## 3634 | 10.4456807 | 14.129972 | 1.837685 maternal |
| ## 5577 | 4.8452717 | 6.553689 | 1.837412 maternal |
| ## 5780 | 11.6283091 | 15.723438 | 1.836401 maternal |
| ## 20100 | 4.2385224 | 5.731172 | 1.836386 maternal |
| ## 9186 | 18.4903135 | 24.999456 | 1.836071 maternal |
| ## 2092 | 6.0489011 | 8.177083 | 1.835595 maternal |
| ## 5357 | 14.5245445 | 19.632020 | 1.835156 maternal |
| ## 21603 | 6.0438841 | 8.167570 | 1.834522 maternal |
| ## 4216 | 3.0101836 | 4.066555 | 1.833465 maternal |
| ## 22280 | 3.0228096 | 4.083382 | 1.833285 maternal |
| ## 3085 | 31.7008333 | 42.820687 | 1.833090 maternal |
| ## 4555 | 16.9566128 | 22.902761 | 1.832837 maternal |
| ## 4689 | 21.3981476 | 28.886491 | 1.831138 maternal |
| ## 25601 | 5.4620596 | 7.372084 | 1.830512 maternal |
| ## 6560 | 20.9082054 | 28.218177 | 1.830353 maternal |
| ## 10733 | 106.3773625 | 143.536321 | 1.829618 maternal |
| ## 30698 | 11.7027337 | 15.788608 | 1.829204 maternal |
| ## 13793 | 5.9055104 | 7.966405 | 1.828823 maternal |
| ## 30574 | 3.7309265 | 5.032295 | 1.828414 maternal |
| ## 30223 | 8.5647179 | 11.551858 | 1.828335 maternal |
| ## 28728 | 13.2844909 | 17.917117 | 1.828220 maternal |
| ## 32047 | 10.4783253 | 14.132034 | 1.828144 maternal |
| ## 31153 | 8.4308086 | 11.368620 | 1.827596 maternal |
| ## 21715 | 14.9086582 | 20.099456 | 1.826912 maternal |
| ## 3389 | 18.5769961 | 25.037408 | 1.825940 maternal |
| ## 32395 | 19.3114577 | 26.023043 | 1.825418 maternal |
| ## 29482 | 7.0372457 | 9.482847 | 1.825366 maternal |
| ## 32517 | 6.0363534 | 8.130253 | 1.823844 maternal |
| ## 23467 | 4.5244784 | 6.089153 | 1.821333 maternal |
| ## 16866 | 13.3447857 | 17.949491 | 1.819509 maternal |
| ## 27359 | 7.3051827 | 9.824993 | 1.819220 maternal |
| ## 15115 | 18.1782493 | 24.447176 | 1.819039 maternal |
| ## 22446 | 32.6364970 | 43.876863 | 1.817976 maternal |
| ## 10238 | 53.7225644 | 72.181371 | 1.816038 maternal |
| ## 16630 | 3.1106130 | 4.179024 | 1.815748 maternal |
| ## 30784 | 4.1265162 | 5.543581 | 1.815586 maternal |
| ## 34278 | 3.2990910 | 4.431531 | 1.815238 maternal |
| ## 14609 | 25.0547611 | 33.652624 | 1.815012 maternal |
| ## 33373 | 29.9756147 | 40.239440 | 1.813214 maternal |
| ## 16730 | 46.8997628 | 62.946080 | 1.812584 maternal |
| ## 24394 | 18.7864514 | 25.210894 | 1.812184 maternal |
| ## 14321 | 48.4401712 | 64.990198 | 1.811440 maternal |
| ## 6046 | 8.3566228 | 11.211377 | 1.811337 maternal |
| ## 25418 | 9.1629669 | 12.292440 | 1.811146 maternal |

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|----------|-------------|------------|-------------------|
| ## 21236 | 3.7189009 | 4.988354 | 1.810710 maternal |
| ## 5712 | 11.0013581 | 14.753876 | 1.810103 maternal |
| ## 28786 | 41.2311187 | 55.292056 | 1.809940 maternal |
| ## 22559 | 12.8297900 | 17.203730 | 1.809687 maternal |
| ## 27524 | 6.3296128 | 8.486490 | 1.809305 maternal |
| ## 23589 | 37.9248389 | 50.842693 | 1.808966 maternal |
| ## 14910 | 9.5771488 | 12.838651 | 1.808807 maternal |
| ## 32354 | 2.8364630 | 3.801696 | 1.808200 maternal |
| ## 10818 | 29.9751510 | 40.155299 | 1.806596 maternal |
| ## 5506 | 75.4256233 | 101.039595 | 1.806532 maternal |
| ## 24679 | 25.7927905 | 34.551719 | 1.806522 maternal |
| ## 25604 | 5.7244226 | 7.667097 | 1.805994 maternal |
| ## 7329 | 9.8227230 | 13.155673 | 1.805862 maternal |
| ## 23049 | 7.7523501 | 10.382758 | 1.805848 maternal |
| ## 35049 | 26.0080596 | 34.831382 | 1.805727 maternal |
| ## 27646 | 10.3709619 | 13.887305 | 1.805260 maternal |
| ## 31667 | 12.9934856 | 17.396928 | 1.804878 maternal |
| ## 2047 | 7.9874394 | 10.693622 | 1.804661 maternal |
| ## 20556 | 14.3192587 | 19.163897 | 1.803534 maternal |
| ## 28817 | 42.8967340 | 57.404619 | 1.803237 maternal |
| ## 5511 | 4.4033278 | 5.891362 | 1.802593 maternal |
| ## 7305 | 5.1517083 | 6.887338 | 1.800146 maternal |
| ## 17873 | 3.7481066 | 5.010782 | 1.800098 maternal |
| ## 15457 | 12.6052577 | 16.849914 | 1.799750 maternal |
| ## 16490 | 2.8120933 | 3.758759 | 1.799522 maternal |
| ## 18407 | 12.9225866 | 17.272488 | 1.799454 maternal |
| ## 4619 | 39.9086921 | 53.332557 | 1.798866 maternal |
| ## 14713 | 3.2525058 | 4.344926 | 1.797692 maternal |
| ## 35002 | 15.2633623 | 20.387030 | 1.797250 maternal |
| ## 32815 | 9.3750870 | 12.519770 | 1.796646 maternal |
| ## 23469 | 29.7071289 | 39.670412 | 1.796536 maternal |
| ## 28029 | 111.9088299 | 149.365591 | 1.794931 maternal |
| ## 5142 | 28.5799962 | 38.140202 | 1.794454 maternal |
| ## 15181 | 6.6412860 | 8.862798 | 1.794438 maternal |
| ## 21684 | 17.6569962 | 23.563177 | 1.794426 maternal |
| ## 34299 | 20.9474287 | 27.951048 | 1.794064 maternal |
| ## 32550 | 34.4741613 | 45.996619 | 1.793807 maternal |
| ## 6610 | 39.8180718 | 53.124386 | 1.793672 maternal |
| ## 20554 | 4.7170878 | 6.293048 | 1.793478 maternal |
| ## 20319 | 4.0207580 | 5.361397 | 1.791895 maternal |
| ## 9592 | 298.0670021 | 397.413344 | 1.791592 maternal |
| ## 9557 | 6.0387410 | 8.049304 | 1.790742 maternal |
| ## 34008 | 8.1513155 | 10.862869 | 1.790049 maternal |
| ## 35412 | 19.0036425 | 25.323301 | 1.789806 maternal |
| ## 16481 | 39.4432258 | 52.550931 | 1.789256 maternal |
| ## 10497 | 15.3004552 | 20.377860 | 1.788136 maternal |
| ## 6364 | 23.3933785 | 31.134631 | 1.785926 maternal |
| ## 9917 | 63.1588767 | 84.045654 | 1.785418 maternal |
| ## 9260 | 26.8372803 | 35.693536 | 1.783746 maternal |
| ## 28177 | 10.0389126 | 13.349663 | 1.783255 maternal |
| ## 518 | 8.3230852 | 11.065405 | 1.782523 maternal |
| ## 15563 | 19.7423337 | 26.245032 | 1.782274 maternal |
| ## 23590 | 20.9469685 | 27.843431 | 1.781932 maternal |
| ## 635 | 13.7453384 | 18.270551 | 1.781893 maternal |

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|----------|-------------|------------|-------------------|
| ## 18532 | 42.4989995 | 56.490078 | 1.781873 maternal |
| ## 32816 | 22.8735061 | 30.403168 | 1.781819 maternal |
| ## 32311 | 55.8725787 | 74.244044 | 1.780924 maternal |
| ## 7324 | 13.5063265 | 17.944817 | 1.780480 maternal |
| ## 18592 | 21.1246310 | 28.058970 | 1.779614 maternal |
| ## 10777 | 3.2406531 | 4.303884 | 1.779218 maternal |
| ## 27042 | 16.1520898 | 21.445117 | 1.778286 maternal |
| ## 27909 | 7.4217360 | 9.853331 | 1.778125 maternal |
| ## 16255 | 49.6384733 | 65.889954 | 1.777568 maternal |
| ## 15172 | 3.0524332 | 4.051547 | 1.777378 maternal |
| ## 6879 | 46.2995065 | 61.425943 | 1.775932 maternal |
| ## 13224 | 8.5561964 | 11.347101 | 1.774690 maternal |
| ## 12796 | 61.9602491 | 82.157759 | 1.774191 maternal |
| ## 13003 | 4.3554352 | 5.773223 | 1.773114 maternal |
| ## 26506 | 5.5563900 | 7.362503 | 1.771997 maternal |
| ## 24613 | 37.5552202 | 49.757176 | 1.771654 maternal |
| ## 14186 | 4.5318985 | 6.004247 | 1.771603 maternal |
| ## 3736 | 12.0928618 | 16.017946 | 1.770874 maternal |
| ## 17828 | 4.1268694 | 5.465061 | 1.770125 maternal |
| ## 20377 | 59.5749384 | 78.859784 | 1.768805 maternal |
| ## 34258 | 8.5565336 | 11.323040 | 1.767887 maternal |
| ## 3588 | 16.6174938 | 21.973236 | 1.765452 maternal |
| ## 21651 | 3.9684341 | 5.242861 | 1.762710 maternal |
| ## 14437 | 25.1719133 | 33.245427 | 1.761746 maternal |
| ## 25548 | 428.8996390 | 566.419141 | 1.761504 maternal |
| ## 25808 | 10.8755634 | 14.362134 | 1.761396 maternal |
| ## 34960 | 5.7472279 | 7.588841 | 1.761033 maternal |
| ## 34139 | 20.8718894 | 27.558913 | 1.760913 maternal |
| ## 9532 | 4.8120923 | 6.353324 | 1.760672 maternal |
| ## 12312 | 34.6642413 | 45.756784 | 1.759999 maternal |
| ## 12354 | 27.8249404 | 36.722822 | 1.759479 maternal |
| ## 18124 | 5.6863600 | 7.503726 | 1.759052 maternal |
| ## 26254 | 4.8313875 | 6.374932 | 1.758771 maternal |
| ## 16313 | 4.7002253 | 6.201176 | 1.758423 maternal |
| ## 5884 | 7.3162877 | 9.652563 | 1.758397 maternal |
| ## 24278 | 19.5819164 | 25.816516 | 1.756166 maternal |
| ## 33646 | 3.9185372 | 5.164592 | 1.755225 maternal |
| ## 6842 | 19.8251937 | 26.122157 | 1.754358 maternal |
| ## 144 | 5.2395987 | 6.903403 | 1.754167 maternal |
| ## 28737 | 10.5776453 | 13.934616 | 1.753741 maternal |
| ## 34406 | 44.9184098 | 59.171061 | 1.753590 maternal |
| ## 31052 | 7.9069883 | 10.413975 | 1.753017 maternal |
| ## 15930 | 4.7060410 | 6.198122 | 1.753009 maternal |
| ## 32165 | 6.6587422 | 8.764537 | 1.751082 maternal |
| ## 11359 | 5.2670930 | 6.929728 | 1.749703 maternal |
| ## 24614 | 7.7222537 | 10.153983 | 1.747885 maternal |
| ## 26128 | 20.2414859 | 26.610031 | 1.747242 maternal |
| ## 29636 | 4.9280882 | 6.478542 | 1.747212 maternal |
| ## 5233 | 9.3299904 | 12.263449 | 1.746728 maternal |
| ## 1051 | 52.1193418 | 68.504194 | 1.746633 maternal |
| ## 9595 | 141.2500845 | 185.604006 | 1.745773 maternal |
| ## 14724 | 4.7228167 | 6.202108 | 1.743903 maternal |
| ## 17558 | 19.9486963 | 26.197043 | 1.743899 maternal |
| ## 23463 | 16.1541985 | 21.198692 | 1.741644 maternal |

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|----------|-------------|------------|-------------------|
| ## 17480 | 9.2201112 | 12.096571 | 1.740945 maternal |
| ## 33861 | 19.5536273 | 25.653527 | 1.740899 maternal |
| ## 24923 | 14.0299653 | 18.406654 | 1.740888 maternal |
| ## 7777 | 4.0397863 | 5.299900 | 1.740824 maternal |
| ## 3764 | 29.5995922 | 38.822891 | 1.740055 maternal |
| ## 27629 | 5.7077922 | 7.486158 | 1.739974 maternal |
| ## 27066 | 4.4927038 | 5.891703 | 1.739560 maternal |
| ## 15839 | 32.4359782 | 42.534308 | 1.739411 maternal |
| ## 28110 | 28.0720532 | 36.806493 | 1.738966 maternal |
| ## 11747 | 6.9063553 | 9.054366 | 1.738671 maternal |
| ## 31772 | 4.1988340 | 5.502346 | 1.737310 maternal |
| ## 7037 | 5.6177512 | 7.361082 | 1.737023 maternal |
| ## 26624 | 70.9478609 | 92.960522 | 1.736880 maternal |
| ## 15145 | 6.1765691 | 8.092689 | 1.736782 maternal |
| ## 35481 | 14.2974095 | 18.727465 | 1.735894 maternal |
| ## 6134 | 3.1531574 | 4.129661 | 1.735515 maternal |
| ## 7028 | 3.5430387 | 4.638542 | 1.734347 maternal |
| ## 19511 | 3.7528570 | 4.912089 | 1.733621 maternal |
| ## 2458 | 23.8237516 | 31.181949 | 1.733542 maternal |
| ## 3062 | 19.6184329 | 25.677385 | 1.733494 maternal |
| ## 32359 | 5.1331521 | 6.718041 | 1.733294 maternal |
| ## 30427 | 18.3503951 | 24.016127 | 1.733287 maternal |
| ## 6407 | 51.3878467 | 67.250902 | 1.733145 maternal |
| ## 33300 | 22.5196970 | 29.465504 | 1.732527 maternal |
| ## 28014 | 4.4487719 | 5.819868 | 1.731967 maternal |
| ## 25554 | 36.7625565 | 48.092231 | 1.731940 maternal |
| ## 17634 | 9.4427713 | 12.351910 | 1.731693 maternal |
| ## 30927 | 8.9518944 | 11.706546 | 1.730828 maternal |
| ## 5609 | 8.6089419 | 11.258044 | 1.730823 maternal |
| ## 18468 | 29.8915229 | 39.088300 | 1.730720 maternal |
| ## 28746 | 16.4660282 | 21.531809 | 1.730670 maternal |
| ## 14830 | 16.3163875 | 21.327173 | 1.729366 maternal |
| ## 23354 | 4.0870338 | 5.341974 | 1.729254 maternal |
| ## 32041 | 44.0846653 | 57.617078 | 1.729040 maternal |
| ## 27324 | 136.8227872 | 178.807423 | 1.728779 maternal |
| ## 8446 | 3.0195053 | 3.945558 | 1.728389 maternal |
| ## 27924 | 32.8166416 | 42.879699 | 1.728282 maternal |
| ## 9289 | 13.0877812 | 17.100688 | 1.728210 maternal |
| ## 6329 | 13.7219296 | 17.928469 | 1.728070 maternal |
| ## 732 | 51.0197784 | 66.656003 | 1.727875 maternal |
| ## 28785 | 29.9585805 | 39.131362 | 1.727183 maternal |
| ## 32284 | 44.6175953 | 58.276868 | 1.727085 maternal |
| ## 9567 | 25.8595372 | 33.770963 | 1.726604 maternal |
| ## 4503 | 2.9650357 | 3.871932 | 1.726426 maternal |
| ## 34058 | 16.5675368 | 21.631892 | 1.725989 maternal |
| ## 4548 | 3.6055866 | 4.707458 | 1.725803 maternal |
| ## 15805 | 58.8221239 | 76.782715 | 1.725176 maternal |
| ## 19687 | 45.0594392 | 58.816028 | 1.725084 maternal |
| ## 26918 | 19.2000179 | 25.061117 | 1.725005 maternal |
| ## 27274 | 21.0891105 | 27.514609 | 1.723623 maternal |
| ## 28289 | 6.4379311 | 8.399137 | 1.723503 maternal |
| ## 23345 | 3.4359676 | 4.481721 | 1.722842 maternal |
| ## 15842 | 8.1146988 | 10.584404 | 1.722830 maternal |
| ## 32822 | 7.8011963 | 10.169555 | 1.721024 maternal |

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|----------|-------------|------------|----------|----------|
| ## 18617 | 23.3205043 | 30.399517 | 1.720939 | maternal |
| ## 20370 | 13.7024942 | 17.859302 | 1.720483 | maternal |
| ## 6914 | 27.1917827 | 35.438004 | 1.720246 | maternal |
| ## 15581 | 3.1323951 | 4.081978 | 1.719980 | maternal |
| ## 275 | 4.7958587 | 6.249097 | 1.719671 | maternal |
| ## 5768 | 4.6663103 | 6.078979 | 1.719002 | maternal |
| ## 28249 | 23.7897898 | 30.989994 | 1.718816 | maternal |
| ## 6687 | 24.3818166 | 31.759119 | 1.718613 | maternal |
| ## 30296 | 11.0077880 | 14.338149 | 1.718546 | maternal |
| ## 19921 | 31.5995979 | 41.152051 | 1.717955 | maternal |
| ## 23821 | 6.3602836 | 8.282668 | 1.717840 | maternal |
| ## 25743 | 11.1790949 | 14.556695 | 1.717572 | maternal |
| ## 14600 | 34.1511580 | 44.468994 | 1.717541 | maternal |
| ## 33033 | 15.3662649 | 20.008656 | 1.717525 | maternal |
| ## 16780 | 100.2132332 | 130.483554 | 1.717390 | maternal |
| ## 14906 | 44.5883045 | 58.052860 | 1.717191 | maternal |
| ## 5860 | 12.3077338 | 16.016644 | 1.715701 | maternal |
| ## 15691 | 10.2126458 | 13.289675 | 1.715578 | maternal |
| ## 3610 | 15.5953143 | 20.293138 | 1.715428 | maternal |
| ## 5406 | 8.1645841 | 10.622877 | 1.715094 | maternal |
| ## 35051 | 4.4905316 | 5.841455 | 1.714491 | maternal |
| ## 25397 | 81.5696611 | 106.055419 | 1.712933 | maternal |
| ## 6230 | 14.3855476 | 18.701349 | 1.712523 | maternal |
| ## 29228 | 39.7231371 | 51.620065 | 1.711303 | maternal |
| ## 20606 | 33.7758054 | 43.873386 | 1.710028 | maternal |
| ## 6237 | 3.3039170 | 4.290785 | 1.709404 | maternal |
| ## 8932 | 27.4235175 | 35.614815 | 1.709403 | maternal |
| ## 17498 | 7.6558811 | 9.941514 | 1.709047 | maternal |
| ## 18423 | 32.0721035 | 41.644267 | 1.708837 | maternal |
| ## 3962 | 2.9572938 | 3.839511 | 1.708508 | maternal |
| ## 4475 | 26.0829367 | 33.858813 | 1.708038 | maternal |
| ## 10493 | 7.3752016 | 9.570764 | 1.707026 | maternal |
| ## 16310 | 3.4740607 | 4.507392 | 1.706425 | maternal |
| ## 2798 | 5.1382768 | 6.666431 | 1.706339 | maternal |
| ## 28781 | 43.1804623 | 56.016158 | 1.705985 | maternal |
| ## 16518 | 35.2778375 | 45.762161 | 1.705833 | maternal |
| ## 35142 | 11.5746679 | 15.012822 | 1.705473 | maternal |
| ## 14742 | 12.5237533 | 16.241022 | 1.704941 | maternal |
| ## 21646 | 28.4377971 | 36.876178 | 1.704737 | maternal |
| ## 16509 | 3.7277722 | 4.833519 | 1.704482 | maternal |
| ## 34977 | 30.1485759 | 39.088743 | 1.704275 | maternal |
| ## 17123 | 199.5672753 | 258.744608 | 1.704255 | maternal |
| ## 4625 | 138.7033578 | 179.822875 | 1.704084 | maternal |
| ## 945 | 12.3629425 | 16.027583 | 1.704001 | maternal |
| ## 8938 | 5.1027446 | 6.615227 | 1.703964 | maternal |
| ## 4160 | 11.2370602 | 14.565576 | 1.703496 | maternal |
| ## 32528 | 54.1994368 | 70.252454 | 1.703437 | maternal |
| ## 32000 | 18.7320589 | 24.278711 | 1.703249 | maternal |
| ## 33167 | 50.5325372 | 65.481451 | 1.702590 | maternal |
| ## 18023 | 15.0881704 | 19.547448 | 1.701926 | maternal |
| ## 6770 | 9.8052322 | 12.702893 | 1.701864 | maternal |
| ## 35470 | 6.4331523 | 8.333074 | 1.701416 | maternal |
| ## 8983 | 63.4553982 | 82.194232 | 1.701355 | maternal |
| ## 25709 | 12.4708645 | 16.152418 | 1.701129 | maternal |

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|----------|-------------|------------|-------------------|
| ## 7565 | 25.7096440 | 33.298383 | 1.701031 maternal |
| ## 7960 | 31.4575244 | 40.739254 | 1.700758 maternal |
| ## 4155 | 88.5465030 | 114.669329 | 1.700668 maternal |
| ## 15592 | 5.5712509 | 7.213102 | 1.699914 maternal |
| ## 8844 | 47.9799198 | 62.107189 | 1.699298 maternal |
| ## 15338 | 32.5480336 | 42.118301 | 1.698334 maternal |
| ## 16775 | 20.7738652 | 26.879322 | 1.698014 maternal |
| ## 17439 | 8.0363426 | 10.397663 | 1.697847 maternal |
| ## 35027 | 17.8950766 | 23.152869 | 1.697804 maternal |
| ## 15086 | 29.2443036 | 37.836361 | 1.697782 maternal |
| ## 25674 | 19.3477923 | 25.029977 | 1.697505 maternal |
| ## 15647 | 275.5988616 | 356.509364 | 1.697254 maternal |
| ## 29319 | 27.2313987 | 35.224426 | 1.697116 maternal |
| ## 6181 | 4.9647488 | 6.420968 | 1.696615 maternal |
| ## 23790 | 46.5587045 | 60.196743 | 1.695688 maternal |
| ## 27742 | 9.7393950 | 12.591913 | 1.695601 maternal |
| ## 35485 | 10.1908097 | 13.175143 | 1.695508 maternal |
| ## 17110 | 10.0650073 | 13.009059 | 1.694696 maternal |
| ## 1015 | 68.4278028 | 88.433074 | 1.694345 maternal |
| ## 28180 | 19.0875226 | 24.662401 | 1.693664 maternal |
| ## 14368 | 4.8951047 | 6.323950 | 1.693245 maternal |
| ## 11397 | 75.9790183 | 98.153132 | 1.693132 maternal |
| ## 4620 | 91.2173579 | 117.836135 | 1.693065 maternal |
| ## 7145 | 3.1244630 | 4.035999 | 1.692886 maternal |
| ## 19949 | 36.5550783 | 47.218954 | 1.692837 maternal |
| ## 12045 | 13.2549679 | 17.120447 | 1.692609 maternal |
| ## 26779 | 3.0474658 | 3.934968 | 1.691663 maternal |
| ## 16171 | 4.7346918 | 6.112755 | 1.691260 maternal |
| ## 27824 | 2.9806402 | 3.847185 | 1.690471 maternal |
| ## 8474 | 9.9930575 | 12.897549 | 1.690296 maternal |
| ## 20463 | 4.3566848 | 5.622077 | 1.689815 maternal |
| ## 30131 | 8.1576624 | 10.525249 | 1.689293 maternal |
| ## 8233 | 109.6557130 | 141.478581 | 1.689242 maternal |
| ## 9197 | 11.3224470 | 14.606752 | 1.688917 maternal |
| ## 104 | 14.7455981 | 19.022414 | 1.688845 maternal |
| ## 23132 | 5.5680277 | 7.182428 | 1.688610 maternal |
| ## 15220 | 19.1836496 | 24.740289 | 1.687931 maternal |
| ## 32262 | 14.3521086 | 18.507969 | 1.687716 maternal |
| ## 32505 | 14.2635767 | 18.388191 | 1.686781 maternal |
| ## 11533 | 38.9516660 | 50.212942 | 1.686634 maternal |
| ## 15492 | 11.0196288 | 14.205107 | 1.686549 maternal |
| ## 947 | 15.3019425 | 19.721951 | 1.686025 maternal |
| ## 10625 | 41.8985387 | 53.999100 | 1.685915 maternal |
| ## 5659 | 27.7255432 | 35.716361 | 1.684502 maternal |
| ## 32984 | 28.9861013 | 37.335393 | 1.684106 maternal |
| ## 8387 | 10.3307033 | 13.304879 | 1.683755 maternal |
| ## 136 | 3.7535569 | 4.833517 | 1.683327 maternal |
| ## 23594 | 17.9648056 | 23.130994 | 1.682985 maternal |
| ## 2431 | 66.9773606 | 86.237720 | 1.682967 maternal |
| ## 16426 | 23.6835573 | 30.492125 | 1.682767 maternal |
| ## 15987 | 33.2113995 | 42.734574 | 1.681017 maternal |
| ## 15871 | 29.1039230 | 37.443334 | 1.680530 maternal |
| ## 35490 | 11.4500170 | 14.728839 | 1.680104 maternal |
| ## 25455 | 24.0361285 | 30.907829 | 1.678990 maternal |

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|----------|------------|------------|-------------------|
| ## 34653 | 9.1081805 | 11.709004 | 1.678177 maternal |
| ## 3696 | 4.4910671 | 5.772978 | 1.677910 maternal |
| ## 12556 | 87.3881784 | 112.327963 | 1.677803 maternal |
| ## 637 | 7.8359058 | 10.072054 | 1.677759 maternal |
| ## 3990 | 47.6056610 | 61.188147 | 1.677617 maternal |
| ## 33758 | 3.0928614 | 3.973374 | 1.676143 maternal |
| ## 2476 | 11.3268464 | 14.549999 | 1.675827 maternal |
| ## 9977 | 65.5486488 | 84.180209 | 1.675070 maternal |
| ## 14634 | 6.8264045 | 8.763855 | 1.674066 maternal |
| ## 268 | 42.7927677 | 54.937416 | 1.674028 maternal |
| ## 26899 | 3.6105386 | 4.634838 | 1.673781 maternal |
| ## 13090 | 5.7303633 | 7.355916 | 1.673725 maternal |
| ## 9191 | 16.7816719 | 21.540677 | 1.673511 maternal |
| ## 15424 | 47.0011637 | 60.309593 | 1.672484 maternal |
| ## 1713 | 11.1041410 | 14.247719 | 1.672361 maternal |
| ## 33046 | 17.0292657 | 21.849020 | 1.672191 maternal |
| ## 25235 | 4.5017075 | 5.775290 | 1.671913 maternal |
| ## 24646 | 7.9098793 | 10.147224 | 1.671779 maternal |
| ## 11209 | 4.9296931 | 6.323792 | 1.671641 maternal |
| ## 27251 | 23.8045237 | 30.535571 | 1.671563 maternal |
| ## 105 | 30.4968936 | 39.099428 | 1.669938 maternal |
| ## 19690 | 13.2212779 | 16.947626 | 1.669381 maternal |
| ## 10366 | 4.6707999 | 5.984398 | 1.667936 maternal |
| ## 34931 | 45.6108888 | 58.436473 | 1.667840 maternal |
| ## 2245 | 9.6107351 | 12.312280 | 1.667604 maternal |
| ## 16314 | 5.1887271 | 6.646107 | 1.667076 maternal |
| ## 5305 | 20.7230390 | 26.543219 | 1.667032 maternal |
| ## 22068 | 75.4068162 | 96.548923 | 1.665888 maternal |
| ## 29690 | 84.4423514 | 108.115064 | 1.665812 maternal |
| ## 29285 | 41.4218852 | 53.029653 | 1.665553 maternal |
| ## 33219 | 11.8234482 | 15.136612 | 1.665522 maternal |
| ## 22241 | 4.8851602 | 6.253247 | 1.665118 maternal |
| ## 33472 | 12.0314673 | 15.398607 | 1.664670 maternal |
| ## 7437 | 4.2504796 | 5.439917 | 1.664611 maternal |
| ## 34711 | 3.9357903 | 5.036254 | 1.664060 maternal |
| ## 18359 | 6.8976963 | 8.824898 | 1.663570 maternal |
| ## 26246 | 6.2750765 | 8.028140 | 1.663502 maternal |
| ## 5232 | 4.8252473 | 6.173107 | 1.663420 maternal |
| ## 26416 | 3.3714714 | 4.312958 | 1.663221 maternal |
| ## 31030 | 3.9945202 | 5.109968 | 1.663206 maternal |
| ## 18307 | 7.4814408 | 9.570432 | 1.663155 maternal |
| ## 34839 | 9.2313271 | 11.808803 | 1.663123 maternal |
| ## 15857 | 8.3899209 | 10.732427 | 1.663111 maternal |
| ## 2214 | 10.4863744 | 13.409692 | 1.662086 maternal |
| ## 16304 | 34.0551441 | 43.547770 | 1.662014 maternal |
| ## 5556 | 16.8919201 | 21.596715 | 1.661493 maternal |
| ## 15943 | 27.6108067 | 35.299385 | 1.661349 maternal |
| ## 4756 | 6.9165045 | 8.838633 | 1.660024 maternal |
| ## 14985 | 43.4932292 | 55.573816 | 1.659675 maternal |
| ## 27059 | 46.5346269 | 59.452354 | 1.659285 maternal |
| ## 18825 | 17.9565268 | 22.940809 | 1.659241 maternal |
| ## 1981 | 3.9331116 | 5.023305 | 1.658311 maternal |
| ## 24252 | 5.2939587 | 6.760079 | 1.657738 maternal |
| ## 28937 | 13.3965437 | 17.106604 | 1.657736 maternal |

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|----------|-------------|------------|-------------------|
| ## 21469 | 82.6206349 | 105.494552 | 1.657530 maternal |
| ## 35376 | 20.9754462 | 26.782456 | 1.657514 maternal |
| ## 34221 | 31.0485706 | 39.642802 | 1.657399 maternal |
| ## 27078 | 3.2196178 | 4.110639 | 1.657276 maternal |
| ## 25568 | 9.6450703 | 12.310920 | 1.656438 maternal |
| ## 8157 | 42.7951763 | 54.617028 | 1.656076 maternal |
| ## 355 | 7.3960439 | 9.438086 | 1.655736 maternal |
| ## 25388 | 48.9274923 | 62.435311 | 1.655686 maternal |
| ## 2256 | 9.1687482 | 11.699024 | 1.655423 maternal |
| ## 12399 | 3.1570486 | 4.027159 | 1.654571 maternal |
| ## 14554 | 45.1380054 | 57.573716 | 1.654322 maternal |
| ## 15797 | 127.8267114 | 163.017346 | 1.653836 maternal |
| ## 17760 | 6.7332498 | 8.586506 | 1.653694 maternal |
| ## 5557 | 164.5220204 | 209.793174 | 1.653523 maternal |
| ## 15455 | 83.1906087 | 106.068520 | 1.653139 maternal |
| ## 34174 | 202.6193033 | 258.312104 | 1.652803 maternal |
| ## 32666 | 6.0531806 | 7.715383 | 1.652175 maternal |
| ## 15950 | 56.8585281 | 72.439420 | 1.650819 maternal |
| ## 35225 | 3.7697995 | 4.802174 | 1.650403 maternal |
| ## 13852 | 456.7550207 | 581.832957 | 1.650371 maternal |
| ## 120 | 30.5192086 | 38.874650 | 1.650219 maternal |
| ## 2443 | 54.6093051 | 69.557147 | 1.650093 maternal |
| ## 24345 | 6.0080331 | 7.652382 | 1.650018 maternal |
| ## 34814 | 7.5789807 | 9.652034 | 1.649626 maternal |
| ## 19915 | 4.1514530 | 5.286727 | 1.649478 maternal |
| ## 27734 | 26.0577153 | 33.183562 | 1.649477 maternal |
| ## 1097 | 22.7248298 | 28.934841 | 1.649016 maternal |
| ## 27748 | 23.7903705 | 30.289408 | 1.648801 maternal |
| ## 5656 | 16.3473383 | 20.811271 | 1.648536 maternal |
| ## 5453 | 22.4993573 | 28.640071 | 1.648205 maternal |
| ## 6107 | 4.9218923 | 6.264784 | 1.647996 maternal |
| ## 3512 | 13.6114069 | 17.321511 | 1.647361 maternal |
| ## 32307 | 5.6078926 | 7.136449 | 1.647359 maternal |
| ## 4120 | 7.6675393 | 9.757343 | 1.647311 maternal |
| ## 34891 | 18.1136812 | 23.049122 | 1.647117 maternal |
| ## 21550 | 107.3593201 | 136.607544 | 1.647028 maternal |
| ## 16532 | 72.0213888 | 91.637316 | 1.646861 maternal |
| ## 9731 | 65.0469357 | 82.762674 | 1.646839 maternal |
| ## 31828 | 21.9478220 | 27.922887 | 1.646569 maternal |
| ## 13008 | 7.5988407 | 9.665755 | 1.646009 maternal |
| ## 30168 | 18.0940403 | 23.011930 | 1.645516 maternal |
| ## 4158 | 7.9518969 | 10.112805 | 1.645400 maternal |
| ## 34795 | 18.1031917 | 23.022063 | 1.645318 maternal |
| ## 5661 | 10.4978118 | 13.350137 | 1.645303 maternal |
| ## 29364 | 5.5376388 | 7.041079 | 1.644800 maternal |
| ## 33007 | 29.9787888 | 38.115089 | 1.644580 maternal |
| ## 16709 | 3.6683906 | 4.663906 | 1.644519 maternal |
| ## 21099 | 6.2721951 | 7.973969 | 1.644386 maternal |
| ## 23359 | 11.5450736 | 14.676886 | 1.644262 maternal |
| ## 25367 | 29.3957565 | 37.352362 | 1.642846 maternal |
| ## 13863 | 3.7358079 | 4.744314 | 1.641147 maternal |
| ## 20247 | 5.8547818 | 7.435174 | 1.641088 maternal |
| ## 23002 | 54.3821426 | 69.050673 | 1.640610 maternal |
| ## 13079 | 8.5796572 | 10.893221 | 1.640435 maternal |

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|----------|-------------|------------|-------------------|
| ## 3122 | 102.9271360 | 130.680678 | 1.640401 maternal |
| ## 34394 | 11.7891100 | 14.953119 | 1.637412 maternal |
| ## 10423 | 9.9722028 | 12.646612 | 1.636943 maternal |
| ## 34168 | 31.9928840 | 40.572917 | 1.636941 maternal |
| ## 35397 | 63.9460660 | 81.081300 | 1.636414 maternal |
| ## 29353 | 5.2884760 | 6.704842 | 1.636075 maternal |
| ## 35007 | 18.5164691 | 23.473814 | 1.635850 maternal |
| ## 5740 | 46.6767815 | 59.171422 | 1.635750 maternal |
| ## 29730 | 47.5442778 | 60.261616 | 1.635275 maternal |
| ## 20454 | 23.2732012 | 29.490898 | 1.634508 maternal |
| ## 33965 | 83.4126086 | 105.686056 | 1.634190 maternal |
| ## 21434 | 13.8830264 | 17.586058 | 1.633486 maternal |
| ## 9 | 5.0499219 | 6.396310 | 1.633212 maternal |
| ## 15555 | 43.0836625 | 54.569068 | 1.633136 maternal |
| ## 4434 | 60.6222092 | 76.779200 | 1.632983 maternal |
| ## 14315 | 17.9026377 | 22.673933 | 1.632970 maternal |
| ## 20636 | 7.3207311 | 9.271047 | 1.632724 maternal |
| ## 18878 | 8.9919332 | 11.385856 | 1.632296 maternal |
| ## 876 | 27.3407060 | 34.619066 | 1.632248 maternal |
| ## 17492 | 40.8553803 | 51.725079 | 1.631876 maternal |
| ## 15686 | 14.8212350 | 18.758827 | 1.630972 maternal |
| ## 19939 | 27.6672621 | 35.000995 | 1.629539 maternal |
| ## 28102 | 16.6997327 | 21.126290 | 1.629535 maternal |
| ## 9661 | 33.0512807 | 41.799783 | 1.628650 maternal |
| ## 4725 | 15.0507827 | 19.033082 | 1.628403 maternal |
| ## 3590 | 12.7341402 | 16.102981 | 1.628311 maternal |
| ## 6892 | 11.5128793 | 14.557624 | 1.628103 maternal |
| ## 25392 | 5.4049273 | 6.833867 | 1.627896 maternal |
| ## 34290 | 12.2812871 | 15.526650 | 1.627600 maternal |
| ## 3872 | 8.2601662 | 10.436377 | 1.625714 maternal |
| ## 26248 | 37.0792727 | 46.846760 | 1.625627 maternal |
| ## 30337 | 32.2547741 | 40.750623 | 1.625571 maternal |
| ## 22657 | 14.0169261 | 17.705326 | 1.624955 maternal |
| ## 30315 | 16.2126223 | 20.474750 | 1.624363 maternal |
| ## 5803 | 31.6132058 | 39.912278 | 1.623483 maternal |
| ## 33946 | 7.5019041 | 9.471229 | 1.623461 maternal |
| ## 5306 | 20.9817836 | 26.488895 | 1.623369 maternal |
| ## 8226 | 22.9149371 | 28.924767 | 1.622884 maternal |
| ## 14255 | 9.1617532 | 11.563434 | 1.622587 maternal |
| ## 2527 | 4.7006718 | 5.932789 | 1.622523 maternal |
| ## 32628 | 102.1684227 | 128.935393 | 1.622223 maternal |
| ## 10456 | 11.2319370 | 14.174142 | 1.622131 maternal |
| ## 20309 | 10.3336450 | 13.039391 | 1.621866 maternal |
| ## 18523 | 10.0043048 | 12.623764 | 1.621854 maternal |
| ## 8029 | 18.4898200 | 23.326916 | 1.621320 maternal |
| ## 1071 | 4.6692455 | 5.890615 | 1.621246 maternal |
| ## 9990 | 133.9515738 | 168.981535 | 1.621091 maternal |
| ## 5338 | 7.4900343 | 9.445412 | 1.620027 maternal |
| ## 19907 | 113.6011899 | 143.229373 | 1.619421 maternal |
| ## 4765 | 25.2975102 | 31.894612 | 1.619354 maternal |
| ## 33259 | 22.4325997 | 28.282534 | 1.619348 maternal |
| ## 31024 | 38.1052734 | 48.040328 | 1.619225 maternal |
| ## 34206 | 12.4086757 | 15.640219 | 1.618512 maternal |
| ## 7026 | 24.6831134 | 31.102879 | 1.617708 maternal |

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|----------|-------------|------------|-------------------|
| ## 12502 | 9.9646304 | 12.554789 | 1.617346 maternal |
| ## 27635 | 14.3874375 | 18.126512 | 1.617226 maternal |
| ## 3411 | 6.4057637 | 8.070267 | 1.617131 maternal |
| ## 18847 | 30.2022958 | 38.042842 | 1.616552 maternal |
| ## 20211 | 38.0728129 | 47.948954 | 1.616078 maternal |
| ## 28275 | 29.7123798 | 37.417518 | 1.615895 maternal |
| ## 9901 | 20.2940436 | 25.556196 | 1.615827 maternal |
| ## 26636 | 8.1337756 | 10.241746 | 1.615511 maternal |
| ## 7830 | 16.3718633 | 20.613764 | 1.615355 maternal |
| ## 5046 | 8.2404247 | 10.375452 | 1.615343 maternal |
| ## 29388 | 52.5197735 | 66.121176 | 1.615070 maternal |
| ## 14116 | 39.5237994 | 49.757983 | 1.614976 maternal |
| ## 21175 | 9.9278827 | 12.497558 | 1.614731 maternal |
| ## 21548 | 4.5735099 | 5.756836 | 1.614495 maternal |
| ## 27835 | 102.6912656 | 129.260595 | 1.614484 maternal |
| ## 32400 | 8.4967794 | 10.694986 | 1.614437 maternal |
| ## 3559 | 62.8618381 | 79.112370 | 1.613966 maternal |
| ## 5533 | 4.6787578 | 5.887546 | 1.613597 maternal |
| ## 2079 | 16.0076041 | 20.139020 | 1.612966 maternal |
| ## 615 | 41.2802107 | 51.929438 | 1.612689 maternal |
| ## 31401 | 17.5576415 | 22.086208 | 1.612573 maternal |
| ## 24284 | 15.0750339 | 18.961873 | 1.612353 maternal |
| ## 26066 | 23.8203339 | 29.959484 | 1.612102 maternal |
| ## 7795 | 5.7674347 | 7.252630 | 1.611596 maternal |
| ## 24674 | 15.6686319 | 19.701697 | 1.611319 maternal |
| ## 28893 | 21.0260312 | 26.431141 | 1.610535 maternal |
| ## 29221 | 27.0074085 | 33.943895 | 1.609987 maternal |
| ## 26180 | 34.9213260 | 43.882386 | 1.609442 maternal |
| ## 10374 | 3.3548478 | 4.215725 | 1.609441 maternal |
| ## 7696 | 8.0606889 | 10.128366 | 1.609220 maternal |
| ## 9225 | 37.9469409 | 47.671628 | 1.608643 maternal |
| ## 33350 | 4.2497134 | 5.338175 | 1.608299 maternal |
| ## 28250 | 121.4311523 | 152.513653 | 1.607924 maternal |
| ## 9873 | 37.5861437 | 47.205695 | 1.607842 maternal |
| ## 8637 | 5.4054604 | 6.788633 | 1.607725 maternal |
| ## 9669 | 27.8911304 | 35.020779 | 1.607108 maternal |
| ## 28324 | 4.7256650 | 5.932658 | 1.606604 maternal |
| ## 4517 | 8.7987925 | 11.044842 | 1.606261 maternal |
| ## 9703 | 23.0395870 | 28.920749 | 1.606250 maternal |
| ## 6762 | 34.0309093 | 42.716222 | 1.606144 maternal |
| ## 15380 | 5.0912599 | 6.389283 | 1.605509 maternal |
| ## 2037 | 5.2835437 | 6.630571 | 1.605501 maternal |
| ## 25409 | 27.1276588 | 34.038675 | 1.605053 maternal |
| ## 32493 | 42.6985496 | 53.565648 | 1.604455 maternal |
| ## 24801 | 41.6421367 | 52.228569 | 1.603782 maternal |
| ## 18685 | 5.9647008 | 7.479723 | 1.603245 maternal |
| ## 2633 | 3.8157498 | 4.784230 | 1.602802 maternal |
| ## 2145 | 22.0149947 | 27.587136 | 1.601128 maternal |
| ## 27168 | 15.5476058 | 19.479810 | 1.600670 maternal |
| ## 25739 | 63.0064283 | 78.930858 | 1.600264 maternal |
| ## 18725 | 39.9580158 | 50.044269 | 1.599500 maternal |
| ## 29406 | 3.9318021 | 4.923890 | 1.599270 maternal |
| ## 2797 | 110.4321523 | 138.242613 | 1.598103 maternal |
| ## 25181 | 501.7801343 | 628.043388 | 1.597623 maternal |

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|----------|-------------|------------|-------------------|
| ## 5741 | 4.3895239 | 5.493279 | 1.597199 maternal |
| ## 25124 | 51.9563412 | 64.987063 | 1.595653 maternal |
| ## 34709 | 18.2902017 | 22.876217 | 1.595498 maternal |
| ## 33859 | 23.8292829 | 29.801710 | 1.595256 maternal |
| ## 5862 | 66.5060228 | 83.169208 | 1.595060 maternal |
| ## 19808 | 4.2070148 | 5.261006 | 1.595013 maternal |
| ## 14479 | 17.6023701 | 22.008826 | 1.594541 maternal |
| ## 32428 | 5.2706259 | 6.588369 | 1.593789 maternal |
| ## 1333 | 15.8563529 | 19.820282 | 1.593726 maternal |
| ## 15559 | 3.7408627 | 4.675797 | 1.593572 maternal |
| ## 34123 | 17.3447473 | 21.671961 | 1.592521 maternal |
| ## 16777 | 9.6880980 | 12.103475 | 1.592120 maternal |
| ## 25100 | 4.5065625 | 5.630069 | 1.592098 maternal |
| ## 16663 | 49.6544115 | 62.020215 | 1.591464 maternal |
| ## 17707 | 11.6129868 | 14.504006 | 1.591249 maternal |
| ## 15351 | 32.4455449 | 40.514864 | 1.590671 maternal |
| ## 19074 | 29.2740227 | 36.540894 | 1.589561 maternal |
| ## 4897 | 27.0986159 | 33.824667 | 1.589490 maternal |
| ## 7475 | 4.7789314 | 5.964898 | 1.589393 maternal |
| ## 34643 | 4.7569220 | 5.936422 | 1.588892 maternal |
| ## 31212 | 11.5286390 | 14.384740 | 1.588382 maternal |
| ## 557 | 34.4246447 | 42.949896 | 1.588168 maternal |
| ## 16221 | 97.9662862 | 122.219926 | 1.587982 maternal |
| ## 4864 | 3.4938150 | 4.357876 | 1.587365 maternal |
| ## 22320 | 30.1559890 | 37.611261 | 1.587156 maternal |
| ## 22808 | 22.2724974 | 27.774041 | 1.586650 maternal |
| ## 7569 | 113.1428543 | 141.079294 | 1.586418 maternal |
| ## 25162 | 4.7214273 | 5.886990 | 1.586308 maternal |
| ## 33333 | 32.2757487 | 40.243336 | 1.586292 maternal |
| ## 33423 | 7.2171723 | 8.998347 | 1.586142 maternal |
| ## 17545 | 5.6607799 | 7.057740 | 1.586099 maternal |
| ## 8488 | 8.3432471 | 10.402022 | 1.586054 maternal |
| ## 12514 | 8.3989989 | 10.470757 | 1.585835 maternal |
| ## 34391 | 18.2067988 | 22.689086 | 1.584695 maternal |
| ## 32560 | 44.5591292 | 55.519142 | 1.584168 maternal |
| ## 5538 | 60.3263388 | 75.153660 | 1.583740 maternal |
| ## 20059 | 24.8585976 | 30.968275 | 1.583721 maternal |
| ## 27759 | 8.4197057 | 10.488091 | 1.583443 maternal |
| ## 6374 | 57.0314967 | 71.034075 | 1.583119 maternal |
| ## 14968 | 15.1828457 | 18.906821 | 1.582529 maternal |
| ## 21343 | 15.7658264 | 19.632391 | 1.582468 maternal |
| ## 10191 | 8.0201072 | 9.986487 | 1.582306 maternal |
| ## 7585 | 4.5620515 | 5.680452 | 1.582239 maternal |
| ## 15668 | 22.6566759 | 28.201853 | 1.581277 maternal |
| ## 25755 | 7.0922051 | 8.827492 | 1.581104 maternal |
| ## 32219 | 10.4111651 | 12.957854 | 1.580952 maternal |
| ## 24672 | 25.3159199 | 31.498366 | 1.580003 maternal |
| ## 22877 | 5.6543058 | 7.035071 | 1.579968 maternal |
| ## 11556 | 20.9047117 | 26.009554 | 1.579965 maternal |
| ## 30235 | 4.1164920 | 5.120270 | 1.579127 maternal |
| ## 31195 | 19.4361069 | 24.168878 | 1.578322 maternal |
| ## 8519 | 5.6824279 | 7.065413 | 1.578026 maternal |
| ## 20582 | 135.7603305 | 168.799850 | 1.577995 maternal |
| ## 35259 | 7.5697097 | 9.407537 | 1.576619 maternal |

| | | | |
|----------|-------------|------------|-------------------|
| ## 23300 | 32.0488628 | 39.820175 | 1.575898 maternal |
| ## 3027 | 7.7394580 | 9.616116 | 1.575888 maternal |
| ## 3865 | 7.3770210 | 9.163355 | 1.575103 maternal |
| ## 15752 | 5.1637158 | 6.412785 | 1.574497 maternal |
| ## 462 | 6.4702820 | 8.035217 | 1.574429 maternal |
| ## 2367 | 7.4153037 | 9.207605 | 1.574045 maternal |
| ## 34023 | 24.5091019 | 30.418059 | 1.572594 maternal |
| ## 13796 | 27.6829446 | 34.356693 | 1.572560 maternal |
| ## 13149 | 42.8116301 | 53.125456 | 1.572165 maternal |
| ## 15182 | 4.7668365 | 5.913958 | 1.571535 maternal |
| ## 34569 | 8.1336152 | 10.090084 | 1.571285 maternal |
| ## 24634 | 202.4017059 | 251.083342 | 1.571235 maternal |
| ## 34003 | 138.1723763 | 171.394026 | 1.571036 maternal |
| ## 9125 | 25.6629247 | 31.833175 | 1.571032 maternal |
| ## 14430 | 11.2965895 | 14.009741 | 1.570414 maternal |
| ## 35241 | 8.8223202 | 10.941083 | 1.570378 maternal |
| ## 13395 | 4.0940996 | 5.077205 | 1.570303 maternal |
| ## 2074 | 7.3630310 | 9.130686 | 1.570170 maternal |
| ## 12300 | 10.6673156 | 13.227425 | 1.569990 maternal |
| ## 23013 | 21.5977987 | 26.776286 | 1.569452 maternal |
| ## 21087 | 7.7435855 | 9.598574 | 1.568935 maternal |
| ## 23219 | 20.3087445 | 25.170009 | 1.568499 maternal |
| ## 4510 | 3.6856930 | 4.567778 | 1.568401 maternal |
| ## 24181 | 5.1455338 | 6.376989 | 1.568397 maternal |
| ## 32287 | 27.0066872 | 33.469429 | 1.568341 maternal |
| ## 5660 | 19.7609336 | 24.484654 | 1.567728 maternal |
| ## 22047 | 9.0766317 | 11.244763 | 1.567315 maternal |
| ## 6559 | 5.1510769 | 6.380792 | 1.566983 maternal |
| ## 24157 | 7.9394661 | 9.831076 | 1.565853 maternal |
| ## 33733 | 8.9109647 | 11.028525 | 1.564384 maternal |
| ## 31556 | 16.5647333 | 20.500305 | 1.564270 maternal |
| ## 32973 | 48.0859973 | 59.499854 | 1.563738 maternal |
| ## 16552 | 91.1024647 | 112.718793 | 1.563528 maternal |
| ## 10470 | 8.7369934 | 10.809059 | 1.563255 maternal |
| ## 6590 | 4.2842482 | 5.300087 | 1.563137 maternal |
| ## 19659 | 38.0866027 | 47.112261 | 1.562821 maternal |
| ## 4483 | 8.5739914 | 10.604165 | 1.562359 maternal |
| ## 16169 | 23.4882235 | 29.048477 | 1.562222 maternal |
| ## 8949 | 9.5111802 | 11.761599 | 1.561943 maternal |
| ## 530 | 4.6458520 | 5.744405 | 1.561590 maternal |
| ## 17047 | 10.8869290 | 13.460410 | 1.561409 maternal |
| ## 27210 | 14.2322214 | 17.596168 | 1.561358 maternal |
| ## 16440 | 30.1343435 | 37.251831 | 1.560956 maternal |
| ## 10109 | 4.6761095 | 5.779777 | 1.560554 maternal |
| ## 34617 | 16.7888379 | 20.748984 | 1.560214 maternal |
| ## 17464 | 6.7552255 | 8.345330 | 1.559049 maternal |
| ## 32996 | 9.5398621 | 11.782886 | 1.558413 maternal |
| ## 9184 | 10.4551386 | 12.912821 | 1.558290 maternal |
| ## 30206 | 15.7158219 | 19.409267 | 1.558159 maternal |
| ## 25602 | 4.4446614 | 5.489103 | 1.558096 maternal |
| ## 4126 | 49.6419250 | 61.300327 | 1.557769 maternal |
| ## 29942 | 27.0320767 | 33.372631 | 1.557072 maternal |
| ## 25236 | 20.0146621 | 24.706230 | 1.556716 maternal |
| ## 28579 | 11.8553329 | 14.632723 | 1.556400 maternal |

| | | | |
|----------|-------------|------------|-------------------|
| ## 6925 | 50.4613630 | 62.281966 | 1.556345 maternal |
| ## 32184 | 4.3669773 | 5.389224 | 1.555953 maternal |
| ## 7548 | 8.3801948 | 10.341334 | 1.555799 maternal |
| ## 8108 | 47.1913637 | 58.230479 | 1.555566 maternal |
| ## 17115 | 6.9881580 | 8.621456 | 1.555094 maternal |
| ## 18387 | 24.9033682 | 30.716402 | 1.554381 maternal |
| ## 24953 | 14.6754387 | 18.098706 | 1.554005 maternal |
| ## 5950 | 10.2217519 | 12.602382 | 1.553134 maternal |
| ## 18711 | 84.9008842 | 104.673067 | 1.553103 maternal |
| ## 25693 | 55.9249735 | 68.948791 | 1.553090 maternal |
| ## 25488 | 6.0346604 | 7.440010 | 1.553089 maternal |
| ## 14652 | 5.3618313 | 6.610050 | 1.552893 maternal |
| ## 10968 | 5.0093117 | 6.175454 | 1.552888 maternal |
| ## 20212 | 21.8082946 | 26.881992 | 1.552544 maternal |
| ## 3106 | 4.2576971 | 5.247679 | 1.552225 maternal |
| ## 33318 | 42.4087948 | 52.255019 | 1.551414 maternal |
| ## 16671 | 13.1477836 | 16.199811 | 1.551315 maternal |
| ## 5690 | 32.8781430 | 40.509175 | 1.551239 maternal |
| ## 33736 | 25.0965390 | 30.920873 | 1.551183 maternal |
| ## 9798 | 13.8651264 | 17.082302 | 1.551080 maternal |
| ## 19825 | 3.4821764 | 4.288671 | 1.550065 maternal |
| ## 22035 | 34.4585435 | 42.423108 | 1.548945 maternal |
| ## 34439 | 13.9178262 | 17.130952 | 1.548302 maternal |
| ## 4654 | 43.4516795 | 53.471983 | 1.547694 maternal |
| ## 948 | 38.1651236 | 46.960270 | 1.547318 maternal |
| ## 7382 | 11.2537392 | 13.845801 | 1.547031 maternal |
| ## 4537 | 12.3036943 | 15.137495 | 1.547013 maternal |
| ## 1198 | 29.0531386 | 35.741609 | 1.546761 maternal |
| ## 18813 | 6.0535572 | 7.446555 | 1.546517 maternal |
| ## 16172 | 6.5135474 | 8.011992 | 1.546370 maternal |
| ## 8784 | 61.6535263 | 75.814895 | 1.545520 maternal |
| ## 5579 | 4.1193154 | 5.065492 | 1.545520 maternal |
| ## 35090 | 20.2526434 | 24.903977 | 1.545456 maternal |
| ## 4227 | 578.7105905 | 711.522457 | 1.545053 maternal |
| ## 17074 | 4.8596462 | 5.974112 | 1.544660 maternal |
| ## 2673 | 15.6667036 | 19.255079 | 1.543981 maternal |
| ## 25159 | 9.1095313 | 11.195507 | 1.543847 maternal |
| ## 21393 | 10.1343997 | 12.454060 | 1.543613 maternal |
| ## 26083 | 115.7322291 | 142.214868 | 1.543464 maternal |
| ## 28469 | 3.5079662 | 4.310142 | 1.543098 maternal |
| ## 11223 | 29.6721819 | 36.455566 | 1.542951 maternal |
| ## 9513 | 225.8734818 | 277.505593 | 1.542898 maternal |
| ## 16335 | 29.2234377 | 35.896351 | 1.542310 maternal |
| ## 14471 | 44.1701545 | 54.235580 | 1.541211 maternal |
| ## 22644 | 12.9897522 | 15.947718 | 1.540824 maternal |
| ## 33466 | 25.8885776 | 31.776272 | 1.540133 maternal |
| ## 27250 | 25.9017589 | 31.791916 | 1.540084 maternal |
| ## 26584 | 129.7215226 | 159.193601 | 1.539588 maternal |
| ## 27174 | 4.0268235 | 4.941196 | 1.539292 maternal |
| ## 15707 | 57.2552989 | 70.253085 | 1.539160 maternal |
| ## 25369 | 51.9365939 | 63.725339 | 1.539086 maternal |
| ## 18507 | 52.1182971 | 63.944855 | 1.538929 maternal |
| ## 32746 | 20.0420279 | 24.583631 | 1.538184 maternal |
| ## 2012 | 82.1921619 | 100.809804 | 1.537970 maternal |

| | | | |
|----------|-------------|------------|-------------------|
| ## 11117 | 16.2585868 | 19.937306 | 1.537375 maternal |
| ## 16483 | 39.6908726 | 48.667385 | 1.537131 maternal |
| ## 22251 | 24.2036492 | 29.675125 | 1.536892 maternal |
| ## 12400 | 4.3499125 | 5.330875 | 1.535594 maternal |
| ## 6266 | 211.3783208 | 258.995622 | 1.535017 maternal |
| ## 7871 | 8.1868404 | 10.030868 | 1.534952 maternal |
| ## 5363 | 47.4070135 | 58.078186 | 1.534605 maternal |
| ## 27584 | 18.2444187 | 22.347349 | 1.534106 maternal |
| ## 21314 | 135.9757773 | 166.534108 | 1.533742 maternal |
| ## 34938 | 8.9112871 | 10.913192 | 1.533540 maternal |
| ## 16622 | 5.0606296 | 6.195688 | 1.532693 maternal |
| ## 34589 | 6.8395122 | 8.368530 | 1.530947 maternal |
| ## 9704 | 23.7195955 | 29.022216 | 1.530942 maternal |
| ## 33296 | 61.7073207 | 75.499329 | 1.530829 maternal |
| ## 6902 | 130.2576522 | 159.355846 | 1.530550 maternal |
| ## 9249 | 5.5617081 | 6.803751 | 1.530386 maternal |
| ## 15176 | 253.6771531 | 310.326796 | 1.530371 maternal |
| ## 34819 | 10.8125773 | 13.226816 | 1.530292 maternal |
| ## 8902 | 22.3405413 | 27.320493 | 1.529414 maternal |
| ## 23356 | 3.4626420 | 4.234474 | 1.529394 maternal |
| ## 13069 | 26.7070110 | 32.655463 | 1.528984 maternal |
| ## 2697 | 7.1323501 | 8.719746 | 1.528587 maternal |
| ## 23265 | 30.5618075 | 37.361155 | 1.528387 maternal |
| ## 26500 | 12.6163874 | 15.421984 | 1.528146 maternal |
| ## 34218 | 7.0137990 | 8.572833 | 1.527917 maternal |
| ## 31535 | 4.7945544 | 5.860198 | 1.527871 maternal |
| ## 33063 | 10.3424630 | 12.638887 | 1.527341 maternal |
| ## 32315 | 6.1060518 | 7.461466 | 1.527200 maternal |
| ## 16590 | 13.4662073 | 16.453235 | 1.526814 maternal |
| ## 29705 | 15.0356688 | 18.366425 | 1.526119 maternal |
| ## 10533 | 111.2607432 | 135.874634 | 1.525414 maternal |
| ## 25347 | 36.1244108 | 44.098406 | 1.524250 maternal |
| ## 17038 | 10.0965129 | 12.323720 | 1.523905 maternal |
| ## 20141 | 5.8897118 | 7.188286 | 1.523644 maternal |
| ## 18541 | 20.3837691 | 24.877581 | 1.523593 maternal |
| ## 25126 | 60.6928056 | 74.067365 | 1.523366 maternal |
| ## 1065 | 11.5330345 | 14.072651 | 1.522984 maternal |
| ## 2510 | 20.4597898 | 24.961325 | 1.522544 maternal |
| ## 26146 | 18.5296807 | 22.602335 | 1.522003 maternal |
| ## 28784 | 10.0406199 | 12.246441 | 1.521763 maternal |
| ## 22930 | 31.2227336 | 38.076658 | 1.521353 maternal |
| ## 2455 | 3.6889371 | 4.497564 | 1.520607 maternal |
| ## 12165 | 5.3607866 | 6.533734 | 1.519653 maternal |
| ## 15018 | 17.2789799 | 21.059149 | 1.519585 maternal |
| ## 30743 | 14.3304692 | 17.463507 | 1.519241 maternal |
| ## 15413 | 53.4083712 | 65.073453 | 1.518731 maternal |
| ## 22876 | 3.5710437 | 4.350390 | 1.518321 maternal |
| ## 5973 | 8.6751108 | 10.567705 | 1.518139 maternal |
| ## 20147 | 7.1764511 | 8.741441 | 1.517923 maternal |
| ## 7964 | 5.4485130 | 6.636416 | 1.517805 maternal |
| ## 12555 | 9.8549680 | 12.001943 | 1.517411 maternal |
| ## 30066 | 45.6468257 | 55.586162 | 1.517143 maternal |
| ## 12484 | 5.5024399 | 6.698877 | 1.516414 maternal |
| ## 16702 | 18.2617500 | 22.232272 | 1.516379 maternal |

```

## 29573      20.4324958      24.874761      1.516353 maternal
## 13840       5.9635879       7.258313      1.515625 maternal
## 24439       5.8149927       7.076455      1.515215 maternal
## 7375        9.7832945      11.903419      1.514683 maternal
## 25400       5.4596867       6.642608      1.514578 maternal
## 11692       3.7898019       4.610740      1.514467 maternal
## 5944        9.9444240      12.097957      1.514322 maternal
## 28912      56.8335864      69.134505      1.514039 maternal
## 1938       17.3414703      21.093546      1.513865 maternal
## 10382       6.9299404       8.427885      1.513369 maternal
## 32104       9.9227305      12.066045      1.513001 maternal
## 16300      18.7845424      22.841694      1.512961 maternal
## 8163       39.3673941      47.868297      1.512852 maternal
## 28626       6.5723486       7.991230      1.512731 maternal
## 18036       8.7369774      10.623032      1.512692 maternal
## 10249      16.1084381      19.585593      1.512666 maternal
## 28236       9.2700182      11.270690      1.512577 maternal
## 11519      54.9175903      66.761631      1.512215 maternal
## 4624       13.0202524      15.826782      1.511934 maternal
## 35079      53.1407620      64.593969      1.511874 maternal
## 3888       29.2481558      35.544346      1.511261 maternal
## 14920      19.5524951      23.757893      1.510821 maternal
## 22409      40.9013587      49.698205      1.510802 maternal
## 34284      21.8823361      26.585541      1.510462 maternal
## 34915       9.1372383      11.100383      1.510271 maternal
## 27226      67.4023808      81.846317      1.508949 maternal
## 27872      12.2758363      14.902931      1.508263 maternal
## 536        4.8962955       5.944007      1.508204 maternal
## 23083      20.7690755      25.210664      1.507908 maternal
## 7287       37.8443908      45.926380      1.507201 maternal
## 26217      32.8230906      39.831541      1.507115 maternal
## 27812      10.8593290      13.176962      1.506880 maternal
## 18515      45.0316357      54.633070      1.506386 maternal
## 7856       29.2330169      35.460403      1.505936 maternal
## 34274       6.4170256       7.778985      1.504074 maternal
## 10074      59.3827611      71.984083      1.503987 maternal
## 20567       4.1047252       4.975353      1.503747 maternal
## 32026       5.4184053       6.567549      1.503694 maternal
## 34723       6.9574376       8.430653      1.502899 maternal
## 23753       8.7916996      10.653301      1.502895 maternal
## 26466      28.6911930      34.759619      1.502332 maternal
## 14268      40.9646689      49.625074      1.502102 maternal
## 31884      20.6858289      25.058079      1.501991 maternal
## 722       30.6161025      37.082715      1.501638 maternal
## 6739      52.5138042      63.598599      1.501323 maternal
## 14540      22.7424030      27.542698      1.501297 maternal
## 28505       8.5781100      10.388645      1.501278 maternal
## 3550      20.6596490      25.017585      1.500981 maternal
## 7776      10.8739774      13.165052      1.500397 maternal
## 35143      36.3702053      44.033012      1.500387 maternal
## 6624      17.5882814      21.291286      1.500028 maternal

## Using as id variables

```


znf292b – maternal+zygotic

