



1976 Standard Atmosphere Calculator

[Calculator](#) [Table](#) [Graphs](#) [Options](#) [Help](#)

| Altitude [m] | Temperature [Kelvin] | Pressure [pascal] | Density [kg/m³] | Speed of sound [m/s] |
|-----------------|-------------------------|----------------------|--------------------|-------------------------|
| 0.00000 | 288.150 | 101325 | 1.22500 | 340.294 |
| 50.0000 | 287.825 | 100726 | 1.21913 | 340.102 |
| 100.000 | 287.500 | 100129 | 1.21328 | 339.910 |
| 150.000 | 287.175 | 99536.0 | 1.20746 | 339.718 |
| 200.000 | 286.850 | 98945.3 | 1.20165 | 339.526 |
| 250.000 | 286.525 | 98357.5 | 1.19587 | 339.333 |
| 300.000 | 286.200 | 97772.6 | 1.19011 | 339.141 |
| 350.000 | 285.875 | 97190.4 | 1.18436 | 338.948 |
| 400.000 | 285.550 | 96611.1 | 1.17864 | 338.755 |
| 450.000 | 285.225 | 96034.6 | 1.17295 | 338.563 |
| 500.000 | 284.900 | 95460.8 | 1.16727 | 338.370 |
| 550.000 | 284.575 | 94889.9 | 1.16161 | 338.177 |
| 600.000 | 284.250 | 94321.7 | 1.15598 | 337.983 |
| 650.000 | 283.925 | 93756.2 | 1.15036 | 337.790 |
| 700.000 | 283.600 | 93193.6 | 1.14477 | 337.597 |
| 750.000 | 283.275 | 92633.6 | 1.13920 | 337.403 |
| 800.000 | 282.950 | 92076.4 | 1.13364 | 337.210 |
| 850.000 | 282.625 | 91521.9 | 1.12811 | 337.016 |
| 900.000 | 282.300 | 90970.1 | 1.12260 | 336.822 |
| 950.000 | 281.975 | 90421.0 | 1.11711 | 336.628 |
| 1000.00 | 281.650 | 89874.6 | 1.11164 | 336.434 |
| 1050.00 | 281.325 | 89330.8 | 1.10619 | 336.240 |
| 1100.00 | 281.000 | 88789.8 | 1.10077 | 336.046 |
| 1150.00 | 280.675 | 88251.3 | 1.09536 | 335.851 |
| 1200.00 | 280.350 | 87715.6 | 1.08997 | 335.657 |
| 1250.00 | 280.025 | 87182.5 | 1.08460 | 335.462 |
| 1300.00 | 279.700 | 86651.9 | 1.07925 | 335.267 |
| 1350.00 | 279.375 | 86124.1 | 1.07393 | 335.073 |
| 1400.00 | 279.050 | 85598.8 | 1.06862 | 334.878 |
| 1450.00 | 278.725 | 85076.1 | 1.06333 | 334.683 |
| 1500.00 | 278.400 | 84556.0 | 1.05807 | 334.487 |
| 1550.00 | 278.075 | 84038.5 | 1.05282 | 334.292 |
| 1600.00 | 277.750 | 83523.5 | 1.04759 | 334.097 |
| 1650.00 | 277.425 | 83011.1 | 1.04239 | 333.901 |
| 1700.00 | 277.100 | 82501.3 | 1.03720 | 333.705 |
| 1750.00 | 276.775 | 81994.0 | 1.03203 | 333.510 |
| 1800.00 | 276.450 | 81489.2 | 1.02688 | 333.314 |

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|---------|---------|---------|----------|---------|
| 1850.00 | 276.125 | 80987.0 | 1.02176 | 333.118 |
| 1900.00 | 275.800 | 80487.2 | 1.01665 | 332.922 |
| 1950.00 | 275.475 | 79990.0 | 1.01156 | 332.726 |
| 2000.00 | 275.150 | 79495.2 | 1.00649 | 332.529 |
| 2050.00 | 274.825 | 79002.9 | 1.00144 | 332.333 |
| 2100.00 | 274.500 | 78513.1 | 0.996410 | 332.136 |
| 2150.00 | 274.175 | 78025.8 | 0.991399 | 331.940 |
| 2200.00 | 273.850 | 77540.9 | 0.986407 | 331.743 |
| 2250.00 | 273.525 | 77058.5 | 0.981435 | 331.546 |
| 2300.00 | 273.200 | 76578.4 | 0.976481 | 331.349 |
| 2350.00 | 272.875 | 76100.9 | 0.971547 | 331.152 |
| 2400.00 | 272.550 | 75625.7 | 0.966632 | 330.954 |
| 2450.00 | 272.225 | 75152.9 | 0.961736 | 330.757 |
| 2500.00 | 271.900 | 74682.5 | 0.956859 | 330.560 |
| 2550.00 | 271.575 | 74214.5 | 0.952001 | 330.362 |
| 2600.00 | 271.250 | 73748.9 | 0.947162 | 330.164 |
| 2650.00 | 270.925 | 73285.7 | 0.942341 | 329.966 |
| 2700.00 | 270.600 | 72824.8 | 0.937540 | 329.768 |
| 2750.00 | 270.275 | 72366.3 | 0.932757 | 329.570 |
| 2800.00 | 269.950 | 71910.1 | 0.927993 | 329.372 |
| 2850.00 | 269.625 | 71456.2 | 0.923247 | 329.174 |
| 2900.00 | 269.300 | 71004.7 | 0.918520 | 328.975 |
| 2950.00 | 268.975 | 70555.5 | 0.913812 | 328.777 |
| 3000.00 | 268.650 | 70108.5 | 0.909122 | 328.578 |
| 3050.00 | 268.325 | 69663.9 | 0.904451 | 328.379 |
| 3100.00 | 268.000 | 69221.6 | 0.899798 | 328.180 |
| 3150.00 | 267.675 | 68781.5 | 0.895163 | 327.981 |
| 3200.00 | 267.350 | 68343.7 | 0.890546 | 327.782 |
| 3250.00 | 267.025 | 67908.2 | 0.885948 | 327.583 |
| 3300.00 | 266.700 | 67474.9 | 0.881368 | 327.383 |
| 3350.00 | 266.375 | 67043.9 | 0.876806 | 327.184 |
| 3400.00 | 266.050 | 66615.0 | 0.872262 | 326.984 |
| 3450.00 | 265.725 | 66188.5 | 0.867737 | 326.784 |
| 3500.00 | 265.400 | 65764.1 | 0.863229 | 326.584 |
| 3550.00 | 265.075 | 65341.9 | 0.858739 | 326.384 |
| 3600.00 | 264.750 | 64921.9 | 0.854267 | 326.184 |
| 3650.00 | 264.425 | 64504.2 | 0.849813 | 325.984 |
| 3700.00 | 264.100 | 64088.6 | 0.845377 | 325.784 |
| 3750.00 | 263.775 | 63675.1 | 0.840958 | 325.583 |
| 3800.00 | 263.450 | 63263.9 | 0.836557 | 325.382 |
| 3850.00 | 263.125 | 62854.7 | 0.832174 | 325.182 |
| 3900.00 | 262.800 | 62447.8 | 0.827808 | 324.981 |
| 3950.00 | 262.475 | 62042.9 | 0.823460 | 324.780 |
| 4000.00 | 262.150 | 61640.2 | 0.819129 | 324.579 |
| 4050.00 | 261.825 | 61239.6 | 0.814816 | 324.377 |
| 4100.00 | 261.500 | 60841.2 | 0.810520 | 324.176 |

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|---------|---------|---------|----------|---------|
| 4150.00 | 261.175 | 60444.8 | 0.806242 | 323.975 |
| 4200.00 | 260.850 | 60050.5 | 0.801981 | 323.773 |
| 4250.00 | 260.525 | 59658.3 | 0.797737 | 323.571 |
| 4300.00 | 260.200 | 59268.2 | 0.793510 | 323.369 |
| 4350.00 | 259.875 | 58880.1 | 0.789301 | 323.167 |
| 4400.00 | 259.550 | 58494.2 | 0.785108 | 322.965 |
| 4450.00 | 259.225 | 58110.2 | 0.780933 | 322.763 |
| 4500.00 | 258.900 | 57728.3 | 0.776775 | 322.560 |
| 4550.00 | 258.575 | 57348.5 | 0.772633 | 322.358 |
| 4600.00 | 258.250 | 56970.6 | 0.768509 | 322.155 |
| 4650.00 | 257.925 | 56594.8 | 0.764401 | 321.952 |
| 4700.00 | 257.600 | 56221.0 | 0.760310 | 321.750 |
| 4750.00 | 257.275 | 55849.2 | 0.756236 | 321.547 |
| 4800.00 | 256.950 | 55479.4 | 0.752179 | 321.343 |
| 4850.00 | 256.625 | 55111.6 | 0.748138 | 321.140 |
| 4900.00 | 256.300 | 54745.7 | 0.744114 | 320.937 |
| 4950.00 | 255.975 | 54381.8 | 0.740107 | 320.733 |
| 5000.00 | 255.650 | 54019.9 | 0.736116 | 320.529 |
| 5050.00 | 255.325 | 53659.9 | 0.732141 | 320.326 |
| 5100.00 | 255.000 | 53301.9 | 0.728183 | 320.122 |
| 5150.00 | 254.675 | 52945.8 | 0.724242 | 319.918 |
| 5200.00 | 254.350 | 52591.7 | 0.720317 | 319.713 |
| 5250.00 | 254.025 | 52239.4 | 0.716408 | 319.509 |
| 5300.00 | 253.700 | 51889.1 | 0.712515 | 319.305 |
| 5350.00 | 253.375 | 51540.7 | 0.708638 | 319.100 |
| 5400.00 | 253.050 | 51194.2 | 0.704778 | 318.895 |
| 5450.00 | 252.725 | 50849.6 | 0.700934 | 318.691 |
| 5500.00 | 252.400 | 50506.8 | 0.697106 | 318.486 |
| 5550.00 | 252.075 | 50165.9 | 0.693294 | 318.280 |
| 5600.00 | 251.750 | 49826.9 | 0.689497 | 318.075 |
| 5650.00 | 251.425 | 49489.8 | 0.685717 | 317.870 |
| 5700.00 | 251.100 | 49154.5 | 0.681953 | 317.664 |
| 5750.00 | 250.775 | 48821.0 | 0.678204 | 317.459 |
| 5800.00 | 250.450 | 48489.4 | 0.674471 | 317.253 |
| 5850.00 | 250.125 | 48159.6 | 0.670754 | 317.047 |
| 5900.00 | 249.800 | 47831.6 | 0.667053 | 316.841 |
| 5950.00 | 249.475 | 47505.4 | 0.663367 | 316.635 |
| 6000.00 | 249.150 | 47181.0 | 0.659697 | 316.428 |
| 6050.00 | 248.825 | 46858.5 | 0.656043 | 316.222 |
| 6100.00 | 248.500 | 46537.7 | 0.652404 | 316.015 |
| 6150.00 | 248.175 | 46218.7 | 0.648780 | 315.809 |
| 6200.00 | 247.850 | 45901.4 | 0.645172 | 315.602 |
| 6250.00 | 247.525 | 45586.0 | 0.641579 | 315.395 |
| 6300.00 | 247.200 | 45272.3 | 0.638002 | 315.188 |
| 6350.00 | 246.875 | 44960.3 | 0.634439 | 314.980 |
| 6400.00 | 246.550 | 44650.1 | 0.630892 | 314.773 |
| 6450.00 | 246.225 | 44341.6 | 0.627361 | 314.566 |

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|---------|---------|---------|----------|---------|
| 6500.00 | 245.900 | 44034.8 | 0.623844 | 314.358 |
| 6550.00 | 245.575 | 43729.8 | 0.620343 | 314.150 |
| 6600.00 | 245.250 | 43426.5 | 0.616856 | 313.942 |
| 6650.00 | 244.925 | 43124.9 | 0.613385 | 313.734 |
| 6700.00 | 244.600 | 42825.0 | 0.609928 | 313.526 |
| 6750.00 | 244.275 | 42526.7 | 0.606487 | 313.317 |
| 6800.00 | 243.950 | 42230.2 | 0.603060 | 313.109 |
| 6850.00 | 243.625 | 41935.3 | 0.599648 | 312.900 |
| 6900.00 | 243.300 | 41642.2 | 0.596251 | 312.692 |
| 6950.00 | 242.975 | 41350.6 | 0.592869 | 312.483 |
| 7000.00 | 242.650 | 41060.7 | 0.589501 | 312.274 |
| 7050.00 | 242.325 | 40772.5 | 0.586148 | 312.064 |
| 7100.00 | 242.000 | 40485.9 | 0.582810 | 311.855 |
| 7150.00 | 241.675 | 40201.0 | 0.579486 | 311.646 |
| 7200.00 | 241.350 | 39917.6 | 0.576177 | 311.436 |
| 7250.00 | 241.025 | 39635.9 | 0.572882 | 311.226 |
| 7300.00 | 240.700 | 39355.8 | 0.569602 | 311.016 |
| 7350.00 | 240.375 | 39077.3 | 0.566336 | 310.806 |
| 7400.00 | 240.050 | 38800.4 | 0.563084 | 310.596 |
| 7450.00 | 239.725 | 38525.1 | 0.559847 | 310.386 |
| 7500.00 | 239.400 | 38251.4 | 0.556624 | 310.175 |
| 7550.00 | 239.075 | 37979.3 | 0.553415 | 309.965 |
| 7600.00 | 238.750 | 37708.7 | 0.550220 | 309.754 |
| 7650.00 | 238.425 | 37439.7 | 0.547039 | 309.543 |
| 7700.00 | 238.100 | 37172.2 | 0.543873 | 309.332 |
| 7750.00 | 237.775 | 36906.3 | 0.540721 | 309.121 |
| 7800.00 | 237.450 | 36642.0 | 0.537582 | 308.909 |
| 7850.00 | 237.125 | 36379.1 | 0.534458 | 308.698 |
| 7900.00 | 236.800 | 36117.8 | 0.531347 | 308.486 |
| 7950.00 | 236.475 | 35858.1 | 0.528250 | 308.275 |
| 8000.00 | 236.150 | 35599.8 | 0.525168 | 308.063 |
| 8050.00 | 235.825 | 35343.1 | 0.522098 | 307.851 |
| 8100.00 | 235.500 | 35087.8 | 0.519043 | 307.638 |
| 8150.00 | 235.175 | 34834.0 | 0.516001 | 307.426 |
| 8200.00 | 234.850 | 34581.8 | 0.512973 | 307.214 |
| 8250.00 | 234.525 | 34331.0 | 0.509959 | 307.001 |
| 8300.00 | 234.200 | 34081.7 | 0.506958 | 306.788 |
| 8350.00 | 233.875 | 33833.8 | 0.503971 | 306.575 |
| 8400.00 | 233.550 | 33587.5 | 0.500997 | 306.362 |
| 8450.00 | 233.225 | 33342.5 | 0.498037 | 306.149 |
| 8500.00 | 232.900 | 33099.0 | 0.495090 | 305.935 |
| 8550.00 | 232.575 | 32857.0 | 0.492156 | 305.722 |
| 8600.00 | 232.250 | 32616.4 | 0.489236 | 305.508 |
| 8650.00 | 231.925 | 32377.2 | 0.486329 | 305.294 |
| 8700.00 | 231.600 | 32139.5 | 0.483435 | 305.080 |
| 8750.00 | 231.275 | 31903.1 | 0.480555 | 304.866 |

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|---------|---------|---------|----------|---------|
| 8800.00 | 230.950 | 31668.2 | 0.477687 | 304.652 |
| 8850.00 | 230.625 | 31434.7 | 0.474833 | 304.438 |
| 8900.00 | 230.300 | 31202.6 | 0.471992 | 304.223 |
| 8950.00 | 229.975 | 30971.8 | 0.469163 | 304.008 |
| 9000.00 | 229.650 | 30742.5 | 0.466348 | 303.793 |
| 9050.00 | 229.325 | 30514.5 | 0.463546 | 303.578 |
| 9100.00 | 229.000 | 30287.9 | 0.460756 | 303.363 |
| 9150.00 | 228.675 | 30062.6 | 0.457980 | 303.148 |
| 9200.00 | 228.350 | 29838.7 | 0.455216 | 302.932 |
| 9250.00 | 228.025 | 29616.2 | 0.452465 | 302.717 |
| 9300.00 | 227.700 | 29395.0 | 0.449727 | 302.501 |
| 9350.00 | 227.375 | 29175.2 | 0.447001 | 302.285 |
| 9400.00 | 227.050 | 28956.7 | 0.444289 | 302.069 |
| 9450.00 | 226.725 | 28739.5 | 0.441588 | 301.852 |
| 9500.00 | 226.400 | 28523.6 | 0.438901 | 301.636 |
| 9550.00 | 226.075 | 28309.1 | 0.436226 | 301.419 |
| 9600.00 | 225.750 | 28095.8 | 0.433563 | 301.203 |
| 9650.00 | 225.425 | 27883.9 | 0.430913 | 300.986 |
| 9700.00 | 225.100 | 27673.2 | 0.428275 | 300.769 |
| 9750.00 | 224.775 | 27463.9 | 0.425649 | 300.552 |
| 9800.00 | 224.450 | 27255.8 | 0.423036 | 300.334 |
| 9850.00 | 224.125 | 27049.0 | 0.420436 | 300.117 |
| 9900.00 | 223.800 | 26843.5 | 0.417847 | 299.899 |
| 9950.00 | 223.475 | 26639.3 | 0.415271 | 299.681 |
| 10000.0 | 223.150 | 26436.3 | 0.412707 | 299.463 |
| 10050.0 | 222.825 | 26234.5 | 0.410155 | 299.245 |
| 10100.0 | 222.500 | 26034.0 | 0.407615 | 299.027 |
| 10150.0 | 222.175 | 25834.8 | 0.405087 | 298.808 |
| 10200.0 | 221.850 | 25636.8 | 0.402571 | 298.590 |
| 10250.0 | 221.525 | 25440.0 | 0.400067 | 298.371 |
| 10300.0 | 221.200 | 25244.5 | 0.397575 | 298.152 |
| 10350.0 | 220.875 | 25050.1 | 0.395095 | 297.933 |
| 10400.0 | 220.550 | 24857.0 | 0.392627 | 297.714 |
| 10450.0 | 220.225 | 24665.1 | 0.390170 | 297.494 |
| 10500.0 | 219.900 | 24474.4 | 0.387725 | 297.275 |
| 10550.0 | 219.575 | 24284.9 | 0.385293 | 297.055 |
| 10600.0 | 219.250 | 24096.5 | 0.382871 | 296.835 |
| 10650.0 | 218.925 | 23909.4 | 0.380462 | 296.615 |
| 10700.0 | 218.600 | 23723.4 | 0.378064 | 296.395 |
| 10750.0 | 218.275 | 23538.6 | 0.375677 | 296.174 |
| 10800.0 | 217.950 | 23355.0 | 0.373303 | 295.954 |
| 10850.0 | 217.625 | 23172.5 | 0.370939 | 295.733 |
| 10900.0 | 217.300 | 22991.2 | 0.368588 | 295.512 |
| 10950.0 | 216.975 | 22811.1 | 0.366247 | 295.291 |
| 11000.0 | 216.650 | 22632.1 | 0.363918 | 295.070 |
| 11050.0 | 216.650 | 22454.3 | 0.361060 | 295.070 |
| 11100.0 | 216.650 | 22278.0 | 0.358224 | 295.070 |

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| 11150.0 | 216.650 | 22103.0 | 0.355411 | 295.070 |
| 11200.0 | 216.650 | 21929.4 | 0.352620 | 295.070 |
| 11250.0 | 216.650 | 21757.2 | 0.349851 | 295.070 |
| 11300.0 | 216.650 | 21586.3 | 0.347103 | 295.070 |
| 11350.0 | 216.650 | 21416.8 | 0.344377 | 295.070 |
| 11400.0 | 216.650 | 21248.6 | 0.341673 | 295.070 |
| 11450.0 | 216.650 | 21081.8 | 0.338989 | 295.070 |
| 11500.0 | 216.650 | 20916.2 | 0.336327 | 295.070 |
| 11550.0 | 216.650 | 20751.9 | 0.333686 | 295.070 |
| 11600.0 | 216.650 | 20589.0 | 0.331065 | 295.070 |
| 11650.0 | 216.650 | 20427.3 | 0.328465 | 295.070 |
| 11700.0 | 216.650 | 20266.8 | 0.325886 | 295.070 |
| 11750.0 | 216.650 | 20107.7 | 0.323326 | 295.070 |
| 11800.0 | 216.650 | 19949.8 | 0.320787 | 295.070 |
| 11850.0 | 216.650 | 19793.1 | 0.318268 | 295.070 |
| 11900.0 | 216.650 | 19637.6 | 0.315768 | 295.070 |
| 11950.0 | 216.650 | 19483.4 | 0.313289 | 295.070 |
| 12000.0 | 216.650 | 19330.4 | 0.310828 | 295.070 |
| 12050.0 | 216.650 | 19178.6 | 0.308387 | 295.070 |
| 12100.0 | 216.650 | 19028.0 | 0.305965 | 295.070 |
| 12150.0 | 216.650 | 18878.5 | 0.303562 | 295.070 |
| 12200.0 | 216.650 | 18730.3 | 0.301178 | 295.070 |
| 12250.0 | 216.650 | 18583.2 | 0.298813 | 295.070 |
| 12300.0 | 216.650 | 18437.2 | 0.296466 | 295.070 |
| 12350.0 | 216.650 | 18292.4 | 0.294138 | 295.070 |
| 12400.0 | 216.650 | 18148.8 | 0.291828 | 295.070 |
| 12450.0 | 216.650 | 18006.3 | 0.289536 | 295.070 |
| 12500.0 | 216.650 | 17864.8 | 0.287262 | 295.070 |
| 12550.0 | 216.650 | 17724.5 | 0.285006 | 295.070 |
| 12600.0 | 216.650 | 17585.4 | 0.282768 | 295.070 |
| 12650.0 | 216.650 | 17447.2 | 0.280547 | 295.070 |
| 12700.0 | 216.650 | 17310.2 | 0.278344 | 295.070 |
| 12750.0 | 216.650 | 17174.3 | 0.276158 | 295.070 |
| 12800.0 | 216.650 | 17039.4 | 0.273989 | 295.070 |
| 12850.0 | 216.650 | 16905.6 | 0.271838 | 295.070 |
| 12900.0 | 216.650 | 16772.8 | 0.269703 | 295.070 |
| 12950.0 | 216.650 | 16641.1 | 0.267585 | 295.070 |
| 13000.0 | 216.650 | 16510.4 | 0.265483 | 295.070 |
| 13050.0 | 216.650 | 16380.7 | 0.263398 | 295.070 |
| 13100.0 | 216.650 | 16252.1 | 0.261330 | 295.070 |
| 13150.0 | 216.650 | 16124.5 | 0.259277 | 295.070 |
| 13200.0 | 216.650 | 15997.8 | 0.257241 | 295.070 |
| 13250.0 | 216.650 | 15872.2 | 0.255221 | 295.070 |
| 13300.0 | 216.650 | 15747.5 | 0.253217 | 295.070 |
| 13350.0 | 216.650 | 15623.9 | 0.251228 | 295.070 |
| 13400.0 | 216.650 | 15501.2 | 0.249255 | 295.070 |

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| 13450.0 | 216.650 | 15379.4 | 0.247297 | 295.070 |
| 13500.0 | 216.650 | 15258.7 | 0.245355 | 295.070 |
| 13550.0 | 216.650 | 15138.8 | 0.243428 | 295.070 |
| 13600.0 | 216.650 | 15019.9 | 0.241517 | 295.070 |
| 13650.0 | 216.650 | 14902.0 | 0.239620 | 295.070 |
| 13700.0 | 216.650 | 14784.9 | 0.237738 | 295.070 |
| 13750.0 | 216.650 | 14668.8 | 0.235871 | 295.070 |
| 13800.0 | 216.650 | 14553.6 | 0.234019 | 295.070 |
| 13850.0 | 216.650 | 14439.3 | 0.232181 | 295.070 |
| 13900.0 | 216.650 | 14325.9 | 0.230357 | 295.070 |
| 13950.0 | 216.650 | 14213.4 | 0.228548 | 295.070 |
| 14000.0 | 216.650 | 14101.8 | 0.226753 | 295.070 |
| 14050.0 | 216.650 | 13991.1 | 0.224973 | 295.070 |
| 14100.0 | 216.650 | 13881.2 | 0.223206 | 295.070 |
| 14150.0 | 216.650 | 13772.2 | 0.221453 | 295.070 |
| 14200.0 | 216.650 | 13664.0 | 0.219714 | 295.070 |
| 14250.0 | 216.650 | 13556.7 | 0.217988 | 295.070 |
| 14300.0 | 216.650 | 13450.2 | 0.216276 | 295.070 |
| 14350.0 | 216.650 | 13344.6 | 0.214578 | 295.070 |
| 14400.0 | 216.650 | 13239.8 | 0.212893 | 295.070 |
| 14450.0 | 216.650 | 13135.8 | 0.211221 | 295.070 |
| 14500.0 | 216.650 | 13032.7 | 0.209562 | 295.070 |
| 14550.0 | 216.650 | 12930.3 | 0.207916 | 295.070 |
| 14600.0 | 216.650 | 12828.8 | 0.206283 | 295.070 |
| 14650.0 | 216.650 | 12728.0 | 0.204663 | 295.070 |
| 14700.0 | 216.650 | 12628.1 | 0.203056 | 295.070 |
| 14750.0 | 216.650 | 12528.9 | 0.201461 | 295.070 |
| 14800.0 | 216.650 | 12430.5 | 0.199879 | 295.070 |
| 14850.0 | 216.650 | 12332.9 | 0.198309 | 295.070 |
| 14900.0 | 216.650 | 12236.0 | 0.196752 | 295.070 |
| 14950.0 | 216.650 | 12139.9 | 0.195207 | 295.070 |
| 15000.0 | 216.650 | 12044.6 | 0.193674 | 295.070 |
| 15050.0 | 216.650 | 11950.0 | 0.192153 | 295.070 |
| 15100.0 | 216.650 | 11856.1 | 0.190644 | 295.070 |
| 15150.0 | 216.650 | 11763.0 | 0.189146 | 295.070 |
| 15200.0 | 216.650 | 11670.6 | 0.187661 | 295.070 |
| 15250.0 | 216.650 | 11579.0 | 0.186187 | 295.070 |
| 15300.0 | 216.650 | 11488.1 | 0.184725 | 295.070 |
| 15350.0 | 216.650 | 11397.8 | 0.183274 | 295.070 |
| 15400.0 | 216.650 | 11308.3 | 0.181835 | 295.070 |
| 15450.0 | 216.650 | 11219.5 | 0.180407 | 295.070 |
| 15500.0 | 216.650 | 11131.4 | 0.178990 | 295.070 |
| 15550.0 | 216.650 | 11044.0 | 0.177584 | 295.070 |
| 15600.0 | 216.650 | 10957.2 | 0.176190 | 295.070 |
| 15650.0 | 216.650 | 10871.2 | 0.174806 | 295.070 |
| 15700.0 | 216.650 | 10785.8 | 0.173433 | 295.070 |
| 15750.0 | 216.650 | 10701.1 | 0.172071 | 295.070 |

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| 15800.0 | 216.650 | 10617.1 | 0.170720 | 295.070 |
| 15850.0 | 216.650 | 10533.7 | 0.169379 | 295.070 |
| 15900.0 | 216.650 | 10451.0 | 0.168049 | 295.070 |
| 15950.0 | 216.650 | 10368.9 | 0.166729 | 295.070 |
| 16000.0 | 216.650 | 10287.5 | 0.165420 | 295.070 |
| 16050.0 | 216.650 | 10206.7 | 0.164121 | 295.070 |
| 16100.0 | 216.650 | 10126.5 | 0.162832 | 295.070 |
| 16150.0 | 216.650 | 10047.0 | 0.161553 | 295.070 |
| 16200.0 | 216.650 | 9968.08 | 0.160284 | 295.070 |
| 16250.0 | 216.650 | 9889.80 | 0.159025 | 295.070 |
| 16300.0 | 216.650 | 9812.13 | 0.157777 | 295.070 |
| 16350.0 | 216.650 | 9735.07 | 0.156538 | 295.070 |
| 16400.0 | 216.650 | 9658.61 | 0.155308 | 295.070 |
| 16450.0 | 216.650 | 9582.76 | 0.154088 | 295.070 |
| 16500.0 | 216.650 | 9507.50 | 0.152878 | 295.070 |
| 16550.0 | 216.650 | 9432.84 | 0.151678 | 295.070 |
| 16600.0 | 216.650 | 9358.76 | 0.150487 | 295.070 |
| 16650.0 | 216.650 | 9285.26 | 0.149305 | 295.070 |
| 16700.0 | 216.650 | 9212.34 | 0.148132 | 295.070 |
| 16750.0 | 216.650 | 9139.99 | 0.146969 | 295.070 |
| 16800.0 | 216.650 | 9068.21 | 0.145815 | 295.070 |
| 16850.0 | 216.650 | 8996.99 | 0.144669 | 295.070 |
| 16900.0 | 216.650 | 8926.34 | 0.143533 | 295.070 |
| 16950.0 | 216.650 | 8856.23 | 0.142406 | 295.070 |
| 17000.0 | 216.650 | 8786.68 | 0.141288 | 295.070 |
| 17050.0 | 216.650 | 8717.68 | 0.140178 | 295.070 |
| 17100.0 | 216.650 | 8649.21 | 0.139077 | 295.070 |
| 17150.0 | 216.650 | 8581.29 | 0.137985 | 295.070 |
| 17200.0 | 216.650 | 8513.89 | 0.136901 | 295.070 |
| 17250.0 | 216.650 | 8447.03 | 0.135826 | 295.070 |
| 17300.0 | 216.650 | 8380.69 | 0.134759 | 295.070 |
| 17350.0 | 216.650 | 8314.88 | 0.133701 | 295.070 |
| 17400.0 | 216.650 | 8249.58 | 0.132651 | 295.070 |
| 17450.0 | 216.650 | 8184.79 | 0.131609 | 295.070 |
| 17500.0 | 216.650 | 8120.51 | 0.130576 | 295.070 |
| 17550.0 | 216.650 | 8056.74 | 0.129550 | 295.070 |
| 17600.0 | 216.650 | 7993.46 | 0.128533 | 295.070 |
| 17650.0 | 216.650 | 7930.69 | 0.127524 | 295.070 |
| 17700.0 | 216.650 | 7868.40 | 0.126522 | 295.070 |
| 17750.0 | 216.650 | 7806.61 | 0.125528 | 295.070 |
| 17800.0 | 216.650 | 7745.30 | 0.124543 | 295.070 |
| 17850.0 | 216.650 | 7684.47 | 0.123564 | 295.070 |
| 17900.0 | 216.650 | 7624.13 | 0.122594 | 295.070 |
| 17950.0 | 216.650 | 7564.25 | 0.121631 | 295.070 |
| 18000.0 | 216.650 | 7504.84 | 0.120676 | 295.070 |
| 18050.0 | 216.650 | 7445.91 | 0.119728 | 295.070 |

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| 18100.0 | 216.650 | 7387.43 | 0.118788 | 295.070 |
| 18150.0 | 216.650 | 7329.41 | 0.117855 | 295.070 |
| 18200.0 | 216.650 | 7271.85 | 0.116930 | 295.070 |
| 18250.0 | 216.650 | 7214.74 | 0.116011 | 295.070 |
| 18300.0 | 216.650 | 7158.08 | 0.115100 | 295.070 |
| 18350.0 | 216.650 | 7101.87 | 0.114196 | 295.070 |
| 18400.0 | 216.650 | 7046.09 | 0.113299 | 295.070 |
| 18450.0 | 216.650 | 6990.76 | 0.112410 | 295.070 |
| 18500.0 | 216.650 | 6935.86 | 0.111527 | 295.070 |
| 18550.0 | 216.650 | 6881.39 | 0.110651 | 295.070 |
| 18600.0 | 216.650 | 6827.34 | 0.109782 | 295.070 |
| 18650.0 | 216.650 | 6773.73 | 0.108920 | 295.070 |
| 18700.0 | 216.650 | 6720.53 | 0.108064 | 295.070 |
| 18750.0 | 216.650 | 6667.75 | 0.107216 | 295.070 |
| 18800.0 | 216.650 | 6615.39 | 0.106374 | 295.070 |
| 18850.0 | 216.650 | 6563.43 | 0.105538 | 295.070 |
| 18900.0 | 216.650 | 6511.89 | 0.104710 | 295.070 |
| 18950.0 | 216.650 | 6460.75 | 0.103887 | 295.070 |
| 19000.0 | 216.650 | 6410.01 | 0.103071 | 295.070 |
| 19050.0 | 216.650 | 6359.67 | 0.102262 | 295.070 |
| 19100.0 | 216.650 | 6309.72 | 0.101459 | 295.070 |
| 19150.0 | 216.650 | 6260.17 | 0.100662 | 295.070 |
| 19200.0 | 216.650 | 6211.00 | 0.0998714 | 295.070 |
| 19250.0 | 216.650 | 6162.23 | 0.0990871 | 295.070 |
| 19300.0 | 216.650 | 6113.83 | 0.0983089 | 295.070 |
| 19350.0 | 216.650 | 6065.82 | 0.0975369 | 295.070 |
| 19400.0 | 216.650 | 6018.18 | 0.0967709 | 295.070 |
| 19450.0 | 216.650 | 5970.92 | 0.0960109 | 295.070 |
| 19500.0 | 216.650 | 5924.03 | 0.0952569 | 295.070 |
| 19550.0 | 216.650 | 5877.50 | 0.0945088 | 295.070 |
| 19600.0 | 216.650 | 5831.34 | 0.0937666 | 295.070 |
| 19650.0 | 216.650 | 5785.55 | 0.0930302 | 295.070 |
| 19700.0 | 216.650 | 5740.11 | 0.0922996 | 295.070 |
| 19750.0 | 216.650 | 5695.03 | 0.0915747 | 295.070 |
| 19800.0 | 216.650 | 5650.31 | 0.0908555 | 295.070 |
| 19850.0 | 216.650 | 5605.93 | 0.0901420 | 295.070 |
| 19900.0 | 216.650 | 5561.91 | 0.0894341 | 295.070 |
| 19950.0 | 216.650 | 5518.23 | 0.0887317 | 295.070 |
| 20000.0 | 216.650 | 5474.89 | 0.0880349 | 295.070 |
| 20050.0 | 216.700 | 5431.90 | 0.0873234 | 295.104 |
| 20100.0 | 216.750 | 5389.25 | 0.0866179 | 295.138 |
| 20150.0 | 216.800 | 5346.95 | 0.0859182 | 295.172 |
| 20200.0 | 216.850 | 5304.99 | 0.0852243 | 295.206 |
| 20250.0 | 216.900 | 5263.38 | 0.0845362 | 295.240 |
| 20300.0 | 216.950 | 5222.09 | 0.0838538 | 295.274 |
| 20350.0 | 217.000 | 5181.14 | 0.0831771 | 295.308 |
| 20400.0 | 217.050 | 5140.52 | 0.0825060 | 295.342 |

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| 20450.0 | 217.100 | 5100.23 | 0.0818405 | 295.376 |
| 20500.0 | 217.150 | 5060.26 | 0.0811804 | 295.410 |
| 20550.0 | 217.200 | 5020.62 | 0.0805259 | 295.444 |
| 20600.0 | 217.250 | 4981.29 | 0.0798768 | 295.478 |
| 20650.0 | 217.300 | 4942.29 | 0.0792330 | 295.512 |
| 20700.0 | 217.350 | 4903.59 | 0.0785946 | 295.546 |
| 20750.0 | 217.400 | 4865.21 | 0.0779615 | 295.580 |
| 20800.0 | 217.450 | 4827.14 | 0.0773336 | 295.614 |
| 20850.0 | 217.500 | 4789.37 | 0.0767109 | 295.648 |
| 20900.0 | 217.550 | 4751.91 | 0.0760934 | 295.682 |
| 20950.0 | 217.600 | 4714.75 | 0.0754810 | 295.716 |
| 21000.0 | 217.650 | 4677.89 | 0.0748737 | 295.750 |
| 21050.0 | 217.700 | 4641.32 | 0.0742713 | 295.784 |
| 21100.0 | 217.750 | 4605.05 | 0.0736740 | 295.818 |
| 21150.0 | 217.800 | 4569.07 | 0.0730816 | 295.852 |
| 21200.0 | 217.850 | 4533.38 | 0.0724941 | 295.886 |
| 21250.0 | 217.900 | 4497.98 | 0.0719115 | 295.920 |
| 21300.0 | 217.950 | 4462.86 | 0.0713336 | 295.954 |
| 21350.0 | 218.000 | 4428.02 | 0.0707606 | 295.987 |
| 21400.0 | 218.050 | 4393.47 | 0.0701923 | 296.021 |
| 21450.0 | 218.100 | 4359.19 | 0.0696286 | 296.055 |
| 21500.0 | 218.150 | 4325.18 | 0.0690697 | 296.089 |
| 21550.0 | 218.200 | 4291.45 | 0.0685153 | 296.123 |
| 21600.0 | 218.250 | 4257.99 | 0.0679655 | 296.157 |
| 21650.0 | 218.300 | 4224.80 | 0.0674203 | 296.191 |
| 21700.0 | 218.350 | 4191.87 | 0.0668795 | 296.225 |
| 21750.0 | 218.400 | 4159.21 | 0.0663432 | 296.259 |
| 21800.0 | 218.450 | 4126.81 | 0.0658114 | 296.293 |
| 21850.0 | 218.500 | 4094.67 | 0.0652839 | 296.327 |
| 21900.0 | 218.550 | 4062.79 | 0.0647607 | 296.361 |
| 21950.0 | 218.600 | 4031.16 | 0.0642419 | 296.395 |
| 22000.0 | 218.650 | 3999.79 | 0.0637273 | 296.428 |
| 22050.0 | 218.700 | 3968.67 | 0.0632170 | 296.462 |
| 22100.0 | 218.750 | 3937.79 | 0.0627109 | 296.496 |
| 22150.0 | 218.800 | 3907.17 | 0.0622090 | 296.530 |
| 22200.0 | 218.850 | 3876.79 | 0.0617111 | 296.564 |
| 22250.0 | 218.900 | 3846.65 | 0.0612174 | 296.598 |
| 22300.0 | 218.950 | 3816.75 | 0.0607278 | 296.632 |
| 22350.0 | 219.000 | 3787.10 | 0.0602421 | 296.666 |
| 22400.0 | 219.050 | 3757.68 | 0.0597605 | 296.699 |
| 22450.0 | 219.100 | 3728.49 | 0.0592828 | 296.733 |
| 22500.0 | 219.150 | 3699.54 | 0.0588091 | 296.767 |
| 22550.0 | 219.200 | 3670.82 | 0.0583392 | 296.801 |
| 22600.0 | 219.250 | 3642.33 | 0.0578732 | 296.835 |
| 22650.0 | 219.300 | 3614.06 | 0.0574110 | 296.869 |
| 22700.0 | 219.350 | 3586.03 | 0.0569526 | 296.903 |

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| 22750.0 | 219.400 | 3558.21 | 0.0564980 | 296.936 |
| 22800.0 | 219.450 | 3530.62 | 0.0560471 | 296.970 |
| 22850.0 | 219.500 | 3503.25 | 0.0555999 | 297.004 |
| 22900.0 | 219.550 | 3476.09 | 0.0551564 | 297.038 |
| 22950.0 | 219.600 | 3449.16 | 0.0547165 | 297.072 |
| 23000.0 | 219.650 | 3422.43 | 0.0542803 | 297.105 |
| 23050.0 | 219.700 | 3395.93 | 0.0538476 | 297.139 |
| 23100.0 | 219.750 | 3369.63 | 0.0534184 | 297.173 |
| 23150.0 | 219.800 | 3343.54 | 0.0529928 | 297.207 |
| 23200.0 | 219.850 | 3317.66 | 0.0525706 | 297.241 |
| 23250.0 | 219.900 | 3291.98 | 0.0521520 | 297.275 |
| 23300.0 | 219.950 | 3266.51 | 0.0517367 | 297.308 |
| 23350.0 | 220.000 | 3241.25 | 0.0513248 | 297.342 |
| 23400.0 | 220.050 | 3216.18 | 0.0509164 | 297.376 |
| 23450.0 | 220.100 | 3191.32 | 0.0505112 | 297.410 |
| 23500.0 | 220.150 | 3166.65 | 0.0501094 | 297.443 |
| 23550.0 | 220.200 | 3142.17 | 0.0497108 | 297.477 |
| 23600.0 | 220.250 | 3117.90 | 0.0493155 | 297.511 |
| 23650.0 | 220.300 | 3093.81 | 0.0489235 | 297.545 |
| 23700.0 | 220.350 | 3069.92 | 0.0485346 | 297.579 |
| 23750.0 | 220.400 | 3046.21 | 0.0481490 | 297.612 |
| 23800.0 | 220.450 | 3022.70 | 0.0477665 | 297.646 |
| 23850.0 | 220.500 | 2999.37 | 0.0473871 | 297.680 |
| 23900.0 | 220.550 | 2976.23 | 0.0470108 | 297.714 |
| 23950.0 | 220.600 | 2953.27 | 0.0466375 | 297.747 |
| 24000.0 | 220.650 | 2930.49 | 0.0462674 | 297.781 |
| 24050.0 | 220.700 | 2907.90 | 0.0459002 | 297.815 |
| 24100.0 | 220.750 | 2885.48 | 0.0455360 | 297.849 |
| 24150.0 | 220.800 | 2863.24 | 0.0451749 | 297.882 |
| 24200.0 | 220.850 | 2841.18 | 0.0448166 | 297.916 |
| 24250.0 | 220.900 | 2819.29 | 0.0444613 | 297.950 |
| 24300.0 | 220.950 | 2797.58 | 0.0441089 | 297.983 |
| 24350.0 | 221.000 | 2776.03 | 0.0437593 | 298.017 |
| 24400.0 | 221.050 | 2754.66 | 0.0434126 | 298.051 |
| 24450.0 | 221.100 | 2733.46 | 0.0430687 | 298.085 |
| 24500.0 | 221.150 | 2712.42 | 0.0427276 | 298.118 |
| 24550.0 | 221.200 | 2691.56 | 0.0423893 | 298.152 |
| 24600.0 | 221.250 | 2670.85 | 0.0420538 | 298.186 |
| 24650.0 | 221.300 | 2650.32 | 0.0417210 | 298.219 |
| 24700.0 | 221.350 | 2629.94 | 0.0413909 | 298.253 |
| 24750.0 | 221.400 | 2609.73 | 0.0410634 | 298.287 |
| 24800.0 | 221.450 | 2589.67 | 0.0407387 | 298.320 |
| 24850.0 | 221.500 | 2569.77 | 0.0404166 | 298.354 |
| 24900.0 | 221.550 | 2550.03 | 0.0400971 | 298.388 |
| 24950.0 | 221.600 | 2530.45 | 0.0397801 | 298.421 |
| 25000.0 | 221.650 | 2511.02 | 0.0394658 | 298.455 |
| 25050.0 | 221.700 | 2491.75 | 0.0391540 | 298.489 |

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| 25100.0 | 221.750 | 2472.63 | 0.0388448 | 298.522 |
| 25150.0 | 221.800 | 2453.65 | 0.0385381 | 298.556 |
| 25200.0 | 221.850 | 2434.83 | 0.0382338 | 298.590 |
| 25250.0 | 221.900 | 2416.16 | 0.0379321 | 298.623 |
| 25300.0 | 221.950 | 2397.63 | 0.0376327 | 298.657 |
| 25350.0 | 222.000 | 2379.25 | 0.0373358 | 298.691 |
| 25400.0 | 222.050 | 2361.02 | 0.0370414 | 298.724 |
| 25450.0 | 222.100 | 2342.93 | 0.0367493 | 298.758 |
| 25500.0 | 222.150 | 2324.98 | 0.0364595 | 298.791 |
| 25550.0 | 222.200 | 2307.17 | 0.0361721 | 298.825 |
| 25600.0 | 222.250 | 2289.51 | 0.0358871 | 298.859 |
| 25650.0 | 222.300 | 2271.98 | 0.0356044 | 298.892 |
| 25700.0 | 222.350 | 2254.59 | 0.0353239 | 298.926 |
| 25750.0 | 222.400 | 2237.34 | 0.0350457 | 298.960 |
| 25800.0 | 222.450 | 2220.22 | 0.0347698 | 298.993 |
| 25850.0 | 222.500 | 2203.24 | 0.0344961 | 299.027 |
| 25900.0 | 222.550 | 2186.39 | 0.0342246 | 299.060 |
| 25950.0 | 222.600 | 2169.68 | 0.0339553 | 299.094 |
| 26000.0 | 222.650 | 2153.09 | 0.0336882 | 299.128 |
| 26050.0 | 222.700 | 2136.64 | 0.0334233 | 299.161 |
| 26100.0 | 222.750 | 2120.32 | 0.0331605 | 299.195 |
| 26150.0 | 222.800 | 2104.12 | 0.0328998 | 299.228 |
| 26200.0 | 222.850 | 2088.05 | 0.0326413 | 299.262 |
| 26250.0 | 222.900 | 2072.11 | 0.0323848 | 299.295 |
| 26300.0 | 222.950 | 2056.29 | 0.0321304 | 299.329 |
| 26350.0 | 223.000 | 2040.60 | 0.0318780 | 299.363 |
| 26400.0 | 223.050 | 2025.03 | 0.0316277 | 299.396 |
| 26450.0 | 223.100 | 2009.58 | 0.0313794 | 299.430 |
| 26500.0 | 223.150 | 1994.26 | 0.0311331 | 299.463 |
| 26550.0 | 223.200 | 1979.05 | 0.0308888 | 299.497 |
| 26600.0 | 223.250 | 1963.97 | 0.0306465 | 299.530 |
| 26650.0 | 223.300 | 1949.00 | 0.0304061 | 299.564 |
| 26700.0 | 223.350 | 1934.15 | 0.0301677 | 299.597 |
| 26750.0 | 223.400 | 1919.41 | 0.0299312 | 299.631 |
| 26800.0 | 223.450 | 1904.80 | 0.0296966 | 299.664 |
| 26850.0 | 223.500 | 1890.29 | 0.0294638 | 299.698 |
| 26900.0 | 223.550 | 1875.90 | 0.0292330 | 299.732 |
| 26950.0 | 223.600 | 1861.62 | 0.0290040 | 299.765 |
| 27000.0 | 223.650 | 1847.46 | 0.0287769 | 299.799 |
| 27050.0 | 223.700 | 1833.40 | 0.0285516 | 299.832 |
| 27100.0 | 223.750 | 1819.46 | 0.0283281 | 299.866 |
| 27150.0 | 223.800 | 1805.62 | 0.0281064 | 299.899 |
| 27200.0 | 223.850 | 1791.89 | 0.0278865 | 299.933 |
| 27250.0 | 223.900 | 1778.27 | 0.0276683 | 299.966 |
| 27300.0 | 223.950 | 1764.76 | 0.0274519 | 300.000 |
| 27350.0 | 224.000 | 1751.35 | 0.0272373 | 300.033 |

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| 27400.0 | 224.050 | 1738.05 | 0.0270244 | 300.067 |
| 27450.0 | 224.100 | 1724.85 | 0.0268131 | 300.100 |
| 27500.0 | 224.150 | 1711.75 | 0.0266036 | 300.133 |
| 27550.0 | 224.200 | 1698.76 | 0.0263958 | 300.167 |
| 27600.0 | 224.250 | 1685.87 | 0.0261896 | 300.200 |
| 27650.0 | 224.300 | 1673.08 | 0.0259851 | 300.234 |
| 27700.0 | 224.350 | 1660.39 | 0.0257823 | 300.267 |
| 27750.0 | 224.400 | 1647.79 | 0.0255810 | 300.301 |
| 27800.0 | 224.450 | 1635.30 | 0.0253814 | 300.334 |
| 27850.0 | 224.500 | 1622.90 | 0.0251834 | 300.368 |
| 27900.0 | 224.550 | 1610.60 | 0.0249870 | 300.401 |
| 27950.0 | 224.600 | 1598.40 | 0.0247921 | 300.435 |
| 28000.0 | 224.650 | 1586.29 | 0.0245988 | 300.468 |
| 28050.0 | 224.700 | 1574.28 | 0.0244071 | 300.501 |
| 28100.0 | 224.750 | 1562.35 | 0.0242169 | 300.535 |
| 28150.0 | 224.800 | 1550.53 | 0.0240282 | 300.568 |
| 28200.0 | 224.850 | 1538.79 | 0.0238410 | 300.602 |
| 28250.0 | 224.900 | 1527.15 | 0.0236553 | 300.635 |
| 28300.0 | 224.950 | 1515.59 | 0.0234712 | 300.669 |
| 28350.0 | 225.000 | 1504.13 | 0.0232884 | 300.702 |
| 28400.0 | 225.050 | 1492.75 | 0.0231072 | 300.735 |
| 28450.0 | 225.100 | 1481.47 | 0.0229274 | 300.769 |
| 28500.0 | 225.150 | 1470.27 | 0.0227490 | 300.802 |
| 28550.0 | 225.200 | 1459.16 | 0.0225721 | 300.836 |
| 28600.0 | 225.250 | 1448.13 | 0.0223966 | 300.869 |
| 28650.0 | 225.300 | 1437.19 | 0.0222225 | 300.902 |
| 28700.0 | 225.350 | 1426.34 | 0.0220498 | 300.936 |
| 28750.0 | 225.400 | 1415.57 | 0.0218784 | 300.969 |
| 28800.0 | 225.450 | 1404.89 | 0.0217084 | 301.003 |
| 28850.0 | 225.500 | 1394.28 | 0.0215398 | 301.036 |
| 28900.0 | 225.550 | 1383.76 | 0.0213726 | 301.069 |
| 28950.0 | 225.600 | 1373.32 | 0.0212066 | 301.103 |
| 29000.0 | 225.650 | 1362.96 | 0.0210420 | 301.136 |
| 29050.0 | 225.700 | 1352.69 | 0.0208787 | 301.169 |
| 29100.0 | 225.750 | 1342.49 | 0.0207167 | 301.203 |
| 29150.0 | 225.800 | 1332.37 | 0.0205560 | 301.236 |
| 29200.0 | 225.850 | 1322.33 | 0.0203966 | 301.269 |
| 29250.0 | 225.900 | 1312.37 | 0.0202385 | 301.303 |
| 29300.0 | 225.950 | 1302.48 | 0.0200816 | 301.336 |
| 29350.0 | 226.000 | 1292.68 | 0.0199259 | 301.369 |
| 29400.0 | 226.050 | 1282.94 | 0.0197716 | 301.403 |
| 29450.0 | 226.100 | 1273.29 | 0.0196184 | 301.436 |
| 29500.0 | 226.150 | 1263.70 | 0.0194664 | 301.469 |
| 29550.0 | 226.200 | 1254.20 | 0.0193157 | 301.503 |
| 29600.0 | 226.250 | 1244.76 | 0.0191662 | 301.536 |
| 29650.0 | 226.300 | 1235.40 | 0.0190178 | 301.569 |
| 29700.0 | 226.350 | 1226.11 | 0.0188707 | 301.603 |

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|---------|---------|---------|-----------|---------|
| 29750.0 | 226.400 | 1216.89 | 0.0187247 | 301.636 |
| 29800.0 | 226.450 | 1207.75 | 0.0185798 | 301.669 |
| 29850.0 | 226.500 | 1198.67 | 0.0184362 | 301.703 |
| 29900.0 | 226.550 | 1189.67 | 0.0182936 | 301.736 |
| 29950.0 | 226.600 | 1180.73 | 0.0181522 | 301.769 |
| 30000.0 | 226.650 | 1171.87 | 0.0180119 | 301.803 |
| 30050.0 | 226.700 | 1163.07 | 0.0178728 | 301.836 |
| 30100.0 | 226.750 | 1154.34 | 0.0177347 | 301.869 |
| 30150.0 | 226.800 | 1145.68 | 0.0175978 | 301.902 |
| 30200.0 | 226.850 | 1137.08 | 0.0174619 | 301.936 |
| 30250.0 | 226.900 | 1128.55 | 0.0173271 | 301.969 |
| 30300.0 | 226.950 | 1120.09 | 0.0171934 | 302.002 |
| 30350.0 | 227.000 | 1111.69 | 0.0170607 | 302.036 |
| 30400.0 | 227.050 | 1103.36 | 0.0169291 | 302.069 |
| 30450.0 | 227.100 | 1095.09 | 0.0167985 | 302.102 |
| 30500.0 | 227.150 | 1086.88 | 0.0166690 | 302.135 |
| 30550.0 | 227.200 | 1078.74 | 0.0165405 | 302.169 |
| 30600.0 | 227.250 | 1070.66 | 0.0164130 | 302.202 |
| 30650.0 | 227.300 | 1062.65 | 0.0162865 | 302.235 |
| 30700.0 | 227.350 | 1054.69 | 0.0161610 | 302.268 |
| 30750.0 | 227.400 | 1046.80 | 0.0160365 | 302.301 |
| 30800.0 | 227.450 | 1038.97 | 0.0159130 | 302.335 |
| 30850.0 | 227.500 | 1031.19 | 0.0157905 | 302.368 |
| 30900.0 | 227.550 | 1023.48 | 0.0156690 | 302.401 |
| 30950.0 | 227.600 | 1015.83 | 0.0155484 | 302.434 |
| 31000.0 | 227.650 | 1008.23 | 0.0154288 | 302.468 |
| 31050.0 | 227.700 | 1000.70 | 0.0153101 | 302.501 |
| 31100.0 | 227.750 | 993.218 | 0.0151923 | 302.534 |
| 31150.0 | 227.800 | 985.797 | 0.0150755 | 302.567 |
| 31200.0 | 227.850 | 978.434 | 0.0149596 | 302.600 |
| 31250.0 | 227.900 | 971.127 | 0.0148446 | 302.634 |
| 31300.0 | 227.950 | 963.876 | 0.0147306 | 302.667 |
| 31350.0 | 228.000 | 956.681 | 0.0146174 | 302.700 |
| 31400.0 | 228.050 | 949.541 | 0.0145051 | 302.733 |
| 31450.0 | 228.100 | 942.456 | 0.0143937 | 302.766 |
| 31500.0 | 228.150 | 935.425 | 0.0142832 | 302.800 |
| 31550.0 | 228.200 | 928.449 | 0.0141736 | 302.833 |
| 31600.0 | 228.250 | 921.526 | 0.0140648 | 302.866 |
| 31650.0 | 228.300 | 914.656 | 0.0139569 | 302.899 |
| 31700.0 | 228.350 | 907.838 | 0.0138499 | 302.932 |
| 31750.0 | 228.400 | 901.073 | 0.0137437 | 302.965 |
| 31800.0 | 228.450 | 894.360 | 0.0136383 | 302.999 |
| 31850.0 | 228.500 | 887.699 | 0.0135337 | 303.032 |
| 31900.0 | 228.550 | 881.088 | 0.0134300 | 303.065 |
| 31950.0 | 228.600 | 874.528 | 0.0133271 | 303.098 |
| 32000.0 | 228.650 | 868.019 | 0.0132250 | 303.131 |

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| 32050.0 | 228.790 | 861.560 | 0.0131186 | 303.224 |
| 32100.0 | 228.930 | 855.154 | 0.0130131 | 303.317 |
| 32150.0 | 229.070 | 848.799 | 0.0129085 | 303.409 |
| 32200.0 | 229.210 | 842.495 | 0.0128048 | 303.502 |
| 32250.0 | 229.350 | 836.241 | 0.0127020 | 303.595 |
| 32300.0 | 229.490 | 830.038 | 0.0126001 | 303.688 |
| 32350.0 | 229.630 | 823.885 | 0.0124990 | 303.780 |
| 32400.0 | 229.770 | 817.781 | 0.0123989 | 303.873 |
| 32450.0 | 229.910 | 811.725 | 0.0122996 | 303.965 |
| 32500.0 | 230.050 | 805.719 | 0.0122011 | 304.058 |
| 32550.0 | 230.190 | 799.760 | 0.0121035 | 304.150 |
| 32600.0 | 230.330 | 793.849 | 0.0120068 | 304.243 |
| 32650.0 | 230.470 | 787.985 | 0.0119108 | 304.335 |
| 32700.0 | 230.610 | 782.168 | 0.0118157 | 304.428 |
| 32750.0 | 230.750 | 776.398 | 0.0117214 | 304.520 |
| 32800.0 | 230.890 | 770.674 | 0.0116280 | 304.612 |
| 32850.0 | 231.030 | 764.995 | 0.0115353 | 304.705 |
| 32900.0 | 231.170 | 759.361 | 0.0114434 | 304.797 |
| 32950.0 | 231.310 | 753.772 | 0.0113523 | 304.889 |
| 33000.0 | 231.450 | 748.228 | 0.0112620 | 304.982 |
| 33050.0 | 231.590 | 742.728 | 0.0111724 | 305.074 |
| 33100.0 | 231.730 | 737.272 | 0.0110837 | 305.166 |
| 33150.0 | 231.870 | 731.859 | 0.0109956 | 305.258 |
| 33200.0 | 232.010 | 726.489 | 0.0109084 | 305.350 |
| 33250.0 | 232.150 | 721.161 | 0.0108219 | 305.442 |
| 33300.0 | 232.290 | 715.876 | 0.0107361 | 305.535 |
| 33350.0 | 232.430 | 710.632 | 0.0106510 | 305.627 |
| 33400.0 | 232.570 | 705.431 | 0.0105667 | 305.719 |
| 33450.0 | 232.710 | 700.270 | 0.0104831 | 305.811 |
| 33500.0 | 232.850 | 695.150 | 0.0104002 | 305.903 |
| 33550.0 | 232.990 | 690.071 | 0.0103180 | 305.995 |
| 33600.0 | 233.130 | 685.032 | 0.0102365 | 306.086 |
| 33650.0 | 233.270 | 680.032 | 0.0101557 | 306.178 |
| 33700.0 | 233.410 | 675.072 | 0.0100756 | 306.270 |
| 33750.0 | 233.550 | 670.151 | 0.00999611 | 306.362 |
| 33800.0 | 233.690 | 665.269 | 0.00991734 | 306.454 |
| 33850.0 | 233.830 | 660.426 | 0.00983924 | 306.546 |
| 33900.0 | 233.970 | 655.620 | 0.00976181 | 306.637 |
| 33950.0 | 234.110 | 650.852 | 0.00968502 | 306.729 |
| 34000.0 | 234.250 | 646.122 | 0.00960889 | 306.821 |
| 34050.0 | 234.390 | 641.429 | 0.00953340 | 306.913 |
| 34100.0 | 234.530 | 636.773 | 0.00945855 | 307.004 |
| 34150.0 | 234.670 | 632.153 | 0.00938432 | 307.096 |
| 34200.0 | 234.810 | 627.570 | 0.00931073 | 307.187 |
| 34250.0 | 234.950 | 623.023 | 0.00923776 | 307.279 |
| 34300.0 | 235.090 | 618.511 | 0.00916540 | 307.370 |
| 34350.0 | 235.230 | 614.034 | 0.00909365 | 307.462 |

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| 34400.0 | 235.370 | 609.593 | 0.00902250 | 307.553 |
| 34450.0 | 235.510 | 605.186 | 0.00895195 | 307.645 |
| 34500.0 | 235.650 | 600.814 | 0.00888200 | 307.736 |
| 34550.0 | 235.790 | 596.476 | 0.00881263 | 307.828 |
| 34600.0 | 235.930 | 592.172 | 0.00874385 | 307.919 |
| 34650.0 | 236.070 | 587.901 | 0.00867564 | 308.010 |
| 34700.0 | 236.210 | 583.664 | 0.00860800 | 308.102 |
| 34750.0 | 236.350 | 579.459 | 0.00854094 | 308.193 |
| 34800.0 | 236.490 | 575.288 | 0.00847443 | 308.284 |
| 34850.0 | 236.630 | 571.149 | 0.00840848 | 308.376 |
| 34900.0 | 236.770 | 567.042 | 0.00834308 | 308.467 |
| 34950.0 | 236.910 | 562.967 | 0.00827823 | 308.558 |
| 35000.0 | 237.050 | 558.924 | 0.00821392 | 308.649 |
| 35050.0 | 237.190 | 554.912 | 0.00815015 | 308.740 |
| 35100.0 | 237.330 | 550.931 | 0.00808691 | 308.831 |
| 35150.0 | 237.470 | 546.981 | 0.00802420 | 308.922 |
| 35200.0 | 237.610 | 543.062 | 0.00796201 | 309.013 |
| 35250.0 | 237.750 | 539.173 | 0.00790034 | 309.104 |
| 35300.0 | 237.890 | 535.314 | 0.00783918 | 309.195 |
| 35350.0 | 238.030 | 531.485 | 0.00777853 | 309.286 |
| 35400.0 | 238.170 | 527.686 | 0.00771839 | 309.377 |
| 35450.0 | 238.310 | 523.916 | 0.00765874 | 309.468 |
| 35500.0 | 238.450 | 520.175 | 0.00759959 | 309.559 |
| 35550.0 | 238.590 | 516.463 | 0.00754094 | 309.650 |
| 35600.0 | 238.730 | 512.780 | 0.00748277 | 309.741 |
| 35650.0 | 238.870 | 509.125 | 0.00742508 | 309.832 |
| 35700.0 | 239.010 | 505.498 | 0.00736787 | 309.922 |
| 35750.0 | 239.150 | 501.900 | 0.00731113 | 310.013 |
| 35800.0 | 239.290 | 498.329 | 0.00725486 | 310.104 |
| 35850.0 | 239.430 | 494.785 | 0.00719906 | 310.195 |
| 35900.0 | 239.570 | 491.269 | 0.00714372 | 310.285 |
| 35950.0 | 239.710 | 487.779 | 0.00708884 | 310.376 |
| 36000.0 | 239.850 | 484.317 | 0.00703441 | 310.467 |
| 36050.0 | 239.990 | 480.881 | 0.00698043 | 310.557 |
| 36100.0 | 240.130 | 477.471 | 0.00692690 | 310.648 |
| 36150.0 | 240.270 | 474.088 | 0.00687381 | 310.738 |
| 36200.0 | 240.410 | 470.730 | 0.00682115 | 310.829 |
| 36250.0 | 240.550 | 467.398 | 0.00676893 | 310.919 |
| 36300.0 | 240.690 | 464.092 | 0.00671714 | 311.010 |
| 36350.0 | 240.830 | 460.811 | 0.00666577 | 311.100 |
| 36400.0 | 240.970 | 457.555 | 0.00661483 | 311.191 |
| 36450.0 | 241.110 | 454.324 | 0.00656430 | 311.281 |
| 36500.0 | 241.250 | 451.118 | 0.00651419 | 311.371 |
| 36550.0 | 241.390 | 447.936 | 0.00646449 | 311.462 |
| 36600.0 | 241.530 | 444.778 | 0.00641520 | 311.552 |
| 36650.0 | 241.670 | 441.645 | 0.00636632 | 311.642 |

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|---------|---------|---------|------------|---------|
| 36700.0 | 241.810 | 438.535 | 0.00631783 | 311.733 |
| 36750.0 | 241.950 | 435.449 | 0.00626974 | 311.823 |
| 36800.0 | 242.090 | 432.386 | 0.00622205 | 311.913 |
| 36850.0 | 242.230 | 429.347 | 0.00617474 | 312.003 |
| 36900.0 | 242.370 | 426.331 | 0.00612782 | 312.093 |
| 36950.0 | 242.510 | 423.338 | 0.00608128 | 312.183 |
| 37000.0 | 242.650 | 420.367 | 0.00603513 | 312.274 |
| 37050.0 | 242.790 | 417.419 | 0.00598935 | 312.364 |
| 37100.0 | 242.930 | 414.494 | 0.00594394 | 312.454 |
| 37150.0 | 243.070 | 411.590 | 0.00589891 | 312.544 |
| 37200.0 | 243.210 | 408.709 | 0.00585424 | 312.634 |
| 37250.0 | 243.350 | 405.849 | 0.00580993 | 312.724 |
| 37300.0 | 243.490 | 403.011 | 0.00576599 | 312.814 |
| 37350.0 | 243.630 | 400.194 | 0.00572240 | 312.904 |
| 37400.0 | 243.770 | 397.399 | 0.00567917 | 312.993 |
| 37450.0 | 243.910 | 394.625 | 0.00563629 | 313.083 |
| 37500.0 | 244.050 | 391.872 | 0.00559375 | 313.173 |
| 37550.0 | 244.190 | 389.139 | 0.00555156 | 313.263 |
| 37600.0 | 244.330 | 386.427 | 0.00550972 | 313.353 |
| 37650.0 | 244.470 | 383.736 | 0.00546821 | 313.442 |
| 37700.0 | 244.610 | 381.065 | 0.00542704 | 313.532 |
| 37750.0 | 244.750 | 378.414 | 0.00538620 | 313.622 |
| 37800.0 | 244.890 | 375.783 | 0.00534569 | 313.712 |
| 37850.0 | 245.030 | 373.172 | 0.00530551 | 313.801 |
| 37900.0 | 245.170 | 370.580 | 0.00526566 | 313.891 |
| 37950.0 | 245.310 | 368.008 | 0.00522612 | 313.981 |
| 38000.0 | 245.450 | 365.455 | 0.00518691 | 314.070 |
| 38050.0 | 245.590 | 362.921 | 0.00514801 | 314.160 |
| 38100.0 | 245.730 | 360.406 | 0.00510943 | 314.249 |
| 38150.0 | 245.870 | 357.910 | 0.00507115 | 314.339 |
| 38200.0 | 246.010 | 355.433 | 0.00503319 | 314.428 |
| 38250.0 | 246.150 | 352.974 | 0.00499553 | 314.518 |
| 38300.0 | 246.290 | 350.534 | 0.00495817 | 314.607 |
| 38350.0 | 246.430 | 348.112 | 0.00492112 | 314.696 |
| 38400.0 | 246.570 | 345.708 | 0.00488436 | 314.786 |
| 38450.0 | 246.710 | 343.322 | 0.00484789 | 314.875 |
| 38500.0 | 246.850 | 340.954 | 0.00481172 | 314.965 |
| 38550.0 | 246.990 | 338.603 | 0.00477584 | 315.054 |
| 38600.0 | 247.130 | 336.270 | 0.00474025 | 315.143 |
| 38650.0 | 247.270 | 333.955 | 0.00470494 | 315.232 |
| 38700.0 | 247.410 | 331.656 | 0.00466992 | 315.322 |
| 38750.0 | 247.550 | 329.375 | 0.00463517 | 315.411 |
| 38800.0 | 247.690 | 327.111 | 0.00460071 | 315.500 |
| 38850.0 | 247.830 | 324.863 | 0.00456651 | 315.589 |
| 38900.0 | 247.970 | 322.632 | 0.00453260 | 315.678 |
| 38950.0 | 248.110 | 320.418 | 0.00449895 | 315.767 |
| 39000.0 | 248.250 | 318.220 | 0.00446557 | 315.856 |

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