

Z.U.O. "EKO - SOFT"
Łódź ul. Rogozińskiego 17/7
tel. 042 648 71 85

HAŁAS PRZEMYSŁOWY i DROGOWY
PROGRAM SON2 WERSJA 3.2

Właściciel licencji: Zielony Szlak
Urszula Dobrzyńska
ul. Jana Pawła II 5/16 09-140 Raciąż
Licencja nr UD/09140/S12/08 z dnia 13.03.2008

DANE WEJSCIOWE

Rodzaj obliczeń: Poziom hałasu równoważnego

1. Nazwa projektu: Siłownia wiatrowa msc. Pilitowo Dz Nr 93/2 i 94/2 - 800 kW - 101,3 dB - h=60m
2. Temperatura powietrza [st C.] = 10
3. Wilgotność względna powietrza [%] = 70
4. Tło akustyczne dB(A):
Pora dnia : 0
Pora nocy : 0
5. Rodzaj gruntu : grunt porowaty, wskaźnik gruntu G = 1

6. Punktowe źródła hałasu

| Lp | Symbol | Współrzędne źródła | | | Rodzaj źródła | LAW | tD | tN | Do |
|----|--------|--------------------|-------|------|---------------|-------|-------|-------|----|
| | | x | y | z | | | | | |
| | | m | m | m | | | h | h | dB |
| 1 | W 1 | 205.9 | 358.0 | 60.0 | wszechkier. | 101.3 | 8.000 | 1.000 | |

LAW - poziom mocy akustycznej źródła nominalny
tD - czas pracy źródła w przedziale 8 kolejnych najmniej korzystnych godzin dnia
tN - czas pracy źródła w przedziale 1 najmniej korzystnej godziny nocy

LAeq , noc

| | | | | |
|-----|-----|-----|-----|-----|
| 0 | 10 | 20 | 30 | 40 |
| 50 | 60 | 70 | 80 | 90 |
| 100 | 110 | 120 | 130 | 140 |
| 150 | 160 | 170 | 180 | 190 |
| 200 | 210 | 220 | 230 | 240 |
| 250 | 260 | 270 | 280 | 290 |
| 300 | 310 | 320 | 330 | 340 |
| 350 | 360 | 370 | 380 | 390 |
| 400 | 410 | 420 | 430 | 440 |
| 450 | 460 | 470 | 480 | 490 |
| 500 | 510 | 520 | 530 | 540 |
| 550 | 560 | 570 | 580 | 590 |
| 600 | 610 | 620 | 630 | 640 |
| 650 | 660 | 670 | 680 | 690 |
| 700 | 710 | 720 | 730 | 740 |
| 750 | 760 | 770 | 780 | 790 |
| 800 | 810 | 820 | 830 | 840 |
| 850 | 860 | 870 | 880 | 890 |
| 900 | | | | |

| | | | | | |
|-----|------|------|------|------|------|
| 600 | 34.5 | 34.7 | 34.9 | 35.1 | 35.3 |
| | 35.4 | 35.6 | 35.8 | 35.9 | 36.1 |
| | 36.2 | 36.3 | 36.4 | 36.6 | 36.7 |
| | 36.7 | 36.8 | 36.9 | 36.9 | 37.0 |
| | 37.0 | 37.0 | 37.0 | 36.9 | 36.9 |
| | 36.8 | 36.8 | 36.7 | 36.6 | 36.5 |
| | 36.3 | 36.2 | 36.1 | 35.9 | 35.8 |
| | 35.6 | 35.5 | 35.3 | 35.1 | 34.9 |
| | 34.8 | 34.6 | 34.4 | 34.2 | 34.0 |
| | 33.8 | 33.6 | 33.4 | 33.3 | 33.1 |
| | 32.9 | 32.7 | 32.5 | 32.3 | 32.1 |
| | 32.0 | 31.8 | 31.6 | 31.4 | 31.2 |
| | 31.1 | 30.9 | 30.7 | 30.6 | 30.4 |
| | 30.2 | 30.1 | 29.9 | 29.7 | 29.6 |
| | 29.4 | 29.3 | 29.1 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.4 | 28.2 | 28.1 |
| | 27.9 | 27.8 | 27.6 | 27.5 | 27.4 |
| | 27.2 | 27.1 | 27.0 | 26.8 | 26.7 |
| | 26.6 | | | | |
| 590 | 34.8 | 34.9 | 35.1 | 35.3 | 35.5 |
| | 35.7 | 35.9 | 36.0 | 36.2 | 36.4 |
| | 36.5 | 36.6 | 36.8 | 36.9 | 37.0 |
| | 37.1 | 37.2 | 37.2 | 37.3 | 37.3 |
| | 37.3 | 37.3 | 37.3 | 37.3 | 37.2 |
| | 37.2 | 37.1 | 37.0 | 36.9 | 36.8 |
| | 36.7 | 36.5 | 36.4 | 36.2 | 36.1 |
| | 35.9 | 35.7 | 35.5 | 35.4 | 35.2 |
| | 35.0 | 34.8 | 34.6 | 34.4 | 34.2 |
| | 34.0 | 33.8 | 33.6 | 33.4 | 33.2 |
| | 33.0 | 32.8 | 32.7 | 32.5 | 32.3 |
| | 32.1 | 31.9 | 31.7 | 31.5 | 31.4 |
| | 31.2 | 31.0 | 30.8 | 30.7 | 30.5 |
| | 30.3 | 30.1 | 30.0 | 29.8 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.9 |
| | 28.7 | 28.6 | 28.4 | 28.3 | 28.1 |
| | 28.0 | 27.8 | 27.7 | 27.6 | 27.4 |
| | 27.3 | 27.1 | 27.0 | 26.9 | 26.7 |
| | 26.6 | | | | |
| 580 | 35.0 | 35.2 | 35.4 | 35.6 | 35.8 |

| | | | | | |
|-----|------|------|------|------|------|
| | 36.0 | 36.1 | 36.3 | 36.5 | 36.7 |
| | 36.8 | 37.0 | 37.1 | 37.2 | 37.4 |
| | 37.5 | 37.5 | 37.6 | 37.7 | 37.7 |
| | 37.7 | 37.7 | 37.7 | 37.7 | 37.6 |
| | 37.6 | 37.5 | 37.4 | 37.3 | 37.1 |
| | 37.0 | 36.9 | 36.7 | 36.5 | 36.4 |
| | 36.2 | 36.0 | 35.8 | 35.6 | 35.4 |
| | 35.2 | 35.0 | 34.8 | 34.6 | 34.4 |
| | 34.2 | 34.0 | 33.8 | 33.6 | 33.4 |
| | 33.2 | 33.0 | 32.8 | 32.6 | 32.4 |
| | 32.2 | 32.0 | 31.8 | 31.6 | 31.5 |
| | 31.3 | 31.1 | 30.9 | 30.7 | 30.6 |
| | 30.4 | 30.2 | 30.1 | 29.9 | 29.7 |
| | 29.6 | 29.4 | 29.2 | 29.1 | 28.9 |
| | 28.8 | 28.6 | 28.5 | 28.3 | 28.2 |
| | 28.0 | 27.9 | 27.7 | 27.6 | 27.5 |
| | 27.3 | 27.2 | 27.1 | 26.9 | 26.8 |
| | 26.7 | | | | |
| 570 | 35.2 | 35.4 | 35.6 | 35.8 | 36.0 |
| | 36.2 | 36.4 | 36.6 | 36.8 | 37.0 |
| | 37.2 | 37.3 | 37.5 | 37.6 | 37.7 |
| | 37.8 | 37.9 | 38.0 | 38.1 | 38.1 |
| | 38.1 | 38.1 | 38.1 | 38.1 | 38.0 |
| | 37.9 | 37.9 | 37.8 | 37.6 | 37.5 |
| | 37.3 | 37.2 | 37.0 | 36.8 | 36.7 |
| | 36.5 | 36.3 | 36.1 | 35.9 | 35.6 |
| | 35.4 | 35.2 | 35.0 | 34.8 | 34.6 |
| | 34.4 | 34.2 | 34.0 | 33.7 | 33.5 |
| | 33.3 | 33.1 | 32.9 | 32.7 | 32.5 |
| | 32.3 | 32.1 | 31.9 | 31.8 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.7 |
| | 30.5 | 30.3 | 30.1 | 30.0 | 29.8 |
| | 29.6 | 29.5 | 29.3 | 29.2 | 29.0 |
| | 28.8 | 28.7 | 28.5 | 28.4 | 28.2 |
| | 28.1 | 27.9 | 27.8 | 27.7 | 27.5 |
| | 27.4 | 27.2 | 27.1 | 27.0 | 26.8 |
| | 26.7 | | | | |
| 560 | 35.4 | 35.6 | 35.8 | 36.1 | 36.3 |
| | 36.5 | 36.7 | 36.9 | 37.1 | 37.3 |
| | 37.5 | 37.7 | 37.8 | 38.0 | 38.1 |
| | 38.2 | 38.3 | 38.4 | 38.5 | 38.5 |
| | 38.6 | 38.6 | 38.5 | 38.5 | 38.4 |
| | 38.4 | 38.3 | 38.1 | 38.0 | 37.9 |
| | 37.7 | 37.5 | 37.3 | 37.2 | 37.0 |
| | 36.7 | 36.5 | 36.3 | 36.1 | 35.9 |
| | 35.7 | 35.4 | 35.2 | 35.0 | 34.8 |
| | 34.6 | 34.3 | 34.1 | 33.9 | 33.7 |
| | 33.5 | 33.3 | 33.1 | 32.9 | 32.7 |
| | 32.5 | 32.3 | 32.1 | 31.9 | 31.7 |
| | 31.5 | 31.3 | 31.1 | 30.9 | 30.7 |
| | 30.6 | 30.4 | 30.2 | 30.0 | 29.9 |
| | 29.7 | 29.5 | 29.4 | 29.2 | 29.1 |
| | 28.9 | 28.7 | 28.6 | 28.4 | 28.3 |
| | 28.1 | 28.0 | 27.8 | 27.7 | 27.6 |
| | 27.4 | 27.3 | 27.1 | 27.0 | 26.9 |
| | 26.7 | | | | |
| 550 | 35.6 | 35.9 | 36.1 | 36.3 | 36.6 |
| | 36.8 | 37.0 | 37.2 | 37.4 | 37.6 |
| | 37.8 | 38.0 | 38.2 | 38.4 | 38.5 |
| | 38.6 | 38.8 | 38.9 | 38.9 | 39.0 |
| | 39.0 | 39.0 | 39.0 | 38.9 | 38.9 |

| | | | | | |
|-----|------|------|------|------|------|
| | 38.8 | 38.7 | 38.5 | 38.4 | 38.2 |
| | 38.1 | 37.9 | 37.7 | 37.5 | 37.3 |
| | 37.0 | 36.8 | 36.6 | 36.4 | 36.1 |
| | 35.9 | 35.7 | 35.4 | 35.2 | 35.0 |
| | 34.7 | 34.5 | 34.3 | 34.1 | 33.8 |
| | 33.6 | 33.4 | 33.2 | 33.0 | 32.8 |
| | 32.6 | 32.4 | 32.2 | 32.0 | 31.8 |
| | 31.6 | 31.4 | 31.2 | 31.0 | 30.8 |
| | 30.6 | 30.5 | 30.3 | 30.1 | 29.9 |
| | 29.8 | 29.6 | 29.4 | 29.3 | 29.1 |
| | 29.0 | 28.8 | 28.6 | 28.5 | 28.3 |
| | 28.2 | 28.0 | 27.9 | 27.7 | 27.6 |
| | 27.5 | 27.3 | 27.2 | 27.0 | 26.9 |
| | 26.8 | | | | |
| 540 | 35.8 | 36.1 | 36.3 | 36.6 | 36.8 |
| | 37.1 | 37.3 | 37.5 | 37.8 | 38.0 |
| | 38.2 | 38.4 | 38.6 | 38.8 | 38.9 |
| | 39.1 | 39.2 | 39.3 | 39.4 | 39.4 |
| | 39.5 | 39.5 | 39.4 | 39.4 | 39.3 |
| | 39.2 | 39.1 | 39.0 | 38.8 | 38.6 |
| | 38.4 | 38.2 | 38.0 | 37.8 | 37.6 |
| | 37.3 | 37.1 | 36.9 | 36.6 | 36.4 |
| | 36.1 | 35.9 | 35.6 | 35.4 | 35.2 |
| | 34.9 | 34.7 | 34.5 | 34.2 | 34.0 |
| | 33.8 | 33.5 | 33.3 | 33.1 | 32.9 |
| | 32.7 | 32.5 | 32.3 | 32.1 | 31.9 |
| | 31.7 | 31.5 | 31.3 | 31.1 | 30.9 |
| | 30.7 | 30.5 | 30.4 | 30.2 | 30.0 |
| | 29.8 | 29.7 | 29.5 | 29.3 | 29.2 |
| | 29.0 | 28.9 | 28.7 | 28.5 | 28.4 |
| | 28.2 | 28.1 | 27.9 | 27.8 | 27.6 |
| | 27.5 | 27.4 | 27.2 | 27.1 | 26.9 |
| | 26.8 | | | | |
| 530 | 36.1 | 36.3 | 36.6 | 36.8 | 37.1 |
| | 37.3 | 37.6 | 37.8 | 38.1 | 38.3 |
| | 38.6 | 38.8 | 39.0 | 39.2 | 39.4 |
| | 39.5 | 39.7 | 39.8 | 39.9 | 39.9 |
| | 40.0 | 40.0 | 39.9 | 39.9 | 39.8 |
| | 39.7 | 39.5 | 39.4 | 39.2 | 39.0 |
| | 38.8 | 38.6 | 38.4 | 38.1 | 37.9 |
| | 37.6 | 37.4 | 37.1 | 36.9 | 36.6 |
| | 36.4 | 36.1 | 35.8 | 35.6 | 35.3 |
| | 35.1 | 34.9 | 34.6 | 34.4 | 34.1 |
| | 33.9 | 33.7 | 33.4 | 33.2 | 33.0 |
| | 32.8 | 32.6 | 32.4 | 32.2 | 32.0 |
| | 31.8 | 31.6 | 31.4 | 31.2 | 31.0 |
| | 30.8 | 30.6 | 30.4 | 30.2 | 30.1 |
| | 29.9 | 29.7 | 29.6 | 29.4 | 29.2 |
| | 29.1 | 28.9 | 28.7 | 28.6 | 28.4 |
| | 28.3 | 28.1 | 28.0 | 27.8 | 27.7 |
| | 27.5 | 27.4 | 27.3 | 27.1 | 27.0 |
| | 26.8 | | | | |
| 520 | 36.3 | 36.5 | 36.8 | 37.1 | 37.3 |
| | 37.6 | 37.9 | 38.2 | 38.4 | 38.7 |
| | 38.9 | 39.2 | 39.4 | 39.6 | 39.8 |
| | 40.0 | 40.1 | 40.3 | 40.4 | 40.4 |
| | 40.5 | 40.5 | 40.4 | 40.4 | 40.3 |
| | 40.2 | 40.0 | 39.8 | 39.7 | 39.4 |
| | 39.2 | 39.0 | 38.7 | 38.5 | 38.2 |
| | 37.9 | 37.7 | 37.4 | 37.1 | 36.9 |
| | 36.6 | 36.3 | 36.0 | 35.8 | 35.5 |

| | | | | | |
|-----|------|------|------|------|------|
| | 35.3 | 35.0 | 34.8 | 34.5 | 34.3 |
| | 34.0 | 33.8 | 33.6 | 33.3 | 33.1 |
| | 32.9 | 32.7 | 32.5 | 32.3 | 32.0 |
| | 31.8 | 31.6 | 31.4 | 31.2 | 31.1 |
| | 30.9 | 30.7 | 30.5 | 30.3 | 30.1 |
| | 30.0 | 29.8 | 29.6 | 29.4 | 29.3 |
| | 29.1 | 29.0 | 28.8 | 28.6 | 28.5 |
| | 28.3 | 28.2 | 28.0 | 27.9 | 27.7 |
| | 27.6 | 27.4 | 27.3 | 27.2 | 27.0 |
| 510 | 26.9 | | | | |
| | 36.5 | 36.8 | 37.0 | 37.3 | 37.6 |
| | 37.9 | 38.2 | 38.5 | 38.8 | 39.0 |
| | 39.3 | 39.6 | 39.8 | 40.1 | 40.3 |
| | 40.5 | 40.6 | 40.8 | 40.9 | 41.0 |
| | 41.0 | 41.0 | 41.0 | 40.9 | 40.8 |
| | 40.7 | 40.5 | 40.3 | 40.1 | 39.9 |
| | 39.6 | 39.4 | 39.1 | 38.8 | 38.5 |
| | 38.2 | 38.0 | 37.7 | 37.4 | 37.1 |
| | 36.8 | 36.5 | 36.2 | 36.0 | 35.7 |
| | 35.4 | 35.2 | 34.9 | 34.7 | 34.4 |
| | 34.2 | 33.9 | 33.7 | 33.5 | 33.2 |
| | 33.0 | 32.8 | 32.6 | 32.3 | 32.1 |
| | 31.9 | 31.7 | 31.5 | 31.3 | 31.1 |
| | 30.9 | 30.7 | 30.6 | 30.4 | 30.2 |
| | 30.0 | 29.8 | 29.7 | 29.5 | 29.3 |
| | 29.2 | 29.0 | 28.8 | 28.7 | 28.5 |
| | 28.4 | 28.2 | 28.1 | 27.9 | 27.8 |
| | 27.6 | 27.5 | 27.3 | 27.2 | 27.0 |
| 500 | 26.9 | | | | |
| | 36.7 | 37.0 | 37.3 | 37.6 | 37.9 |
| | 38.2 | 38.5 | 38.8 | 39.1 | 39.4 |
| | 39.7 | 40.0 | 40.3 | 40.5 | 40.8 |
| | 41.0 | 41.2 | 41.3 | 41.5 | 41.5 |
| | 41.6 | 41.6 | 41.6 | 41.5 | 41.4 |
| | 41.2 | 41.0 | 40.8 | 40.6 | 40.3 |
| | 40.0 | 39.8 | 39.5 | 39.2 | 38.9 |
| | 38.5 | 38.2 | 37.9 | 37.6 | 37.3 |
| | 37.0 | 36.7 | 36.4 | 36.2 | 35.9 |
| | 35.6 | 35.3 | 35.1 | 34.8 | 34.5 |
| | 34.3 | 34.0 | 33.8 | 33.6 | 33.3 |
| | 33.1 | 32.9 | 32.6 | 32.4 | 32.2 |
| | 32.0 | 31.8 | 31.6 | 31.4 | 31.2 |
| | 31.0 | 30.8 | 30.6 | 30.4 | 30.2 |
| | 30.1 | 29.9 | 29.7 | 29.5 | 29.4 |
| | 29.2 | 29.0 | 28.9 | 28.7 | 28.6 |
| | 28.4 | 28.2 | 28.1 | 27.9 | 27.8 |
| | 27.6 | 27.5 | 27.4 | 27.2 | 27.1 |
| 490 | 26.9 | | | | |
| | 36.9 | 37.2 | 37.5 | 37.8 | 38.1 |
| | 38.5 | 38.8 | 39.1 | 39.4 | 39.8 |
| | 40.1 | 40.4 | 40.7 | 41.0 | 41.3 |
| | 41.5 | 41.7 | 41.9 | 42.1 | 42.2 |
| | 42.2 | 42.2 | 42.2 | 42.1 | 41.9 |
| | 41.8 | 41.6 | 41.3 | 41.1 | 40.8 |
| | 40.5 | 40.2 | 39.8 | 39.5 | 39.2 |
| | 38.8 | 38.5 | 38.2 | 37.9 | 37.6 |
| | 37.2 | 36.9 | 36.6 | 36.3 | 36.0 |
| | 35.8 | 35.5 | 35.2 | 34.9 | 34.7 |
| | 34.4 | 34.2 | 33.9 | 33.7 | 33.4 |
| | 33.2 | 33.0 | 32.7 | 32.5 | 32.3 |
| | 32.1 | 31.9 | 31.7 | 31.5 | 31.3 |

| | | | | | |
|-----|------|------|------|------|------|
| | 31.1 | 30.9 | 30.7 | 30.5 | 30.3 |
| | 30.1 | 29.9 | 29.8 | 29.6 | 29.4 |
| | 29.2 | 29.1 | 28.9 | 28.8 | 28.6 |
| | 28.4 | 28.3 | 28.1 | 28.0 | 27.8 |
| | 27.7 | 27.5 | 27.4 | 27.2 | 27.1 |
| | 27.0 | | | | |
| 480 | 37.1 | 37.4 | 37.7 | 38.1 | 38.4 |
| | 38.7 | 39.1 | 39.4 | 39.8 | 40.1 |
| | 40.5 | 40.8 | 41.2 | 41.5 | 41.8 |
| | 42.1 | 42.3 | 42.5 | 42.7 | 42.8 |
| | 42.9 | 42.9 | 42.8 | 42.7 | 42.6 |
| | 42.4 | 42.1 | 41.9 | 41.6 | 41.2 |
| | 40.9 | 40.6 | 40.2 | 39.9 | 39.5 |
| | 39.1 | 38.8 | 38.5 | 38.1 | 37.8 |
| | 37.4 | 37.1 | 36.8 | 36.5 | 36.2 |
| | 35.9 | 35.6 | 35.3 | 35.1 | 34.8 |
| | 34.5 | 34.3 | 34.0 | 33.8 | 33.5 |
| | 33.3 | 33.0 | 32.8 | 32.6 | 32.4 |
| | 32.1 | 31.9 | 31.7 | 31.5 | 31.3 |
| | 31.1 | 30.9 | 30.7 | 30.5 | 30.3 |
| | 30.2 | 30.0 | 29.8 | 29.6 | 29.5 |
| | 29.3 | 29.1 | 29.0 | 28.8 | 28.6 |
| | 28.5 | 28.3 | 28.2 | 28.0 | 27.9 |
| | 27.7 | 27.6 | 27.4 | 27.3 | 27.1 |
| | 27.0 | | | | |
| 470 | 37.3 | 37.6 | 37.9 | 38.3 | 38.6 |
| | 39.0 | 39.4 | 39.8 | 40.1 | 40.5 |
| | 40.9 | 41.3 | 41.7 | 42.0 | 42.3 |
| | 42.7 | 42.9 | 43.2 | 43.4 | 43.5 |
| | 43.6 | 43.6 | 43.5 | 43.4 | 43.2 |
| | 43.0 | 42.7 | 42.4 | 42.1 | 41.7 |
| | 41.3 | 41.0 | 40.6 | 40.2 | 39.8 |
| | 39.4 | 39.1 | 38.7 | 38.3 | 38.0 |
| | 37.6 | 37.3 | 37.0 | 36.7 | 36.4 |
| | 36.0 | 35.7 | 35.5 | 35.2 | 34.9 |
| | 34.6 | 34.4 | 34.1 | 33.8 | 33.6 |
| | 33.4 | 33.1 | 32.9 | 32.6 | 32.4 |
| | 32.2 | 32.0 | 31.8 | 31.6 | 31.4 |
| | 31.2 | 31.0 | 30.8 | 30.6 | 30.4 |
| | 30.2 | 30.0 | 29.8 | 29.7 | 29.5 |
| | 29.3 | 29.2 | 29.0 | 28.8 | 28.7 |
| | 28.5 | 28.3 | 28.2 | 28.0 | 27.9 |
| | 27.7 | 27.6 | 27.4 | 27.3 | 27.2 |
| | 27.0 | | | | |
| 460 | 37.4 | 37.8 | 38.1 | 38.5 | 38.9 |
| | 39.3 | 39.7 | 40.1 | 40.5 | 40.9 |
| | 41.3 | 41.7 | 42.1 | 42.5 | 42.9 |
| | 43.3 | 43.6 | 43.9 | 44.1 | 44.2 |
| | 44.3 | 44.3 | 44.3 | 44.1 | 43.9 |
| | 43.6 | 43.3 | 43.0 | 42.6 | 42.2 |
| | 41.8 | 41.4 | 41.0 | 40.5 | 40.1 |
| | 39.7 | 39.3 | 38.9 | 38.6 | 38.2 |
| | 37.8 | 37.5 | 37.1 | 36.8 | 36.5 |
| | 36.2 | 35.9 | 35.6 | 35.3 | 35.0 |
| | 34.7 | 34.5 | 34.2 | 33.9 | 33.7 |
| | 33.4 | 33.2 | 32.9 | 32.7 | 32.5 |
| | 32.3 | 32.0 | 31.8 | 31.6 | 31.4 |
| | 31.2 | 31.0 | 30.8 | 30.6 | 30.4 |
| | 30.2 | 30.1 | 29.9 | 29.7 | 29.5 |
| | 29.4 | 29.2 | 29.0 | 28.9 | 28.7 |
| | 28.5 | 28.4 | 28.2 | 28.1 | 27.9 |

| | | | | | |
|-----|------|------|------|------|------|
| | 27.8 | 27.6 | 27.5 | 27.3 | 27.2 |
| | 27.0 | | | | |
| 450 | 37.6 | 38.0 | 38.3 | 38.7 | 39.1 |
| | 39.5 | 39.9 | 40.4 | 40.8 | 41.2 |
| | 41.7 | 42.2 | 42.6 | 43.1 | 43.5 |
| | 43.9 | 44.3 | 44.6 | 44.9 | 45.0 |
| | 45.1 | 45.2 | 45.1 | 44.9 | 44.7 |
| | 44.3 | 44.0 | 43.6 | 43.1 | 42.7 |
| | 42.2 | 41.8 | 41.3 | 40.9 | 40.4 |
| | 40.0 | 39.6 | 39.2 | 38.8 | 38.4 |
| | 38.0 | 37.7 | 37.3 | 37.0 | 36.6 |
| | 36.3 | 36.0 | 35.7 | 35.4 | 35.1 |
| | 34.8 | 34.5 | 34.3 | 34.0 | 33.7 |
| | 33.5 | 33.3 | 33.0 | 32.8 | 32.5 |
| | 32.3 | 32.1 | 31.9 | 31.7 | 31.5 |
| | 31.3 | 31.1 | 30.9 | 30.7 | 30.5 |
| | 30.3 | 30.1 | 29.9 | 29.7 | 29.6 |
| | 29.4 | 29.2 | 29.0 | 28.9 | 28.7 |
| | 28.6 | 28.4 | 28.2 | 28.1 | 27.9 |
| | 27.8 | 27.6 | 27.5 | 27.3 | 27.2 |
| | 27.1 | | | | |
| 440 | 37.7 | 38.1 | 38.5 | 38.9 | 39.3 |
| | 39.7 | 40.2 | 40.6 | 41.1 | 41.6 |
| | 42.1 | 42.6 | 43.1 | 43.6 | 44.1 |
| | 44.6 | 45.0 | 45.4 | 45.7 | 45.9 |
| | 46.0 | 46.0 | 45.9 | 45.7 | 45.4 |
| | 45.1 | 44.6 | 44.2 | 43.7 | 43.2 |
| | 42.7 | 42.2 | 41.7 | 41.2 | 40.7 |
| | 40.3 | 39.8 | 39.4 | 39.0 | 38.6 |
| | 38.2 | 37.8 | 37.4 | 37.1 | 36.8 |
| | 36.4 | 36.1 | 35.8 | 35.5 | 35.2 |
| | 34.9 | 34.6 | 34.3 | 34.1 | 33.8 |
| | 33.6 | 33.3 | 33.1 | 32.8 | 32.6 |
| | 32.4 | 32.1 | 31.9 | 31.7 | 31.5 |
| | 31.3 | 31.1 | 30.9 | 30.7 | 30.5 |
| | 30.3 | 30.1 | 29.9 | 29.8 | 29.6 |
| | 29.4 | 29.2 | 29.1 | 28.9 | 28.7 |
| | 28.6 | 28.4 | 28.3 | 28.1 | 28.0 |
| | 27.8 | 27.7 | 27.5 | 27.4 | 27.2 |
| | 27.1 | | | | |
| 430 | 37.9 | 38.3 | 38.7 | 39.1 | 39.5 |
| | 40.0 | 40.4 | 40.9 | 41.4 | 41.9 |
| | 42.5 | 43.0 | 43.6 | 44.1 | 44.7 |
| | 45.2 | 45.7 | 46.2 | 46.5 | 46.8 |
| | 47.0 | 47.0 | 46.8 | 46.6 | 46.3 |
| | 45.8 | 45.3 | 44.8 | 44.2 | 43.7 |
| | 43.1 | 42.6 | 42.0 | 41.5 | 41.0 |
| | 40.5 | 40.1 | 39.6 | 39.2 | 38.7 |
| | 38.3 | 38.0 | 37.6 | 37.2 | 36.9 |
| | 36.5 | 36.2 | 35.9 | 35.6 | 35.3 |
| | 35.0 | 34.7 | 34.4 | 34.1 | 33.9 |
| | 33.6 | 33.4 | 33.1 | 32.9 | 32.6 |
| | 32.4 | 32.2 | 32.0 | 31.8 | 31.5 |
| | 31.3 | 31.1 | 30.9 | 30.7 | 30.5 |
| | 30.3 | 30.2 | 30.0 | 29.8 | 29.6 |
| | 29.4 | 29.3 | 29.1 | 28.9 | 28.8 |
| | 28.6 | 28.4 | 28.3 | 28.1 | 28.0 |
| | 27.8 | 27.7 | 27.5 | 27.4 | 27.2 |
| | 27.1 | | | | |
| 420 | 38.0 | 38.4 | 38.8 | 39.3 | 39.7 |
| | 40.2 | 40.7 | 41.2 | 41.7 | 42.3 |

| | | | | | |
|-----|------|------|------|------|------|
| | 42.8 | 43.4 | 44.0 | 44.7 | 45.3 |
| | 45.9 | 46.5 | 47.0 | 47.5 | 47.8 |
| | 48.0 | 48.0 | 47.8 | 47.5 | 47.1 |
| | 46.6 | 46.0 | 45.4 | 44.8 | 44.1 |
| | 43.5 | 42.9 | 42.4 | 41.8 | 41.3 |
| | 40.7 | 40.3 | 39.8 | 39.3 | 38.9 |
| | 38.5 | 38.1 | 37.7 | 37.3 | 37.0 |
| | 36.6 | 36.3 | 36.0 | 35.6 | 35.3 |
| | 35.0 | 34.7 | 34.5 | 34.2 | 33.9 |
| | 33.7 | 33.4 | 33.2 | 32.9 | 32.7 |
| | 32.5 | 32.2 | 32.0 | 31.8 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.0 | 29.8 | 29.6 |
| | 29.5 | 29.3 | 29.1 | 28.9 | 28.8 |
| | 28.6 | 28.5 | 28.3 | 28.1 | 28.0 |
| | 27.8 | 27.7 | 27.5 | 27.4 | 27.2 |
| | 27.1 | | | | |
| 410 | 38.1 | 38.5 | 39.0 | 39.4 | 39.9 |
| | 40.3 | 40.9 | 41.4 | 42.0 | 42.5 |
| | 43.2 | 43.8 | 44.5 | 45.2 | 45.9 |
| | 46.6 | 47.2 | 47.9 | 48.4 | 48.8 |
| | 49.0 | 49.0 | 48.9 | 48.5 | 48.0 |
| | 47.4 | 46.7 | 46.0 | 45.3 | 44.6 |
| | 43.9 | 43.3 | 42.6 | 42.1 | 41.5 |
| | 41.0 | 40.4 | 39.9 | 39.5 | 39.0 |
| | 38.6 | 38.2 | 37.8 | 37.4 | 37.1 |
| | 36.7 | 36.4 | 36.0 | 35.7 | 35.4 |
| | 35.1 | 34.8 | 34.5 | 34.2 | 34.0 |
| | 33.7 | 33.5 | 33.2 | 33.0 | 32.7 |
| | 32.5 | 32.3 | 32.0 | 31.8 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.0 | 29.8 | 29.7 |
| | 29.5 | 29.3 | 29.1 | 29.0 | 28.8 |
| | 28.6 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 400 | 38.2 | 38.6 | 39.1 | 39.5 | 40.0 |
| | 40.5 | 41.0 | 41.6 | 42.2 | 42.8 |
| | 43.4 | 44.1 | 44.9 | 45.6 | 46.4 |
| | 47.2 | 48.0 | 48.7 | 49.4 | 49.9 |
| | 50.1 | 50.2 | 49.9 | 49.5 | 48.8 |
| | 48.1 | 47.3 | 46.5 | 45.8 | 45.0 |
| | 44.3 | 43.6 | 42.9 | 42.3 | 41.7 |
| | 41.1 | 40.6 | 40.1 | 39.6 | 39.1 |
| | 38.7 | 38.3 | 37.9 | 37.5 | 37.1 |
| | 36.8 | 36.4 | 36.1 | 35.8 | 35.4 |
| | 35.1 | 34.8 | 34.6 | 34.3 | 34.0 |
| | 33.7 | 33.5 | 33.2 | 33.0 | 32.7 |
| | 32.5 | 32.3 | 32.1 | 31.8 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.0 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.1 | 29.0 | 28.8 |
| | 28.6 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 390 | 38.3 | 38.7 | 39.2 | 39.6 | 40.1 |
| | 40.6 | 41.2 | 41.7 | 42.4 | 43.0 |
| | 43.7 | 44.4 | 45.2 | 46.0 | 46.9 |
| | 47.7 | 48.6 | 49.5 | 50.3 | 50.9 |
| | 51.3 | 51.3 | 51.0 | 50.4 | 49.6 |
| | 48.8 | 47.9 | 47.0 | 46.2 | 45.3 |

| | | | | | |
|-----|------|------|------|------|------|
| | 44.6 | 43.8 | 43.1 | 42.5 | 41.8 |
| | 41.3 | 40.7 | 40.2 | 39.7 | 39.2 |
| | 38.8 | 38.4 | 38.0 | 37.6 | 37.2 |
| | 36.8 | 36.5 | 36.1 | 35.8 | 35.5 |
| | 35.2 | 34.9 | 34.6 | 34.3 | 34.0 |
| | 33.8 | 33.5 | 33.3 | 33.0 | 32.8 |
| | 32.5 | 32.3 | 32.1 | 31.9 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.0 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 380 | 38.3 | 38.8 | 39.2 | 39.7 | 40.2 |
| | 40.7 | 41.3 | 41.9 | 42.5 | 43.2 |
| | 43.9 | 44.6 | 45.4 | 46.3 | 47.2 |
| | 48.2 | 49.2 | 50.2 | 51.1 | 51.9 |
| | 52.4 | 52.5 | 52.0 | 51.3 | 50.4 |
| | 49.4 | 48.4 | 47.4 | 46.5 | 45.6 |
| | 44.8 | 44.0 | 43.3 | 42.6 | 42.0 |
| | 41.4 | 40.8 | 40.3 | 39.8 | 39.3 |
| | 38.9 | 38.4 | 38.0 | 37.6 | 37.2 |
| | 36.9 | 36.5 | 36.2 | 35.8 | 35.5 |
| | 35.2 | 34.9 | 34.6 | 34.3 | 34.1 |
| | 33.8 | 33.5 | 33.3 | 33.0 | 32.8 |
| | 32.6 | 32.3 | 32.1 | 31.9 | 31.7 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.1 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 370 | 38.4 | 38.8 | 39.3 | 39.7 | 40.2 |
| | 40.8 | 41.3 | 41.9 | 42.6 | 43.3 |
| | 44.0 | 44.8 | 45.6 | 46.5 | 47.5 |
| | 48.5 | 49.6 | 50.7 | 51.7 | 52.7 |
| | 53.5 | 53.5 | 52.9 | 51.9 | 50.9 |
| | 49.8 | 48.7 | 47.7 | 46.7 | 45.8 |
| | 44.9 | 44.1 | 43.4 | 42.7 | 42.1 |
| | 41.4 | 40.9 | 40.3 | 39.8 | 39.3 |
| | 38.9 | 38.5 | 38.0 | 37.6 | 37.3 |
| | 36.9 | 36.5 | 36.2 | 35.9 | 35.5 |
| | 35.2 | 34.9 | 34.6 | 34.3 | 34.1 |
| | 33.8 | 33.5 | 33.3 | 33.0 | 32.8 |
| | 32.6 | 32.3 | 32.1 | 31.9 | 31.7 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.3 | 30.1 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 360 | 38.4 | 38.8 | 39.3 | 39.8 | 40.3 |
| | 40.8 | 41.4 | 42.0 | 42.6 | 43.3 |
| | 44.0 | 44.8 | 45.7 | 46.6 | 47.6 |
| | 48.6 | 49.7 | 50.9 | 52.0 | 53.2 |
| | 54.2 | 54.4 | 53.4 | 52.2 | 51.1 |
| | 49.9 | 48.8 | 47.8 | 46.8 | 45.8 |
| | 45.0 | 44.2 | 43.4 | 42.7 | 42.1 |
| | 41.5 | 40.9 | 40.4 | 39.8 | 39.4 |
| | 38.9 | 38.5 | 38.0 | 37.6 | 37.3 |
| | 36.9 | 36.5 | 36.2 | 35.9 | 35.5 |

| | | | | | |
|-----|------|------|------|------|------|
| | 35.2 | 34.9 | 34.6 | 34.4 | 34.1 |
| | 33.8 | 33.5 | 33.3 | 33.0 | 32.8 |
| | 32.6 | 32.3 | 32.1 | 31.9 | 31.7 |
| | 31.5 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.3 | 30.1 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.4 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 350 | 38.4 | 38.8 | 39.3 | 39.8 | 40.3 |
| | 40.8 | 41.4 | 42.0 | 42.6 | 43.3 |
| | 44.0 | 44.8 | 45.7 | 46.6 | 47.5 |
| | 48.6 | 49.7 | 50.8 | 51.9 | 53.0 |
| | 53.8 | 53.9 | 53.1 | 52.1 | 51.0 |
| | 49.9 | 48.8 | 47.7 | 46.7 | 45.8 |
| | 45.0 | 44.2 | 43.4 | 42.7 | 42.1 |
| | 41.5 | 40.9 | 40.4 | 39.8 | 39.4 |
| | 38.9 | 38.5 | 38.0 | 37.6 | 37.3 |
| | 36.9 | 36.5 | 36.2 | 35.9 | 35.5 |
| | 35.2 | 34.9 | 34.6 | 34.4 | 34.1 |
| | 33.8 | 33.5 | 33.3 | 33.0 | 32.8 |
| | 32.6 | 32.3 | 32.1 | 31.9 | 31.7 |
| | 31.5 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.3 | 30.1 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 340 | 38.4 | 38.8 | 39.2 | 39.7 | 40.2 |
| | 40.7 | 41.3 | 41.9 | 42.5 | 43.2 |
| | 43.9 | 44.7 | 45.5 | 46.4 | 47.3 |
| | 48.3 | 49.4 | 50.4 | 51.4 | 52.3 |
| | 52.8 | 52.9 | 52.4 | 51.6 | 50.6 |
| | 49.5 | 48.5 | 47.5 | 46.6 | 45.7 |
| | 44.8 | 44.1 | 43.3 | 42.6 | 42.0 |
| | 41.4 | 40.8 | 40.3 | 39.8 | 39.3 |
| | 38.9 | 38.4 | 38.0 | 37.6 | 37.2 |
| | 36.9 | 36.5 | 36.2 | 35.8 | 35.5 |
| | 35.2 | 34.9 | 34.6 | 34.3 | 34.1 |
| | 33.8 | 33.5 | 33.3 | 33.0 | 32.8 |
| | 32.6 | 32.3 | 32.1 | 31.9 | 31.7 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.1 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 330 | 38.3 | 38.7 | 39.2 | 39.7 | 40.1 |
| | 40.7 | 41.2 | 41.8 | 42.4 | 43.1 |
| | 43.8 | 44.5 | 45.3 | 46.1 | 47.0 |
| | 47.9 | 48.9 | 49.8 | 50.6 | 51.3 |
| | 51.7 | 51.8 | 51.4 | 50.8 | 49.9 |
| | 49.0 | 48.1 | 47.2 | 46.3 | 45.4 |
| | 44.6 | 43.9 | 43.2 | 42.5 | 41.9 |
| | 41.3 | 40.8 | 40.2 | 39.7 | 39.3 |
| | 38.8 | 38.4 | 38.0 | 37.6 | 37.2 |
| | 36.8 | 36.5 | 36.1 | 35.8 | 35.5 |
| | 35.2 | 34.9 | 34.6 | 34.3 | 34.0 |
| | 33.8 | 33.5 | 33.3 | 33.0 | 32.8 |
| | 32.5 | 32.3 | 32.1 | 31.9 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |

| | | | | | |
|-----|------|------|------|------|------|
| | 30.4 | 30.2 | 30.1 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 320 | 38.2 | 38.7 | 39.1 | 39.6 | 40.0 |
| | 40.6 | 41.1 | 41.7 | 42.2 | 42.9 |
| | 43.5 | 44.3 | 45.0 | 45.8 | 46.6 |
| | 47.4 | 48.2 | 49.0 | 49.7 | 50.3 |
| | 50.6 | 50.6 | 50.4 | 49.8 | 49.2 |
| | 48.4 | 47.6 | 46.7 | 45.9 | 45.1 |
| | 44.4 | 43.7 | 43.0 | 42.4 | 41.8 |
| | 41.2 | 40.6 | 40.1 | 39.6 | 39.2 |
| | 38.7 | 38.3 | 37.9 | 37.5 | 37.1 |
| | 36.8 | 36.4 | 36.1 | 35.8 | 35.5 |
| | 35.2 | 34.9 | 34.6 | 34.3 | 34.0 |
| | 33.8 | 33.5 | 33.2 | 33.0 | 32.8 |
| | 32.5 | 32.3 | 32.1 | 31.8 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.0 | 29.9 | 29.7 |
| | 29.5 | 29.3 | 29.2 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 310 | 38.2 | 38.6 | 39.0 | 39.4 | 39.9 |
| | 40.4 | 40.9 | 41.5 | 42.0 | 42.6 |
| | 43.3 | 43.9 | 44.6 | 45.3 | 46.1 |
| | 46.8 | 47.5 | 48.2 | 48.8 | 49.2 |
| | 49.5 | 49.5 | 49.3 | 48.9 | 48.3 |
| | 47.7 | 46.9 | 46.2 | 45.5 | 44.8 |
| | 44.1 | 43.4 | 42.8 | 42.1 | 41.6 |
| | 41.0 | 40.5 | 40.0 | 39.5 | 39.1 |
| | 38.6 | 38.2 | 37.8 | 37.5 | 37.1 |
| | 36.7 | 36.4 | 36.0 | 35.7 | 35.4 |
| | 35.1 | 34.8 | 34.5 | 34.3 | 34.0 |
| | 33.7 | 33.5 | 33.2 | 33.0 | 32.7 |
| | 32.5 | 32.3 | 32.0 | 31.8 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.0 | 29.8 | 29.7 |
| | 29.5 | 29.3 | 29.1 | 29.0 | 28.8 |
| | 28.6 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | | | | |
| 300 | 38.1 | 38.5 | 38.9 | 39.3 | 39.8 |
| | 40.2 | 40.7 | 41.3 | 41.8 | 42.4 |
| | 43.0 | 43.6 | 44.2 | 44.9 | 45.5 |
| | 46.2 | 46.8 | 47.4 | 47.8 | 48.2 |
| | 48.4 | 48.4 | 48.2 | 47.9 | 47.4 |
| | 46.9 | 46.3 | 45.6 | 45.0 | 44.3 |
| | 43.7 | 43.1 | 42.5 | 41.9 | 41.4 |
| | 40.8 | 40.3 | 39.9 | 39.4 | 39.0 |
| | 38.5 | 38.1 | 37.7 | 37.4 | 37.0 |
| | 36.7 | 36.3 | 36.0 | 35.7 | 35.4 |
| | 35.1 | 34.8 | 34.5 | 34.2 | 33.9 |
| | 33.7 | 33.4 | 33.2 | 32.9 | 32.7 |
| | 32.5 | 32.2 | 32.0 | 31.8 | 31.6 |
| | 31.4 | 31.2 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.2 | 30.0 | 29.8 | 29.6 |
| | 29.5 | 29.3 | 29.1 | 29.0 | 28.8 |
| | 28.6 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.8 | 27.7 | 27.5 | 27.4 | 27.3 |

| | | | | | |
|------|------|------|------|------|------|
| 290 | 27.1 | | | | |
| | 37.9 | 38.3 | 38.7 | 39.2 | 39.6 |
| | 40.1 | 40.5 | 41.0 | 41.5 | 42.1 |
| | 42.6 | 43.2 | 43.8 | 44.4 | 44.9 |
| | 45.5 | 46.0 | 46.5 | 46.9 | 47.2 |
| | 47.4 | 47.4 | 47.2 | 47.0 | 46.6 |
| | 46.1 | 45.6 | 45.0 | 44.5 | 43.9 |
| | 43.3 | 42.7 | 42.2 | 41.6 | 41.1 |
| | 40.6 | 40.1 | 39.7 | 39.2 | 38.8 |
| | 38.4 | 38.0 | 37.6 | 37.3 | 36.9 |
| | 36.6 | 36.2 | 35.9 | 35.6 | 35.3 |
| | 35.0 | 34.7 | 34.4 | 34.2 | 33.9 |
| | 33.6 | 33.4 | 33.1 | 32.9 | 32.7 |
| | 32.4 | 32.2 | 32.0 | 31.8 | 31.6 |
| | 31.3 | 31.1 | 30.9 | 30.7 | 30.5 |
| | 30.4 | 30.2 | 30.0 | 29.8 | 29.6 |
| | 29.4 | 29.3 | 29.1 | 28.9 | 28.8 |
| | 28.6 | 28.4 | 28.3 | 28.1 | 28.0 |
| | 27.8 | 27.7 | 27.5 | 27.4 | 27.2 |
| | 27.1 | | | | |
| 280 | 37.8 | 38.2 | 38.6 | 39.0 | 39.4 |
| | 39.8 | 40.3 | 40.8 | 41.2 | 41.7 |
| | 42.2 | 42.8 | 43.3 | 43.8 | 44.3 |
| | 44.8 | 45.3 | 45.7 | 46.0 | 46.3 |
| | 46.4 | 46.4 | 46.3 | 46.1 | 45.8 |
| | 45.4 | 44.9 | 44.4 | 43.9 | 43.4 |
| | 42.9 | 42.3 | 41.8 | 41.3 | 40.8 |
| | 40.4 | 39.9 | 39.5 | 39.1 | 38.6 |
| | 38.3 | 37.9 | 37.5 | 37.1 | 36.8 |
| | 36.5 | 36.1 | 35.8 | 35.5 | 35.2 |
| | 34.9 | 34.6 | 34.4 | 34.1 | 33.8 |
| | 33.6 | 33.3 | 33.1 | 32.8 | 32.6 |
| | 32.4 | 32.2 | 31.9 | 31.7 | 31.5 |
| | 31.3 | 31.1 | 30.9 | 30.7 | 30.5 |
| | 30.3 | 30.1 | 30.0 | 29.8 | 29.6 |
| | 29.4 | 29.3 | 29.1 | 28.9 | 28.8 |
| | 28.6 | 28.4 | 28.3 | 28.1 | 28.0 |
| | 27.8 | 27.7 | 27.5 | 27.4 | 27.2 |
| | 27.1 | | | | |
| | 270 | 37.7 | 38.0 | 38.4 | 38.8 |
| 39.6 | | 40.0 | 40.5 | 40.9 | 41.4 |
| 41.9 | | 42.3 | 42.8 | 43.3 | 43.7 |
| 44.2 | | 44.6 | 44.9 | 45.2 | 45.4 |
| 45.5 | | 45.5 | 45.4 | 45.2 | 45.0 |
| 44.6 | | 44.2 | 43.8 | 43.4 | 42.9 |
| 42.4 | | 41.9 | 41.5 | 41.0 | 40.6 |
| 40.1 | | 39.7 | 39.3 | 38.9 | 38.5 |
| 38.1 | | 37.7 | 37.4 | 37.0 | 36.7 |
| 36.4 | | 36.0 | 35.7 | 35.4 | 35.1 |
| 34.8 | | 34.6 | 34.3 | 34.0 | 33.8 |
| 33.5 | | 33.3 | 33.0 | 32.8 | 32.6 |
| 32.3 | | 32.1 | 31.9 | 31.7 | 31.5 |
| 31.3 | | 31.1 | 30.9 | 30.7 | 30.5 |
| 30.3 | | 30.1 | 29.9 | 29.7 | 29.6 |
| 29.4 | | 29.2 | 29.1 | 28.9 | 28.7 |
| 28.6 | | 28.4 | 28.3 | 28.1 | 27.9 |
| 27.8 | | 27.6 | 27.5 | 27.4 | 27.2 |
| 27.1 | | | | | |
| 260 | | 37.5 | 37.8 | 38.2 | 38.6 |
| | 39.4 | 39.8 | 40.2 | 40.6 | 41.0 |
| | 41.5 | 41.9 | 42.3 | 42.7 | 43.1 |

| | | | | | |
|-----|------|------|------|------|------|
| | 43.5 | 43.9 | 44.2 | 44.4 | 44.6 |
| | 44.6 | 44.7 | 44.6 | 44.4 | 44.2 |
| | 43.9 | 43.6 | 43.2 | 42.8 | 42.4 |
| | 42.0 | 41.5 | 41.1 | 40.7 | 40.3 |
| | 39.8 | 39.4 | 39.0 | 38.7 | 38.3 |
| | 37.9 | 37.6 | 37.2 | 36.9 | 36.5 |
| | 36.2 | 35.9 | 35.6 | 35.3 | 35.0 |
| | 34.8 | 34.5 | 34.2 | 34.0 | 33.7 |
| | 33.5 | 33.2 | 33.0 | 32.7 | 32.5 |
| | 32.3 | 32.1 | 31.9 | 31.6 | 31.4 |
| | 31.2 | 31.0 | 30.8 | 30.6 | 30.4 |
| | 30.3 | 30.1 | 29.9 | 29.7 | 29.5 |
| | 29.4 | 29.2 | 29.0 | 28.9 | 28.7 |
| | 28.5 | 28.4 | 28.2 | 28.1 | 27.9 |
| | 27.8 | 27.6 | 27.5 | 27.3 | 27.2 |
| | 27.0 | | | | |
| 250 | 37.3 | 37.7 | 38.0 | 38.4 | 38.7 |
| | 39.1 | 39.5 | 39.9 | 40.3 | 40.7 |
| | 41.1 | 41.5 | 41.8 | 42.2 | 42.6 |
| | 42.9 | 43.2 | 43.5 | 43.7 | 43.8 |
| | 43.9 | 43.9 | 43.8 | 43.7 | 43.5 |
| | 43.2 | 43.0 | 42.6 | 42.3 | 41.9 |
| | 41.5 | 41.1 | 40.7 | 40.3 | 39.9 |
| | 39.6 | 39.2 | 38.8 | 38.4 | 38.1 |
| | 37.7 | 37.4 | 37.1 | 36.7 | 36.4 |
| | 36.1 | 35.8 | 35.5 | 35.2 | 34.9 |
| | 34.7 | 34.4 | 34.1 | 33.9 | 33.6 |
| | 33.4 | 33.1 | 32.9 | 32.7 | 32.5 |
| | 32.2 | 32.0 | 31.8 | 31.6 | 31.4 |
| | 31.2 | 31.0 | 30.8 | 30.6 | 30.4 |
| | 30.2 | 30.0 | 29.9 | 29.7 | 29.5 |
| | 29.3 | 29.2 | 29.0 | 28.8 | 28.7 |
| | 28.5 | 28.4 | 28.2 | 28.0 | 27.9 |
| | 27.7 | 27.6 | 27.5 | 27.3 | 27.2 |
| | 27.0 | | | | |
| 240 | 37.1 | 37.5 | 37.8 | 38.1 | 38.5 |
| | 38.8 | 39.2 | 39.6 | 39.9 | 40.3 |
| | 40.7 | 41.0 | 41.4 | 41.7 | 42.0 |
| | 42.3 | 42.6 | 42.8 | 43.0 | 43.1 |
| | 43.1 | 43.1 | 43.1 | 43.0 | 42.8 |
| | 42.6 | 42.4 | 42.1 | 41.8 | 41.4 |
| | 41.1 | 40.7 | 40.4 | 40.0 | 39.6 |
| | 39.3 | 38.9 | 38.6 | 38.2 | 37.9 |
| | 37.5 | 37.2 | 36.9 | 36.6 | 36.3 |
| | 36.0 | 35.7 | 35.4 | 35.1 | 34.8 |
| | 34.6 | 34.3 | 34.0 | 33.8 | 33.5 |
| | 33.3 | 33.1 | 32.8 | 32.6 | 32.4 |
| | 32.2 | 32.0 | 31.7 | 31.5 | 31.3 |
| | 31.1 | 30.9 | 30.7 | 30.6 | 30.4 |
| | 30.2 | 30.0 | 29.8 | 29.6 | 29.5 |
| | 29.3 | 29.1 | 29.0 | 28.8 | 28.6 |
| | 28.5 | 28.3 | 28.2 | 28.0 | 27.9 |
| | 27.7 | 27.6 | 27.4 | 27.3 | 27.1 |
| | 27.0 | | | | |
| 230 | 37.0 | 37.3 | 37.6 | 37.9 | 38.2 |
| | 38.6 | 38.9 | 39.2 | 39.6 | 39.9 |
| | 40.3 | 40.6 | 40.9 | 41.2 | 41.5 |
| | 41.7 | 42.0 | 42.2 | 42.3 | 42.4 |
| | 42.5 | 42.5 | 42.4 | 42.3 | 42.2 |
| | 42.0 | 41.8 | 41.5 | 41.3 | 41.0 |
| | 40.6 | 40.3 | 40.0 | 39.6 | 39.3 |

| | | | | | |
|-----|------|------|------|------|------|
| | 39.0 | 38.6 | 38.3 | 38.0 | 37.6 |
| | 37.3 | 37.0 | 36.7 | 36.4 | 36.1 |
| | 35.8 | 35.5 | 35.3 | 35.0 | 34.7 |
| | 34.5 | 34.2 | 33.9 | 33.7 | 33.5 |
| | 33.2 | 33.0 | 32.8 | 32.5 | 32.3 |
| | 32.1 | 31.9 | 31.7 | 31.5 | 31.3 |
| | 31.1 | 30.9 | 30.7 | 30.5 | 30.3 |
| | 30.1 | 30.0 | 29.8 | 29.6 | 29.4 |
| | 29.3 | 29.1 | 28.9 | 28.8 | 28.6 |
| | 28.5 | 28.3 | 28.1 | 28.0 | 27.8 |
| | 27.7 | 27.5 | 27.4 | 27.3 | 27.1 |
| | 27.0 | | | | |
| 220 | 36.8 | 37.1 | 37.4 | 37.7 | 38.0 |
| | 38.3 | 38.6 | 38.9 | 39.2 | 39.6 |
| | 39.9 | 40.2 | 40.4 | 40.7 | 41.0 |
| | 41.2 | 41.4 | 41.6 | 41.7 | 41.8 |
| | 41.8 | 41.8 | 41.8 | 41.7 | 41.6 |
| | 41.4 | 41.2 | 41.0 | 40.8 | 40.5 |
| | 40.2 | 39.9 | 39.6 | 39.3 | 39.0 |
| | 38.7 | 38.4 | 38.0 | 37.7 | 37.4 |
| | 37.1 | 36.8 | 36.5 | 36.2 | 35.9 |
| | 35.7 | 35.4 | 35.1 | 34.8 | 34.6 |
| | 34.3 | 34.1 | 33.8 | 33.6 | 33.4 |
| | 33.1 | 32.9 | 32.7 | 32.5 | 32.2 |
| | 32.0 | 31.8 | 31.6 | 31.4 | 31.2 |
| | 31.0 | 30.8 | 30.6 | 30.5 | 30.3 |
| | 30.1 | 29.9 | 29.7 | 29.6 | 29.4 |
| | 29.2 | 29.1 | 28.9 | 28.7 | 28.6 |
| | 28.4 | 28.3 | 28.1 | 28.0 | 27.8 |
| | 27.7 | 27.5 | 27.4 | 27.2 | 27.1 |
| | 27.0 | | | | |
| 210 | 36.6 | 36.8 | 37.1 | 37.4 | 37.7 |
| | 38.0 | 38.3 | 38.6 | 38.9 | 39.2 |
| | 39.5 | 39.7 | 40.0 | 40.2 | 40.5 |
| | 40.7 | 40.9 | 41.0 | 41.1 | 41.2 |
| | 41.2 | 41.2 | 41.2 | 41.1 | 41.0 |
| | 40.9 | 40.7 | 40.5 | 40.3 | 40.0 |
| | 39.8 | 39.5 | 39.2 | 38.9 | 38.7 |
| | 38.4 | 38.1 | 37.8 | 37.5 | 37.2 |
| | 36.9 | 36.6 | 36.3 | 36.0 | 35.8 |
| | 35.5 | 35.2 | 35.0 | 34.7 | 34.5 |
| | 34.2 | 34.0 | 33.7 | 33.5 | 33.3 |
| | 33.0 | 32.8 | 32.6 | 32.4 | 32.2 |
| | 32.0 | 31.7 | 31.5 | 31.3 | 31.1 |
| | 31.0 | 30.8 | 30.6 | 30.4 | 30.2 |
| | 30.0 | 29.9 | 29.7 | 29.5 | 29.3 |
| | 29.2 | 29.0 | 28.9 | 28.7 | 28.5 |
| | 28.4 | 28.2 | 28.1 | 27.9 | 27.8 |
| | 27.6 | 27.5 | 27.3 | 27.2 | 27.1 |
| | 26.9 | | | | |
| 200 | 36.3 | 36.6 | 36.9 | 37.2 | 37.5 |
| | 37.7 | 38.0 | 38.3 | 38.6 | 38.8 |
| | 39.1 | 39.3 | 39.6 | 39.8 | 40.0 |
| | 40.2 | 40.3 | 40.5 | 40.6 | 40.6 |
| | 40.7 | 40.7 | 40.7 | 40.6 | 40.5 |
| | 40.4 | 40.2 | 40.0 | 39.8 | 39.6 |
| | 39.4 | 39.1 | 38.9 | 38.6 | 38.3 |
| | 38.1 | 37.8 | 37.5 | 37.2 | 36.9 |
| | 36.7 | 36.4 | 36.1 | 35.9 | 35.6 |
| | 35.3 | 35.1 | 34.8 | 34.6 | 34.3 |
| | 34.1 | 33.8 | 33.6 | 33.4 | 33.2 |

| | | | | | |
|-----|------|------|------|------|------|
| | 32.9 | 32.7 | 32.5 | 32.3 | 32.1 |
| | 31.9 | 31.7 | 31.5 | 31.3 | 31.1 |
| | 30.9 | 30.7 | 30.5 | 30.3 | 30.2 |
| | 30.0 | 29.8 | 29.6 | 29.5 | 29.3 |
| | 29.1 | 29.0 | 28.8 | 28.7 | 28.5 |
| | 28.3 | 28.2 | 28.0 | 27.9 | 27.7 |
| | 27.6 | 27.5 | 27.3 | 27.2 | 27.0 |
| 190 | 26.9 | | | | |
| | 36.1 | 36.4 | 36.7 | 36.9 | 37.2 |
| | 37.5 | 37.7 | 38.0 | 38.2 | 38.5 |
| | 38.7 | 38.9 | 39.2 | 39.4 | 39.5 |
| | 39.7 | 39.8 | 40.0 | 40.1 | 40.1 |
| | 40.2 | 40.2 | 40.1 | 40.1 | 40.0 |
| | 39.9 | 39.7 | 39.6 | 39.4 | 39.2 |
| | 39.0 | 38.7 | 38.5 | 38.3 | 38.0 |
| | 37.8 | 37.5 | 37.2 | 37.0 | 36.7 |
| | 36.4 | 36.2 | 35.9 | 35.7 | 35.4 |
| | 35.2 | 34.9 | 34.7 | 34.4 | 34.2 |
| | 34.0 | 33.7 | 33.5 | 33.3 | 33.0 |
| | 32.8 | 32.6 | 32.4 | 32.2 | 32.0 |
| | 31.8 | 31.6 | 31.4 | 31.2 | 31.0 |
| | 30.8 | 30.6 | 30.5 | 30.3 | 30.1 |
| | 29.9 | 29.8 | 29.6 | 29.4 | 29.2 |
| | 29.1 | 28.9 | 28.8 | 28.6 | 28.5 |
| | 28.3 | 28.1 | 28.0 | 27.8 | 27.7 |
| | 27.6 | 27.4 | 27.3 | 27.1 | 27.0 |
| 180 | 26.9 | | | | |
| | 35.9 | 36.2 | 36.4 | 36.7 | 36.9 |
| | 37.2 | 37.4 | 37.7 | 37.9 | 38.1 |
| | 38.3 | 38.5 | 38.7 | 38.9 | 39.1 |
| | 39.3 | 39.4 | 39.5 | 39.6 | 39.6 |
| | 39.7 | 39.7 | 39.6 | 39.6 | 39.5 |
| | 39.4 | 39.3 | 39.1 | 39.0 | 38.8 |
| | 38.6 | 38.4 | 38.2 | 37.9 | 37.7 |
| | 37.5 | 37.2 | 37.0 | 36.7 | 36.5 |
| | 36.2 | 36.0 | 35.7 | 35.5 | 35.2 |
| | 35.0 | 34.8 | 34.5 | 34.3 | 34.0 |
| | 33.8 | 33.6 | 33.4 | 33.2 | 32.9 |
| | 32.7 | 32.5 | 32.3 | 32.1 | 31.9 |
| | 31.7 | 31.5 | 31.3 | 31.1 | 30.9 |
| | 30.8 | 30.6 | 30.4 | 30.2 | 30.0 |
| | 29.9 | 29.7 | 29.5 | 29.4 | 29.2 |
| | 29.0 | 28.9 | 28.7 | 28.6 | 28.4 |
| | 28.3 | 28.1 | 28.0 | 27.8 | 27.7 |
| | 27.5 | 27.4 | 27.2 | 27.1 | 27.0 |
| 170 | 26.8 | | | | |
| | 35.7 | 35.9 | 36.2 | 36.4 | 36.7 |
| | 36.9 | 37.1 | 37.3 | 37.6 | 37.8 |
| | 38.0 | 38.2 | 38.4 | 38.5 | 38.7 |
| | 38.8 | 38.9 | 39.0 | 39.1 | 39.2 |
| | 39.2 | 39.2 | 39.2 | 39.1 | 39.0 |
| | 39.0 | 38.8 | 38.7 | 38.6 | 38.4 |
| | 38.2 | 38.0 | 37.8 | 37.6 | 37.4 |
| | 37.2 | 36.9 | 36.7 | 36.5 | 36.2 |
| | 36.0 | 35.8 | 35.5 | 35.3 | 35.0 |
| | 34.8 | 34.6 | 34.4 | 34.1 | 33.9 |
| | 33.7 | 33.5 | 33.2 | 33.0 | 32.8 |
| | 32.6 | 32.4 | 32.2 | 32.0 | 31.8 |
| | 31.6 | 31.4 | 31.2 | 31.0 | 30.9 |
| | 30.7 | 30.5 | 30.3 | 30.1 | 30.0 |
| | 29.8 | 29.6 | 29.5 | 29.3 | 29.1 |

| | | | | | |
|-----|------|------|------|------|------|
| | 29.0 | 28.8 | 28.7 | 28.5 | 28.4 |
| | 28.2 | 28.1 | 27.9 | 27.8 | 27.6 |
| | 27.5 | 27.3 | 27.2 | 27.1 | 26.9 |
| | 26.8 | | | | |
| 160 | 35.5 | 35.7 | 35.9 | 36.2 | 36.4 |
| | 36.6 | 36.8 | 37.0 | 37.2 | 37.4 |
| | 37.6 | 37.8 | 38.0 | 38.1 | 38.3 |
| | 38.4 | 38.5 | 38.6 | 38.7 | 38.7 |
| | 38.7 | 38.7 | 38.7 | 38.7 | 38.6 |
| | 38.5 | 38.4 | 38.3 | 38.2 | 38.0 |
| | 37.8 | 37.7 | 37.5 | 37.3 | 37.1 |
| | 36.9 | 36.7 | 36.4 | 36.2 | 36.0 |
| | 35.8 | 35.5 | 35.3 | 35.1 | 34.9 |
| | 34.6 | 34.4 | 34.2 | 34.0 | 33.8 |
| | 33.5 | 33.3 | 33.1 | 32.9 | 32.7 |
| | 32.5 | 32.3 | 32.1 | 31.9 | 31.7 |
| | 31.5 | 31.3 | 31.1 | 31.0 | 30.8 |
| | 30.6 | 30.4 | 30.2 | 30.1 | 29.9 |
| | 29.7 | 29.6 | 29.4 | 29.2 | 29.1 |
| | 28.9 | 28.8 | 28.6 | 28.5 | 28.3 |
| | 28.2 | 28.0 | 27.9 | 27.7 | 27.6 |
| | 27.4 | 27.3 | 27.2 | 27.0 | 26.9 |
| | 26.8 | | | | |
| 150 | 35.3 | 35.5 | 35.7 | 35.9 | 36.1 |
| | 36.3 | 36.5 | 36.7 | 36.9 | 37.1 |
| | 37.3 | 37.5 | 37.6 | 37.8 | 37.9 |
| | 38.0 | 38.1 | 38.2 | 38.2 | 38.3 |
| | 38.3 | 38.3 | 38.3 | 38.2 | 38.2 |
| | 38.1 | 38.0 | 37.9 | 37.8 | 37.6 |
| | 37.5 | 37.3 | 37.1 | 37.0 | 36.8 |
| | 36.6 | 36.4 | 36.2 | 36.0 | 35.7 |
| | 35.5 | 35.3 | 35.1 | 34.9 | 34.7 |
| | 34.5 | 34.2 | 34.0 | 33.8 | 33.6 |
| | 33.4 | 33.2 | 33.0 | 32.8 | 32.6 |
| | 32.4 | 32.2 | 32.0 | 31.8 | 31.6 |
| | 31.4 | 31.2 | 31.1 | 30.9 | 30.7 |
| | 30.5 | 30.3 | 30.2 | 30.0 | 29.8 |
| | 29.7 | 29.5 | 29.3 | 29.2 | 29.0 |
| | 28.9 | 28.7 | 28.6 | 28.4 | 28.3 |
| | 28.1 | 28.0 | 27.8 | 27.7 | 27.5 |
| | 27.4 | 27.3 | 27.1 | 27.0 | 26.8 |
| | 26.7 | | | | |
| 140 | 35.1 | 35.3 | 35.5 | 35.7 | 35.9 |
| | 36.1 | 36.3 | 36.4 | 36.6 | 36.8 |
| | 37.0 | 37.1 | 37.3 | 37.4 | 37.5 |
| | 37.6 | 37.7 | 37.8 | 37.8 | 37.9 |
| | 37.9 | 37.9 | 37.9 | 37.8 | 37.8 |
| | 37.7 | 37.6 | 37.5 | 37.4 | 37.3 |
| | 37.1 | 37.0 | 36.8 | 36.7 | 36.5 |
| | 36.3 | 36.1 | 35.9 | 35.7 | 35.5 |
| | 35.3 | 35.1 | 34.9 | 34.7 | 34.5 |
| | 34.3 | 34.1 | 33.9 | 33.7 | 33.4 |
| | 33.2 | 33.0 | 32.8 | 32.6 | 32.5 |
| | 32.3 | 32.1 | 31.9 | 31.7 | 31.5 |
| | 31.3 | 31.1 | 31.0 | 30.8 | 30.6 |
| | 30.4 | 30.3 | 30.1 | 29.9 | 29.8 |
| | 29.6 | 29.4 | 29.3 | 29.1 | 29.0 |
| | 28.8 | 28.7 | 28.5 | 28.4 | 28.2 |
| | 28.1 | 27.9 | 27.8 | 27.6 | 27.5 |
| | 27.3 | 27.2 | 27.1 | 26.9 | 26.8 |
| | 26.7 | | | | |

| | | | | | |
|-----|------|------|------|------|------|
| 130 | 34.8 | 35.0 | 35.2 | 35.4 | 35.6 |
| | 35.8 | 36.0 | 36.2 | 36.3 | 36.5 |
| | 36.6 | 36.8 | 36.9 | 37.0 | 37.1 |
| | 37.2 | 37.3 | 37.4 | 37.4 | 37.5 |
| | 37.5 | 37.5 | 37.5 | 37.4 | 37.4 |
| | 37.3 | 37.3 | 37.2 | 37.1 | 36.9 |
| | 36.8 | 36.7 | 36.5 | 36.3 | 36.2 |
| | 36.0 | 35.8 | 35.6 | 35.5 | 35.3 |
| | 35.1 | 34.9 | 34.7 | 34.5 | 34.3 |
| | 34.1 | 33.9 | 33.7 | 33.5 | 33.3 |
| | 33.1 | 32.9 | 32.7 | 32.5 | 32.3 |
| | 32.1 | 31.9 | 31.8 | 31.6 | 31.4 |
| | 31.2 | 31.0 | 30.9 | 30.7 | 30.5 |
| | 30.3 | 30.2 | 30.0 | 29.8 | 29.7 |
| | 29.5 | 29.4 | 29.2 | 29.0 | 28.9 |
| | 28.7 | 28.6 | 28.4 | 28.3 | 28.1 |
| | 28.0 | 27.9 | 27.7 | 27.6 | 27.4 |
| | 27.3 | 27.2 | 27.0 | 26.9 | 26.8 |
| | 26.6 | | | | |
| 120 | 34.6 | 34.8 | 35.0 | 35.2 | 35.4 |
| | 35.5 | 35.7 | 35.9 | 36.0 | 36.2 |
| | 36.3 | 36.5 | 36.6 | 36.7 | 36.8 |
| | 36.9 | 37.0 | 37.0 | 37.1 | 37.1 |
| | 37.1 | 37.1 | 37.1 | 37.1 | 37.0 |
| | 37.0 | 36.9 | 36.8 | 36.7 | 36.6 |
| | 36.5 | 36.3 | 36.2 | 36.1 | 35.9 |
| | 35.7 | 35.6 | 35.4 | 35.2 | 35.0 |
| | 34.8 | 34.7 | 34.5 | 34.3 | 34.1 |
| | 33.9 | 33.7 | 33.5 | 33.3 | 33.1 |
| | 32.9 | 32.8 | 32.6 | 32.4 | 32.2 |
| | 32.0 | 31.8 | 31.6 | 31.5 | 31.3 |
| | 31.1 | 30.9 | 30.8 | 30.6 | 30.4 |
| | 30.3 | 30.1 | 29.9 | 29.8 | 29.6 |
| | 29.4 | 29.3 | 29.1 | 29.0 | 28.8 |
| | 28.7 | 28.5 | 28.4 | 28.2 | 28.1 |
| | 27.9 | 27.8 | 27.7 | 27.5 | 27.4 |
| | 27.3 | 27.1 | 27.0 | 26.9 | 26.7 |
| | 26.6 | | | | |
| 110 | 34.4 | 34.6 | 34.8 | 34.9 | 35.1 |
| | 35.3 | 35.4 | 35.6 | 35.7 | 35.9 |
| | 36.0 | 36.1 | 36.3 | 36.4 | 36.5 |
| | 36.5 | 36.6 | 36.7 | 36.7 | 36.7 |
| | 36.8 | 36.8 | 36.7 | 36.7 | 36.7 |
| | 36.6 | 36.5 | 36.5 | 36.4 | 36.3 |
| | 36.2 | 36.0 | 35.9 | 35.8 | 35.6 |
| | 35.5 | 35.3 | 35.1 | 35.0 | 34.8 |
| | 34.6 | 34.4 | 34.3 | 34.1 | 33.9 |
| | 33.7 | 33.5 | 33.3 | 33.2 | 33.0 |
| | 32.8 | 32.6 | 32.4 | 32.2 | 32.1 |
| | 31.9 | 31.7 | 31.5 | 31.4 | 31.2 |
| | 31.0 | 30.8 | 30.7 | 30.5 | 30.3 |
| | 30.2 | 30.0 | 29.8 | 29.7 | 29.5 |
| | 29.4 | 29.2 | 29.1 | 28.9 | 28.8 |
| | 28.6 | 28.5 | 28.3 | 28.2 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.5 | 27.3 |
| | 27.2 | 27.1 | 26.9 | 26.8 | 26.7 |
| | 26.5 | | | | |
| 100 | 34.2 | 34.4 | 34.5 | 34.7 | 34.9 |
| | 35.0 | 35.2 | 35.3 | 35.4 | 35.6 |
| | 35.7 | 35.8 | 35.9 | 36.0 | 36.1 |
| | 36.2 | 36.3 | 36.3 | 36.4 | 36.4 |

| | | | | | |
|----|------|------|------|------|------|
| | 36.4 | 36.4 | 36.4 | 36.4 | 36.3 |
| | 36.3 | 36.2 | 36.1 | 36.0 | 36.0 |
| | 35.8 | 35.7 | 35.6 | 35.5 | 35.3 |
| | 35.2 | 35.0 | 34.9 | 34.7 | 34.6 |
| | 34.4 | 34.2 | 34.0 | 33.9 | 33.7 |
| | 33.5 | 33.3 | 33.2 | 33.0 | 32.8 |
| | 32.6 | 32.5 | 32.3 | 32.1 | 31.9 |
| | 31.8 | 31.6 | 31.4 | 31.2 | 31.1 |
| | 30.9 | 30.7 | 30.6 | 30.4 | 30.2 |
| | 30.1 | 29.9 | 29.8 | 29.6 | 29.4 |
| | 29.3 | 29.1 | 29.0 | 28.8 | 28.7 |
| | 28.5 | 28.4 | 28.3 | 28.1 | 28.0 |
| | 27.8 | 27.7 | 27.6 | 27.4 | 27.3 |
| | 27.1 | 27.0 | 26.9 | 26.8 | 26.6 |
| | 26.5 | | | | |
| 90 | 34.0 | 34.1 | 34.3 | 34.5 | 34.6 |
| | 34.8 | 34.9 | 35.0 | 35.2 | 35.3 |
| | 35.4 | 35.5 | 35.6 | 35.7 | 35.8 |
| | 35.9 | 35.9 | 36.0 | 36.0 | 36.0 |
| | 36.1 | 36.1 | 36.1 | 36.0 | 36.0 |
| | 35.9 | 35.9 | 35.8 | 35.7 | 35.6 |
| | 35.5 | 35.4 | 35.3 | 35.2 | 35.1 |
| | 34.9 | 34.8 | 34.6 | 34.5 | 34.3 |
| | 34.2 | 34.0 | 33.8 | 33.7 | 33.5 |
| | 33.3 | 33.2 | 33.0 | 32.8 | 32.6 |
| | 32.5 | 32.3 | 32.1 | 32.0 | 31.8 |
| | 31.6 | 31.5 | 31.3 | 31.1 | 31.0 |
| | 30.8 | 30.6 | 30.5 | 30.3 | 30.1 |
| | 30.0 | 29.8 | 29.7 | 29.5 | 29.4 |
| | 29.2 | 29.1 | 28.9 | 28.8 | 28.6 |
| | 28.5 | 28.3 | 28.2 | 28.0 | 27.9 |
| | 27.8 | 27.6 | 27.5 | 27.4 | 27.2 |
| | 27.1 | 27.0 | 26.8 | 26.7 | 26.6 |
| | 26.5 | | | | |
| 80 | 33.8 | 33.9 | 34.1 | 34.2 | 34.4 |
| | 34.5 | 34.6 | 34.8 | 34.9 | 35.0 |
| | 35.1 | 35.2 | 35.3 | 35.4 | 35.5 |
| | 35.6 | 35.6 | 35.7 | 35.7 | 35.7 |
| | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 |
| | 35.6 | 35.6 | 35.5 | 35.4 | 35.3 |
| | 35.3 | 35.1 | 35.0 | 34.9 | 34.8 |
| | 34.7 | 34.5 | 34.4 | 34.2 | 34.1 |
| | 33.9 | 33.8 | 33.6 | 33.5 | 33.3 |
| | 33.1 | 33.0 | 32.8 | 32.7 | 32.5 |
| | 32.3 | 32.2 | 32.0 | 31.8 | 31.7 |
| | 31.5 | 31.3 | 31.2 | 31.0 | 30.8 |
| | 30.7 | 30.5 | 30.4 | 30.2 | 30.0 |
| | 29.9 | 29.7 | 29.6 | 29.4 | 29.3 |
| | 29.1 | 29.0 | 28.8 | 28.7 | 28.5 |
| | 28.4 | 28.3 | 28.1 | 28.0 | 27.8 |
| | 27.7 | 27.6 | 27.4 | 27.3 | 27.2 |
| | 27.0 | 26.9 | 26.8 | 26.7 | 26.5 |
| | 26.4 | | | | |
| 70 | 33.6 | 33.7 | 33.8 | 34.0 | 34.1 |
| | 34.3 | 34.4 | 34.5 | 34.6 | 34.7 |
| | 34.9 | 34.9 | 35.0 | 35.1 | 35.2 |
| | 35.3 | 35.3 | 35.4 | 35.4 | 35.4 |
| | 35.4 | 35.4 | 35.4 | 35.4 | 35.4 |
| | 35.3 | 35.3 | 35.2 | 35.1 | 35.1 |
| | 35.0 | 34.9 | 34.8 | 34.7 | 34.5 |
| | 34.4 | 34.3 | 34.2 | 34.0 | 33.9 |

| | | | | | |
|----|------|------|------|------|------|
| | 33.7 | 33.6 | 33.4 | 33.3 | 33.1 |
| | 33.0 | 32.8 | 32.6 | 32.5 | 32.3 |
| | 32.2 | 32.0 | 31.8 | 31.7 | 31.5 |
| | 31.4 | 31.2 | 31.0 | 30.9 | 30.7 |
| | 30.6 | 30.4 | 30.2 | 30.1 | 29.9 |
| | 29.8 | 29.6 | 29.5 | 29.3 | 29.2 |
| | 29.0 | 28.9 | 28.8 | 28.6 | 28.5 |
| | 28.3 | 28.2 | 28.0 | 27.9 | 27.8 |
| | 27.6 | 27.5 | 27.4 | 27.2 | 27.1 |
| | 27.0 | 26.9 | 26.7 | 26.6 | 26.5 |
| 60 | 26.4 | | | | |
| | 33.3 | 33.5 | 33.6 | 33.8 | 33.9 |
| | 34.0 | 34.1 | 34.3 | 34.4 | 34.5 |
| | 34.6 | 34.7 | 34.8 | 34.8 | 34.9 |
| | 35.0 | 35.0 | 35.0 | 35.1 | 35.1 |
| | 35.1 | 35.1 | 35.1 | 35.1 | 35.1 |
| | 35.0 | 35.0 | 34.9 | 34.8 | 34.8 |
| | 34.7 | 34.6 | 34.5 | 34.4 | 34.3 |
| | 34.2 | 34.0 | 33.9 | 33.8 | 33.6 |
| | 33.5 | 33.4 | 33.2 | 33.1 | 32.9 |
| | 32.8 | 32.6 | 32.5 | 32.3 | 32.2 |
| | 32.0 | 31.8 | 31.7 | 31.5 | 31.4 |
| | 31.2 | 31.1 | 30.9 | 30.8 | 30.6 |
| | 30.4 | 30.3 | 30.1 | 30.0 | 29.8 |
| | 29.7 | 29.5 | 29.4 | 29.2 | 29.1 |
| | 29.0 | 28.8 | 28.7 | 28.5 | 28.4 |
| | 28.3 | 28.1 | 28.0 | 27.8 | 27.7 |
| | 27.6 | 27.4 | 27.3 | 27.2 | 27.1 |
| | 26.9 | 26.8 | 26.7 | 26.5 | 26.4 |
| 50 | 26.3 | | | | |
| | 33.1 | 33.3 | 33.4 | 33.5 | 33.7 |
| | 33.8 | 33.9 | 34.0 | 34.1 | 34.2 |
| | 34.3 | 34.4 | 34.5 | 34.6 | 34.6 |
| | 34.7 | 34.7 | 34.8 | 34.8 | 34.8 |
| | 34.8 | 34.8 | 34.8 | 34.8 | 34.8 |
| | 34.7 | 34.7 | 34.6 | 34.6 | 34.5 |
| | 34.4 | 34.3 | 34.2 | 34.1 | 34.0 |
| | 33.9 | 33.8 | 33.7 | 33.6 | 33.4 |
| | 33.3 | 33.2 | 33.0 | 32.9 | 32.7 |
| | 32.6 | 32.4 | 32.3 | 32.1 | 32.0 |
| | 31.8 | 31.7 | 31.5 | 31.4 | 31.2 |
| | 31.1 | 30.9 | 30.8 | 30.6 | 30.5 |
| | 30.3 | 30.2 | 30.0 | 29.9 | 29.7 |
| | 29.6 | 29.4 | 29.3 | 29.2 | 29.0 |
| | 28.9 | 28.7 | 28.6 | 28.4 | 28.3 |
| | 28.2 | 28.0 | 27.9 | 27.8 | 27.6 |
| | 27.5 | 27.4 | 27.2 | 27.1 | 27.0 |
| | 26.9 | 26.7 | 26.6 | 26.5 | 26.4 |
| 40 | 26.2 | | | | |
| | 32.9 | 33.1 | 33.2 | 33.3 | 33.4 |
| | 33.5 | 33.7 | 33.8 | 33.9 | 34.0 |
| | 34.1 | 34.1 | 34.2 | 34.3 | 34.3 |
| | 34.4 | 34.4 | 34.5 | 34.5 | 34.5 |
| | 34.5 | 34.5 | 34.5 | 34.5 | 34.5 |
| | 34.4 | 34.4 | 34.3 | 34.3 | 34.2 |
| | 34.1 | 34.1 | 34.0 | 33.9 | 33.8 |
| | 33.7 | 33.6 | 33.5 | 33.3 | 33.2 |
| | 33.1 | 33.0 | 32.8 | 32.7 | 32.5 |
| | 32.4 | 32.3 | 32.1 | 32.0 | 31.8 |
| | 31.7 | 31.5 | 31.4 | 31.2 | 31.1 |
| | 30.9 | 30.8 | 30.7 | 30.5 | 30.4 |

| | | | | | |
|----|------|------|------|------|------|
| | 30.2 | 30.1 | 29.9 | 29.8 | 29.6 |
| | 29.5 | 29.3 | 29.2 | 29.1 | 28.9 |
| | 28.8 | 28.6 | 28.5 | 28.4 | 28.2 |
| | 28.1 | 28.0 | 27.8 | 27.7 | 27.6 |
| | 27.4 | 27.3 | 27.2 | 27.1 | 26.9 |
| | 26.8 | 26.7 | 26.6 | 26.4 | 26.3 |
| | 26.2 | | | | |
| 30 | 32.7 | 32.9 | 33.0 | 33.1 | 33.2 |
| | 33.3 | 33.4 | 33.5 | 33.6 | 33.7 |
| | 33.8 | 33.9 | 33.9 | 34.0 | 34.1 |
| | 34.1 | 34.2 | 34.2 | 34.2 | 34.2 |
| | 34.2 | 34.2 | 34.2 | 34.2 | 34.2 |
| | 34.2 | 34.1 | 34.1 | 34.0 | 34.0 |
| | 33.9 | 33.8 | 33.7 | 33.6 | 33.5 |
| | 33.4 | 33.3 | 33.2 | 33.1 | 33.0 |
| | 32.9 | 32.7 | 32.6 | 32.5 | 32.4 |
| | 32.2 | 32.1 | 31.9 | 31.8 | 31.7 |
| | 31.5 | 31.4 | 31.2 | 31.1 | 31.0 |
| | 30.8 | 30.7 | 30.5 | 30.4 | 30.2 |
| | 30.1 | 29.9 | 29.8 | 29.7 | 29.5 |
| | 29.4 | 29.2 | 29.1 | 29.0 | 28.8 |
| | 28.7 | 28.6 | 28.4 | 28.3 | 28.2 |
| | 28.0 | 27.9 | 27.8 | 27.6 | 27.5 |
| | 27.4 | 27.2 | 27.1 | 27.0 | 26.9 |
| | 26.7 | 26.6 | 26.5 | 26.4 | 26.3 |
| | 26.1 | | | | |
| 20 | 32.5 | 32.6 | 32.8 | 32.9 | 33.0 |
| | 33.1 | 33.2 | 33.3 | 33.4 | 33.5 |
| | 33.5 | 33.6 | 33.7 | 33.8 | 33.8 |
| | 33.9 | 33.9 | 33.9 | 33.9 | 34.0 |
| | 34.0 | 34.0 | 34.0 | 34.0 | 33.9 |
| | 33.9 | 33.9 | 33.8 | 33.8 | 33.7 |
| | 33.6 | 33.6 | 33.5 | 33.4 | 33.3 |
| | 33.2 | 33.1 | 33.0 | 32.9 | 32.8 |
| | 32.7 | 32.5 | 32.4 | 32.3 | 32.2 |
| | 32.0 | 31.9 | 31.8 | 31.6 | 31.5 |
| | 31.4 | 31.2 | 31.1 | 31.0 | 30.8 |
| | 30.7 | 30.5 | 30.4 | 30.3 | 30.1 |
| | 30.0 | 29.8 | 29.7 | 29.6 | 29.4 |
| | 29.3 | 29.1 | 29.0 | 28.9 | 28.7 |
| | 28.6 | 28.5 | 28.3 | 28.2 | 28.1 |
| | 27.9 | 27.8 | 27.7 | 27.6 | 27.4 |
| | 27.3 | 27.2 | 27.0 | 26.9 | 26.8 |
| | 26.7 | 26.6 | 26.4 | 26.3 | 26.2 |
| | 26.1 | | | | |
| 10 | 32.3 | 32.4 | 32.6 | 32.7 | 32.8 |
| | 32.9 | 33.0 | 33.1 | 33.1 | 33.2 |
| | 33.3 | 33.4 | 33.4 | 33.5 | 33.5 |
| | 33.6 | 33.6 | 33.7 | 33.7 | 33.7 |
| | 33.7 | 33.7 | 33.7 | 33.7 | 33.7 |
| | 33.6 | 33.6 | 33.6 | 33.5 | 33.4 |
| | 33.4 | 33.3 | 33.2 | 33.2 | 33.1 |
| | 33.0 | 32.9 | 32.8 | 32.7 | 32.6 |
| | 32.5 | 32.3 | 32.2 | 32.1 | 32.0 |
| | 31.9 | 31.7 | 31.6 | 31.5 | 31.3 |
| | 31.2 | 31.1 | 30.9 | 30.8 | 30.7 |
| | 30.5 | 30.4 | 30.3 | 30.1 | 30.0 |
| | 29.9 | 29.7 | 29.6 | 29.4 | 29.3 |
| | 29.2 | 29.0 | 28.9 | 28.8 | 28.6 |
| | 28.5 | 28.4 | 28.2 | 28.1 | 28.0 |
| | 27.9 | 27.7 | 27.6 | 27.5 | 27.3 |

| | | | | | |
|---|------|------|------|------|------|
| | 27.2 | 27.1 | 27.0 | 26.9 | 26.7 |
| | 26.6 | 26.5 | 26.4 | 26.3 | 26.1 |
| | 26.0 | | | | |
| 0 | 32.1 | 32.2 | 32.3 | 32.5 | 32.6 |
| | 32.7 | 32.7 | 32.8 | 32.9 | 33.0 |
| | 33.1 | 33.1 | 33.2 | 33.2 | 33.3 |
| | 33.3 | 33.4 | 33.4 | 33.4 | 33.4 |
| | 33.4 | 33.4 | 33.4 | 33.4 | 33.4 |
| | 33.4 | 33.3 | 33.3 | 33.3 | 33.2 |
| | 33.1 | 33.1 | 33.0 | 32.9 | 32.8 |
| | 32.8 | 32.7 | 32.6 | 32.5 | 32.4 |
| | 32.3 | 32.2 | 32.0 | 31.9 | 31.8 |
| | 31.7 | 31.6 | 31.4 | 31.3 | 31.2 |
| | 31.1 | 30.9 | 30.8 | 30.7 | 30.5 |
| | 30.4 | 30.3 | 30.1 | 30.0 | 29.9 |
| | 29.7 | 29.6 | 29.5 | 29.3 | 29.2 |
| | 29.1 | 28.9 | 28.8 | 28.7 | 28.5 |
| | 28.4 | 28.3 | 28.2 | 28.0 | 27.9 |
| | 27.8 | 27.6 | 27.5 | 27.4 | 27.3 |
| | 27.2 | 27.0 | 26.9 | 26.8 | 26.7 |
| | 26.5 | 26.4 | 26.3 | 26.2 | 26.1 |
| | 26.0 | | | | |

| | | |
|----|--------------------------------|---------|
| P1 | (x = 143 ,y = 190 ,z = 4.0): | 44.5 dB |
| P2 | (x = 44 ,y = 480 ,z = 4.0): | 43.4 dB |
| P3 | (x = 187 ,y = 534 ,z = 4.0): | 44.6 dB |
| P4 | (x = 498 ,y = 500 ,z = 4.0): | 39.3 dB |
| P5 | (x = 653 ,y = 278 ,z = 4.0): | 36.2 dB |

LAeq , noc: wartość największa poza terenem zakładu występuje w punkcie (210,360,1.5) i wynosi 54.4 dB(A)

Tłumienie przez grunt wg wzoru 9 PN-ISO 9613.

Koniec obliczeń