

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

HAŁAS PRZEMYSŁOWY i DROGOWY
PROGRAM SON2 WERSJA 5.424

Właściciel licencji: NOVUM PROJEKT Norbert Piróg
ul. Planetarna 21C/4, Żalasewo 62-020 Swarzędz
Licencja nr NP/62020/Spd/21 z dnia 14.05.2021

DANE WEJŚCIOWE

Rodzaj obliczeń: Poziom hałasu równoważnego

- 1. Nazwa projektu:
- 2. Temperatura powietrza [st C.] = 10
- 3. Wilgotność względna powietrza [%] = 70
- 4. Tło akustyczne dB(A):
Pora dnia : 0.0
Pora nocy : 0.0
- 5. Rodzaj gruntu : grunt porowaty, wskaźnik gruntu G = 1
- 6. Punktowe źródła hałasu

Lp	Symbol	Współrzędne źródła			ht	Rodzaj źródła	LAW	tD	tN	Do
		x	y	z						
		m	m	m	m		dB(A)	h	h	dB
1	ZP 1	278.0	372.5	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
2	ZP 2	279.6	349.8	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
3	ZP 3	274.9	325.9	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
4	ZP 4	331.3	316.0	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
5	ZP 5	332.9	350.9	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
6	ZP 6	354.5	332.5	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
7	ZP 7	380.4	321.1	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
8	ZP 8	402.7	310.2	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
9	ZP 9	425.8	301.1	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
10	ZP 10	448.2	291.0	1.5	0.0	wszechkier.	68.0	8.000	1.000	3

7. Liniowe źródła hałasu

Lp	Symbol	Początek			ht	Koniec			h2t	LAW 8hD	LAW 1hN	D0
		x1	y1	z1		x2	y2	z2				
		m	m	m	m	m	m	m	m	dBA	dBA	dB
1	T1	310.2	376.0	0.0	0.0	303.1	329.0	0.0	0.0	61.4	66.4	
2	T2	361.1	353.3	0.0	0.0	360.8	349.4	0.0	0.0	52.1	58.1	
3	T3	386.6	342.3	0.0	0.0	385.8	337.2	0.0	0.0	52.1	58.2	
4	T4	410.2	332.5	0.0	0.0	409.8	326.6	0.0	0.0	52.2	58.2	
5	T5	432.5	323.1	0.0	0.0	431.7	317.6	0.0	0.0	52.2	58.2	
6	T6	455.6	311.7	0.0	0.0	454.9	306.6	0.0	0.0	52.1	58.2	

z - wysokość źródła nad gruntem ; ht - wysokość gruntu względem płaszczyzny odniesienia
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

LAW 8hD - równoważny poziom mocy akustycznej źródła w przedziale 8 kolejnych najmniej korzystnych godzin dnia
LAW 1hN - równoważny poziom mocy akustycznej źródła w przedziale 1 najmniej korzystnej godziny nocy

8. Ekran - budynki

Lp	Symbol	Wia	Współrzędne x,y wierzchołków ekranu[m]								ho	h1	ht	Współczynniki			
		ta	x1	y1	x2	y2	x3	y3	x4	y4	m	m	m	odbicia scian			
		(W)												nr 1 - 4			
1	EK-B 1		293.3	366.2	295.7	378.4	281.2	381.5	278.8	369.4	0.0	9.0	0.0	0.8	0.8	0.8	0.8
2	EK-B 2		294.1	341.5	296.1	354.9	281.9	357.2	279.6	344.7	0.0	9.0	0.0	0.8	0.8	0.8	0.8
3	EK-B 3		290.2	319.6	292.1	332.1	277.6	334.9	275.3	322.3	0.0	9.0	0.0	0.8	0.8	0.8	0.8
4	EK-B 4		329.4	314.5	331.0	326.6	316.8	329.8	314.1	317.2	0.0	9.0	0.0	0.8	0.8	0.8	0.8
5	EK-B 5		331.3	349.0	333.3	361.5	318.8	363.9	316.4	350.9	0.0	9.0	0.0	0.8	0.8	0.8	0.8
6	EK-B 6		364.7	332.1	366.6	345.9	354.1	348.2	352.1	334.5	0.0	9.0	0.0	0.8	0.8	0.8	0.8
7	EK-B 7		389.4	320.4	392.1	334.5	380.0	337.2	377.2	322.7	0.0	9.0	0.0	0.8	0.8	0.8	0.8
8	EK-B 8		413.3	310.2	415.3	324.3	402.7	326.6	400.4	312.1	0.0	9.0	0.0	0.8	0.8	0.8	0.8
9	EK-B 9		436.4	299.6	438.8	313.7	426.2	316.4	423.9	302.3	0.0	9.0	0.0	0.8	0.8	0.8	0.8
10	EK-B 10		458.0	289.8	460.4	303.9	448.2	306.2	445.8	292.5	0.0	9.0	0.0	0.8	0.8	0.8	0.8

Koniec danych

LAeq , dzień

	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			
630	7.1	7.3	7.5	7.6	7.8
	8.0	8.1	8.3	8.5	8.6
	8.8	8.9	9.1	9.2	9.3
	9.5	9.6	10.4	10.5	10.6
	10.7	10.8	10.9	10.9	11.0
	11.0	11.1	10.4	10.3	8.6
	8.6	7.4	7.7	7.3	8.3
	10.2	10.1	10.0	8.8	9.7

		9.1	10.0	9.9	9.9	9.8
		8.7	8.6	8.5	8.4	8.2
		8.1	8.0	7.8	7.7	7.5
		7.4	6.6	5.3	5.1	2.7
		2.5	2.4	2.2	2.0	1.9
		1.7	1.5	1.4	1.2	1.0
		0.9	0.7	0.5	0.4	0.2
	5.3E-0002	0.0				
620		7.3	7.5	7.6	7.8	8.0
		8.2	8.3	8.5	8.7	9.4
		9.5	9.2	9.3	9.5	9.6
		9.8	9.9	10.0	10.8	10.9
		11.0	11.1	11.2	11.3	11.3
		11.4	12.0	10.7	10.6	9.0
		9.0	7.7	7.5	7.6	8.6
		10.5	10.4	9.2	9.1	10.0
		9.4	10.3	10.2	10.1	10.0
		9.0	8.9	8.7	8.6	8.5
		8.3	8.2	8.0	7.9	7.7
		7.0	5.6	5.5	3.1	2.9
		2.7	2.5	2.4	2.2	2.0
		1.8	1.7	1.5	1.3	1.2
		1.0	0.8	0.7	0.5	0.3
		0.2	0.0			
610		7.5	7.6	7.8	8.0	8.2
		8.4	8.6	8.7	8.9	9.6
		9.8	9.9	9.6	9.7	9.9
		10.0	10.2	10.3	10.4	11.2
		11.3	11.4	11.5	11.6	11.7
		11.7	12.4	11.1	10.9	9.3
		8.5	8.0	7.8	8.0	9.0
		10.8	10.8	9.5	9.3	10.2
		9.7	10.6	10.5	10.4	9.4
		9.3	9.1	9.0	8.9	8.7
		8.6	8.4	8.3	8.1	8.0
		7.1	5.8	5.7	3.3	3.1
		2.9	2.7	2.5	2.4	2.2
		2.0	1.8	1.6	1.5	1.3
		1.1	0.9	0.8	0.6	0.4
	9.7E-0002					
600		7.6	7.8	8.0	8.2	8.4
		8.6	8.8	8.9	9.1	9.3
		10.0	10.2	10.4	10.0	10.2
		10.3	10.5	10.6	10.8	11.5
		11.6	11.7	11.8	11.9	12.0
		12.1	12.7	11.4	11.3	10.6
		8.8	8.3	8.2	8.3	9.3
		11.2	11.1	9.8	9.6	10.5
		10.0	10.9	10.8	10.7	9.7
		9.5	9.4	9.3	9.1	9.0
		8.8	8.7	8.5	8.3	7.5
		6.2	6.1	3.6	3.5	3.3
		3.1	2.9	2.7	2.5	2.3
		2.1	2.0	1.8	1.6	1.4
		1.2	1.1	0.9	0.7	0.5
		0.4	0.2			
590		7.8	8.6	8.2	8.4	8.6
		8.8	9.0	9.2	9.4	9.6
		9.7	10.4	10.6	10.8	10.5
		10.6	10.8	11.0	11.1	11.2
		12.0	12.1	12.2	12.3	12.4
		12.4	12.5	12.5	11.7	11.0
		9.1	9.4	8.6	8.7	9.7
		11.6	10.3	10.1	11.0	10.4
		11.3	11.2	11.1	11.0	10.0
		9.8	9.7	9.5	9.4	9.2
		9.1	8.9	8.7	7.9	7.5
		6.4	4.0	3.8	3.6	3.4
		3.3	3.1	2.9	2.7	2.5
		2.3	2.1	1.9	1.7	1.5
		1.4	1.2	1.0	0.8	0.6
		0.5	0.3			
580		8.0	8.2	9.1	8.6	8.8
		9.0	9.2	9.4	9.6	9.8
		10.0	10.2	10.9	11.1	11.3
		10.9	11.1	11.3	11.4	11.6
		11.7	12.5	12.6	12.7	12.7
		12.8	12.9	12.9	12.0	11.4
		9.5	10.2	9.0	9.7	10.1
		11.9	10.6	10.4	11.3	10.8
		11.7	11.6	11.5	10.4	10.3
		10.1	10.0	9.8	9.7	9.5
		9.3	9.2	8.3	8.0	6.8
		5.8	4.2	4.0	3.8	3.6
		3.4	3.2	3.0	2.8	2.6
		2.4	2.2	2.0	1.8	1.7
		1.5	1.3	1.1	0.9	0.7
		0.6	0.4			
570		8.1	8.3	8.6	8.8	9.0
		9.2	9.4	9.6	9.8	10.0
		10.3	10.5	10.7	11.3	11.5
		11.7	11.4	11.6	11.8	11.9
		12.1	12.8	12.9	13.0	13.1
		13.2	13.3	13.2	12.5	12.3
		9.8	10.5	9.4	10.1	10.6
		11.1	11.0	11.1	11.6	11.1
		12.0	11.9	11.8	10.7	10.6
		10.4	10.3	10.1	9.9	9.8
		9.6	9.4	8.5	8.0	6.3
		4.7	4.4	4.2	4.0	3.8
		3.6	3.4	3.2	3.0	2.8
		2.6	2.4	2.2	2.0	1.8
		1.6	1.4	1.2	1.0	0.8
		0.7	0.5			
560		8.3	8.5	8.7	8.9	9.2
		9.4	9.6	9.8	10.1	10.3
		10.5	10.7	11.0	11.2	11.8
		12.0	12.2	12.0	12.2	12.3
		12.5	12.6	13.3	13.5	13.6
		13.6	13.7	14.3	13.6	12.7
		10.2	10.9	9.9	10.5	11.0
		11.5	11.3	11.5	11.9	12.5
		11.4	12.3	12.1	11.1	10.9
		10.8	10.6	10.4	10.2	10.0
		9.8	8.9	8.5	7.5	6.3
		4.9	4.7	4.4	4.2	4.0
		3.8	3.6	3.3	3.1	2.9
		2.7	2.5	2.3	2.1	1.9
		1.7	1.5	1.3	1.1	0.9
		0.8	0.6			
550		8.5	8.7	8.9	9.1	9.4

		9.6	9.8	10.1	10.3	10.5
		10.8	11.0	11.2	11.5	11.7
		12.4	12.6	12.8	12.5	12.7
		12.9	13.0	13.8	13.9	14.0
		14.1	14.1	14.2	14.0	13.2
		11.4	10.8	10.3	11.0	11.5
		11.9	11.7	11.8	12.3	12.9
		12.8	12.6	11.6	11.4	11.3
		11.1	10.9	10.7	10.5	10.3
		9.4	9.0	7.9	6.8	5.3
		5.1	4.9	4.6	4.4	4.2
		3.9	3.7	3.5	3.3	3.1
		2.8	2.6	2.4	2.2	2.0
		1.8	1.6	1.4	1.2	1.0
		0.8	0.7			
540		8.6	8.8	9.1	9.3	9.6
		9.8	10.0	10.9	10.5	10.8
		11.0	11.3	11.5	11.8	12.0
		12.2	12.9	13.1	12.9	13.1
		13.3	13.5	13.6	14.3	14.4
		14.5	14.6	14.7	14.5	13.6
		11.9	11.2	10.8	11.5	11.8
		12.3	12.0	12.8	12.6	13.3
		13.1	13.0	12.0	11.8	11.6
		11.4	11.2	11.0	10.8	10.6
		9.5	9.1	7.3	5.8	5.5
		5.3	5.1	4.8	4.6	4.3
		4.1	3.9	3.6	3.4	3.2
		3.0	2.8	2.5	2.3	2.1
		1.9	1.7	1.5	1.3	1.1
		0.9	0.7			
530		8.8	9.0	9.2	9.5	9.7
		10.0	10.3	10.5	11.2	11.0
		11.3	11.6	11.8	12.1	12.3
		12.6	12.8	13.5	13.7	13.5
		13.8	13.9	14.1	14.3	14.9
		15.0	15.1	15.2	15.0	14.8
		12.4	11.7	11.4	12.0	12.2
		12.7	12.7	13.2	12.8	12.7
		13.6	12.5	12.4	12.2	12.0
		11.8	11.6	11.3	11.1	10.1
		9.6	7.8	7.2	6.0	5.8
		5.5	5.3	5.0	4.8	4.5
		4.3	4.0	3.8	3.6	3.3
		3.1	2.9	2.7	2.4	2.2
		2.0	1.8	1.6	1.4	1.2
		1.0	0.8			
520		8.9	9.2	9.4	9.7	9.9
		10.2	10.5	10.7	11.0	11.6
		11.6	11.8	12.1	12.4	12.7
		12.9	13.2	13.5	14.1	14.4
		14.2	14.4	14.6	14.8	15.4
		15.6	15.7	15.7	15.5	15.3
		13.2	12.2	11.9	12.5	12.7
		13.1	13.1	13.6	14.3	14.1
		14.0	12.9	12.8	12.6	12.3
		12.1	11.9	11.7	10.7	10.2
		9.0	7.8	6.5	6.3	6.0
		5.7	5.5	5.2	4.9	4.7
		4.4	4.2	3.9	3.7	3.5
		3.2	3.0	2.8	2.6	2.3
		2.1	1.9	1.7	1.5	1.3
		3.9	3.8			
510		9.6	9.3	9.6	9.8	10.1
		10.4	10.7	10.9	11.2	11.5
		12.1	12.1	12.4	12.7	13.0
		13.3	13.6	13.9	14.2	14.8
		15.0	14.9	15.1	15.3	15.5
		16.1	16.2	16.3	16.0	15.9
		14.2	12.7	12.5	10.5	13.8
		13.5	13.6	14.1	14.7	14.6
		14.4	13.4	13.2	13.0	12.7
		12.5	12.2	11.3	10.8	9.5
		8.3	7.1	6.8	6.5	6.2
		5.9	5.7	5.4	5.1	4.8
		4.6	4.3	4.1	3.8	3.6
		3.3	3.1	2.9	2.7	2.4
		2.2	2.0	1.8	4.4	4.2
		4.0	3.8			
500		10.6	10.7	10.2	10.0	10.3
		10.6	10.9	11.2	11.5	11.8
		12.1	12.7	13.1	13.0	13.3
		13.7	14.0	14.3	14.6	14.9
		15.5	15.8	15.7	15.9	16.1
		16.7	16.9	16.9	16.0	16.5
		15.5	13.4	13.2	10.9	14.3
		14.0	14.2	14.6	14.3	15.1
		14.0	13.8	13.6	13.4	13.1
		12.8	12.6	11.4	10.9	8.9
		8.3	7.3	7.0	6.7	6.4
		6.1	5.8	5.6	5.3	5.0
		4.7	4.5	4.2	4.0	3.7
		3.5	3.2	3.0	2.8	2.5
		2.3	4.9	4.7	4.5	4.3
		4.1	1.0			
490		11.2	11.5	11.2	11.4	10.9
		11.1	11.1	11.4	11.7	12.0
		12.3	12.7	13.2	13.7	13.7
		14.0	14.4	14.7	15.1	15.4
		15.7	16.2	16.6	16.6	16.9
		17.0	17.6	17.6	16.7	16.6
		16.1	14.3	14.0	11.2	14.8
		14.5	15.3	15.9	15.8	15.6
		14.5	14.3	14.1	13.8	13.5
		13.2	12.1	11.5	10.1	9.0
		7.9	7.6	7.3	7.0	6.6
		6.3	6.0	5.7	5.4	5.2
		4.9	4.6	4.3	4.1	3.8
		3.6	3.3	4.8	4.7	5.5
		5.2	5.0	4.8	6.0	5.5
		3.7	1.1			
480		12.0	12.3	12.2	12.1	12.2
		12.3	11.7	11.9	11.9	12.2
		12.6	12.9	13.3	13.8	14.3
		14.4	14.8	15.1	15.5	15.9
		16.3	16.6	17.0	17.5	17.5
		17.8	17.9	18.4	17.5	17.2
		16.9	15.0	11.3	11.5	15.3
		15.3	15.9	16.5	16.3	15.3
		15.1	14.8	14.5	14.2	13.9
		12.9	12.3	10.8	9.6	8.6

		8.2	7.8	7.5	7.2	6.8
		6.5	6.2	5.9	5.6	5.3
		5.0	4.7	4.5	4.2	5.4
		5.4	5.3	6.0	5.8	5.5
		5.3	6.5	5.9	5.6	5.5
		1.4	1.2			
470		12.2	12.6	12.8	12.9	12.9
		13.1	13.1	13.1	12.5	12.8
		12.8	13.2	13.6	14.0	14.5
		15.0	15.2	15.6	16.0	16.4
		16.8	17.2	17.6	18.0	18.5
		18.5	18.8	19.2	18.4	18.0
		17.6	16.6	11.6	11.8	16.0
		15.9	16.5	16.2	16.9	15.9
		15.6	15.3	15.0	14.7	14.3
		13.0	11.6	10.7	9.2	8.8
		8.5	8.1	7.7	7.4	7.0
		6.7	6.4	6.1	5.8	5.5
		5.2	6.1	6.0	6.0	5.8
		6.6	6.3	6.1	5.9	6.6
		6.4	7.2	4.4	1.9	1.7
		1.4	1.2			
460		11.9	12.2	12.6	13.1	13.5
		13.6	13.9	13.8	13.9	13.9
		13.8	13.7	14.0	14.3	14.7
		15.1	15.8	16.0	16.5	17.0
		17.4	17.9	18.3	18.7	19.2
		19.6	19.6	19.8	19.3	19.0
		18.5	15.0	12.0	12.1	16.8
		16.9	17.2	16.9	17.6	16.5
		16.2	15.9	15.5	15.1	13.9
		12.4	11.5	10.4	9.5	9.1
		8.7	8.3	8.0	7.6	7.2
		6.9	6.5	6.2	5.9	6.7
		6.7	6.6	6.5	7.2	7.0
		6.7	7.8	7.1	7.9	6.5
		4.5	2.4	2.2	1.9	1.7
		1.5	1.3			
450		12.0	11.8	12.4	12.7	13.1
		13.7	14.1	14.3	14.7	14.6
		14.8	14.9	14.8	14.8	15.2
		15.5	16.0	16.6	17.4	17.5
		18.0	18.6	19.1	19.6	20.0
		20.4	20.8	20.9	20.0	19.4
		19.5	15.7	12.0	12.8	17.6
		17.7	18.9	18.5	17.5	17.2
		16.8	16.4	16.0	14.8	13.3
		12.3	11.5	10.3	9.8	9.4
		9.0	8.6	8.2	7.8	7.4
		7.1	7.6	7.5	7.4	7.3
		7.1	7.9	8.4	8.2	8.4
		8.8	7.3	6.5	5.0	2.9
		2.7	2.5	2.2	2.0	1.8
		1.6	1.3			
440		12.2	12.4	12.6	12.4	13.0
		13.3	13.7	14.1	14.8	15.3
		15.5	15.8	16.1	16.0	16.0
		16.0	16.5	16.9	17.6	18.3
		18.7	19.3	19.9	20.4	21.0
		21.5	21.9	22.2	21.2	20.6
		20.6	16.0	15.0	13.5	18.5
		19.2	19.8	19.4	18.4	17.9
		17.5	17.0	15.8	15.0	13.3
		12.4	11.1	10.6	10.1	9.7
		9.2	8.8	8.4	8.0	8.4
		8.2	8.1	8.0	8.5	9.2
		9.0	8.8	9.7	8.2	7.8
		6.9	5.4	3.5	3.3	3.0
		2.8	2.5	2.3	2.1	1.8
		1.6	1.4			
430		11.8	12.1	13.1	13.3	13.2
		13.5	13.6	13.9	14.3	14.8
		15.5	16.1	16.5	16.8	17.2
		17.4	17.3	17.6	18.1	18.8
		19.4	20.0	20.7	21.4	22.1
		22.7	23.2	23.5	22.8	21.8
		19.0	16.3	15.4	14.4	19.7
		20.2	20.0	20.3	19.2	18.7
		18.1	17.6	16.1	14.3	13.3
		12.6	11.5	10.9	10.4	9.9
		9.5	9.6	9.3	9.1	8.9
		9.4	9.3	10.0	9.8	10.6
		9.2	8.8	7.9	7.3	5.8
		4.1	3.8	3.6	3.3	3.1
		2.8	2.6	2.3	2.1	1.9
		1.7	1.4			
420		12.2	12.3	12.5	12.7	13.3
		14.0	14.3	14.2	14.3	14.7
		15.1	15.6	16.2	16.9	17.6
		18.1	18.5	18.8	19.0	19.4
		20.0	20.9	21.5	22.4	23.3
		24.1	24.7	25.2	24.5	23.5
		19.5	16.7	16.1	15.6	21.1
		22.1	21.8	20.6	20.2	19.6
		19.0	17.5	15.5	14.4	13.6
		12.7	11.8	11.5	11.1	10.6
		10.3	10.0	10.3	10.2	10.1
		10.9	11.7	10.9	9.9	8.9
		8.3	7.8	6.3	4.8	4.5
		4.2	3.9	3.6	3.4	3.1
		2.9	2.6	2.4	2.1	1.9
		1.7	1.5			
410		12.1	12.3	12.6	13.1	13.4
		13.7	13.8	14.4	15.1	15.2
		15.6	15.6	16.0	16.6	17.2
		17.9	18.8	19.5	20.0	20.5
		21.0	21.6	22.5	23.5	24.5
		25.6	26.6	27.3	26.7	25.5
		19.1	17.4	17.1	18.7	22.5
		23.3	22.9	21.8	21.1	20.4
		19.0	17.2	15.7	14.8	13.9
		13.0	12.4	11.9	11.4	11.4
		11.2	11.2	12.4	11.8	11.5
		11.1	10.6	9.5	8.8	8.2
		7.7	5.5	5.1	4.8	4.5
		4.2	4.0	3.7	3.4	3.2
		2.9	2.7	2.4	2.2	2.0
		1.7	1.5			
400		11.9	12.2	12.7	13.0	13.3
		13.5	13.9	14.5	14.8	15.1
		16.1	16.5	16.6	16.7	17.2

	17.8	18.4	19.2	20.2	21.2
	22.0	22.9	23.6	24.6	25.9
	27.3	28.8	29.9	29.6	22.9
	16.1	19.0	18.1	20.0	24.3
	24.2	23.7	22.9	22.1	21.3
	18.7	17.3	16.2	15.3	14.6
	13.4	13.1	12.6	12.4	13.7
	12.2	12.8	12.5	12.0	10.8
	10.1	9.3	8.7	8.2	6.2
	5.8	5.5	6.6	4.9	4.6
	4.3	4.0	3.7	3.5	3.2
	2.9	2.7	2.5	2.2	2.0
	1.8	1.5			
390	12.7	12.6	13.0	13.3	13.4
	13.5	14.0	14.4	14.8	15.1
	15.6	16.3	16.7	17.7	18.1
	18.3	18.6	19.3	20.1	21.0
	22.1	23.4	24.7	25.9	27.2
	29.1	31.3	33.5	33.8	20.5
	17.4	19.9	20.5	21.4	26.6
	26.0	25.2	24.2	23.2	20.7
	19.0	17.9	16.9	15.9	15.1
	14.3	15.3	13.5	13.4	14.0
	14.2	12.9	11.5	10.7	9.9
	9.3	8.8	7.0	6.6	7.7
	7.1	5.6	5.2	4.9	4.6
	4.3	4.0	3.8	3.5	3.2
	3.0	2.7	2.5	2.2	2.0
	1.8	1.6			
380	12.7	13.0	13.5	13.8	13.9
	14.3	14.7	14.8	15.1	15.6
	16.3	16.4	16.8	17.2	17.8
	18.5	19.6	20.2	20.3	21.2
	22.3	23.4	24.8	26.5	28.5
	30.7	33.7	38.5	41.1	17.7
	21.2	24.8	21.1	23.5	29.9
	28.6	26.9	25.5	23.5	20.9
	19.6	18.4	17.5	17.9	16.0
	15.5	15.1	15.4	14.7	13.3
	12.3	11.4	10.6	10.0	9.5
	7.9	8.9	8.3	7.7	6.3
	5.9	5.6	5.3	5.0	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.7	2.5	2.3	2.0
	1.8	1.6			
370	12.5	12.6	13.1	13.6	14.0
	14.3	15.0	15.3	15.5	16.2
	16.7	16.9	17.2	17.5	18.3
	18.7	19.4	20.0	20.8	22.0
	22.8	23.8	25.2	26.9	28.9
	31.4	35.0	41.0	-1.0	-1.0
	25.0	30.7	22.8	23.3	32.9
	30.9	28.8	26.4	23.5	21.7
	20.3	19.1	18.3	17.7	17.3
	17.6	16.7	14.8	13.4	12.5
	11.8	11.2	10.7	9.4	9.6
	8.9	8.3	7.1	6.7	6.3
	6.0	5.6	5.3	5.0	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.8	2.5	2.3	2.0
	1.8	1.6			
360	12.4	12.6	13.2	13.4	13.9
	14.3	14.6	14.8	15.4	15.9
	16.5	16.9	17.4	17.9	18.7
	19.4	20.0	20.7	21.4	22.2
	23.1	24.5	25.9	27.4	29.3
	31.8	34.9	38.7	41.2	27.2
	27.0	30.3	-1.0	-1.0	37.9
	33.8	30.6	26.6	24.2	22.6
	21.4	20.3	19.7	20.3	18.0
	16.6	15.4	14.6	13.9	12.9
	12.4	11.9	10.7	9.4	9.0
	8.8	8.4	8.0	7.7	7.4
	8.0	7.7	6.5	6.2	6.1
	5.8	4.1	3.8	3.6	3.3
	3.0	2.8	2.5	2.3	2.0
	1.8	1.6			
350	12.0	12.3	12.9	13.2	13.7
	14.1	14.4	14.9	15.3	15.9
	16.4	16.8	17.3	17.7	18.5
	19.1	19.8	20.7	21.5	22.4
	23.5	24.7	26.1	27.8	29.9
	32.1	35.1	40.3	52.0	-1.0
	30.5	31.5	31.3	-1.0	42.1
	35.3	32.0	27.7	25.5	24.6
	23.4	22.8	20.8	19.6	18.5
	17.5	16.3	15.6	15.5	14.7
	13.8	12.6	11.7	10.9	10.6
	10.2	9.4	8.4	8.0	7.7
	7.4	7.1	6.8	6.5	6.2
	5.9	5.6	5.4	3.6	3.3
	3.0	2.8	2.5	2.3	2.1
	1.8	1.6			
340	12.4	12.9	13.2	13.5	13.9
	14.4	14.7	15.1	15.4	15.8
	16.3	16.8	17.4	18.0	18.6
	19.2	19.8	20.5	21.2	22.1
	23.3	24.5	26.0	27.7	29.8
	32.3	35.4	39.0	37.1	27.5
	30.9	31.4	32.7	39.1	39.7
	36.7	-1.0	24.2	26.3	27.4
	22.1	21.9	21.2	20.0	18.8
	18.4	16.1	15.2	14.4	13.7
	13.0	12.2	10.8	9.9	9.0
	8.6	7.5	7.1	6.7	6.3
	6.0	5.7	5.3	5.0	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.8	2.5	2.3	2.0
	1.8	1.6			
330	12.5	13.3	13.6	13.9	14.2
	14.5	14.9	15.2	15.5	15.9
	16.3	16.8	17.3	17.8	18.3
	18.9	19.6	20.4	21.2	22.1
	23.2	24.4	25.7	27.4	29.4
	32.1	36.2	43.1	-1.0	-1.0
	29.3	29.5	35.0	36.2	40.8
	46.2	45.4	38.3	-1.0	-1.0
	23.8	0.0	23.1	21.2	19.8
	17.9	16.3	15.0	13.5	13.3
	12.4	11.9	11.6	10.8	10.4
	10.5	9.6	8.8	8.4	7.4

	7.1	6.8	6.5	5.0	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.8	2.5	2.3	2.0
	1.8	1.6			
320	12.5	13.0	13.3	13.6	14.0
	14.5	14.8	15.3	15.7	16.1
	16.5	16.9	17.4	17.9	18.4
	18.9	19.6	20.3	21.1	22.0
	23.0	24.2	25.5	27.0	28.9
	31.5	35.5	41.4	27.1	-1.0
	24.2	24.1	-1.0	-1.0	42.2
	40.4	40.1	40.7	51.2	40.7
	30.7	-1.0	22.5	28.0	23.4
	20.5	19.0	16.2	13.8	12.2
	11.2	9.2	9.0	8.8	8.5
	8.1	8.0	9.4	8.5	8.2
	7.0	6.7	6.4	6.2	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.7	2.5	2.3	2.0
	1.8	1.6			
310	12.8	13.3	13.6	13.9	14.1
	14.5	14.8	15.1	15.5	15.8
	16.2	16.7	17.2	17.7	18.2
	18.9	19.5	20.2	21.1	21.9
	22.7	23.8	24.9	26.3	28.0
	30.3	32.9	35.1	28.0	24.3
	25.7	26.9	32.3	43.3	41.0
	37.9	37.1	38.0	39.7	39.8
	49.9	44.2	35.5	-1.0	21.6
	25.0	25.0	17.6	13.4	12.2
	10.5	9.7	8.6	8.2	7.1
	6.8	6.6	6.4	4.9	4.9
	4.5	4.2	3.9	3.8	5.9
	4.3	4.0	3.8	3.5	3.2
	3.0	2.7	2.5	2.2	2.0
	1.8	1.6			
300	12.4	12.9	13.2	13.5	13.8
	14.1	14.5	14.8	15.3	15.7
	16.1	16.6	17.2	17.7	18.4
	18.9	19.6	20.2	20.8	21.7
	22.6	23.4	24.5	25.8	27.1
	29.0	30.3	31.8	26.8	24.9
	26.0	31.2	33.8	35.8	35.4
	35.5	34.9	35.3	36.6	38.3
	41.0	40.5	44.1	45.9	33.1
	-1.0	16.4	16.8	14.6	13.6
	11.7	11.2	10.8	10.4	9.8
	8.8	7.9	7.5	6.2	5.6
	5.0	2.8	2.4	1.9	1.5
	1.1	0.7	0.3	0.0	0.0
	0.0	0.0	2.4	2.2	2.0
	1.8	1.5			
290	12.6	13.1	13.4	13.7	14.2
	14.5	14.6	15.0	15.3	15.9
	16.4	17.0	17.4	17.8	18.4
	18.9	19.7	20.2	20.8	21.4
	22.1	22.9	23.9	24.9	26.5
	27.5	28.2	28.8	25.3	24.6
	28.0	29.4	30.9	32.2	32.4
	33.5	33.3	33.6	34.4	35.4
	36.4	37.0	38.6	39.3	41.5
	49.6	32.4	25.9	22.0	19.2
	17.0	15.3	13.7	12.5	11.2
	10.3	9.6	9.0	8.4	7.9
	7.5	6.2	5.7	5.4	6.3
	6.2	5.9	4.3	4.0	3.8
	3.3	0.1	0.0	0.0	0.0
	0.0	0.0			
280	12.5	13.1	13.4	13.8	14.1
	14.6	15.1	15.7	16.1	16.5
	16.6	16.7	17.2	17.7	18.1
	18.8	19.3	19.7	20.2	20.9
	21.6	22.4	23.2	23.9	25.3
	26.1	26.8	26.3	26.7	25.9
	26.7	27.7	28.7	30.0	30.4
	30.6	31.6	31.9	32.4	33.0
	33.7	34.2	34.9	35.6	37.3
	38.5	35.2	31.6	27.8	25.1
	23.1	21.1	19.3	17.9	16.7
	15.8	11.1	10.3	9.0	8.3
	7.7	7.1	6.7	6.2	5.8
	5.4	5.0	4.7	4.3	1.9
	1.5	1.1	0.7	0.3	0.0
	0.0	0.0			
270	12.4	13.2	13.2	13.9	14.4
	14.7	15.0	15.3	15.6	15.9
	15.9	16.3	16.7	17.2	17.7
	18.2	18.7	19.2	19.6	20.2
	20.9	21.6	22.2	23.6	24.3
	24.8	25.4	25.7	25.8	25.0
	25.6	26.6	27.4	28.4	28.8
	29.1	29.5	30.4	30.7	31.2
	31.6	32.0	32.5	32.8	33.4
	33.3	32.0	30.0	28.1	26.2
	23.5	21.7	20.2	18.8	17.7
	17.0	15.6	14.4	13.6	12.7
	12.1	11.6	11.1	10.6	9.6
	9.2	5.4	3.5	4.8	2.6
	2.2	1.8	1.4	1.0	0.6
	0.3	0.0			
260	13.2	13.5	13.8	13.8	14.0
	14.3	14.4	14.7	15.1	15.4
	15.8	16.2	16.4	16.9	17.3
	17.8	18.3	18.8	19.3	19.7
	20.3	20.9	22.0	23.0	23.7
	24.4	25.1	24.8	25.0	24.5
	24.9	25.5	26.2	27.0	27.5
	27.8	28.2	28.9	29.3	29.7
	30.0	30.2	30.5	30.7	30.7
	30.4	29.5	28.3	27.0	25.7
	24.5	23.1	21.1	19.5	18.2
	17.1	16.2	15.5	14.5	14.0
	13.6	12.6	11.7	11.2	10.4
	9.9	9.5	9.2	8.9	8.5
	7.5	6.1	5.8	5.4	5.1
	4.8	0.4			
250	12.8	13.1	13.1	13.4	13.7
	14.0	14.3	14.4	14.7	15.1
	15.4	15.8	16.3	16.7	17.1
	17.3	17.7	18.3	18.8	19.4
	19.9	20.5	21.8	22.4	23.3

	24.2	24.9	24.1	24.1	23.7
	24.1	24.6	25.2	25.9	26.3
	26.7	27.0	27.3	27.9	28.3
	28.6	28.7	28.8	28.9	28.8
	28.3	27.7	26.8	25.8	24.9
	23.9	23.0	22.1	21.0	19.9
	17.9	16.9	15.8	14.9	14.3
	13.6	13.1	12.3	11.8	11.4
	11.5	10.5	10.1	9.1	8.7
	8.4	8.1	7.0	6.7	6.4
	6.2	5.9			
240	12.5	12.5	12.8	13.0	13.3
	13.6	13.9	14.3	14.6	14.9
	15.3	15.7	15.8	16.2	16.6
	17.0	17.5	18.0	18.5	19.0
	19.5	20.5	21.7	22.6	23.0
	23.5	23.6	23.3	23.3	23.0
	23.3	23.7	24.3	25.0	25.3
	25.6	25.9	26.2	26.4	26.9
	27.3	27.4	27.4	27.4	27.2
	26.8	26.3	25.6	24.9	24.0
	23.1	22.5	21.7	21.1	20.1
	19.4	18.7	17.0	15.6	14.7
	13.9	13.3	12.6	12.1	11.5
	11.1	10.7	10.3	10.0	9.8
	9.5	9.1	8.8	7.8	7.5
	6.2	6.0			
230	12.1	12.4	12.7	12.9	13.2
	13.5	13.8	14.1	14.1	14.4
	14.8	15.3	15.6	16.0	16.4
	16.8	17.3	17.8	18.2	18.7
	19.7	21.2	21.6	22.1	22.7
	22.8	22.8	22.6	22.6	22.3
	22.6	23.0	23.5	24.1	24.4
	24.7	25.0	25.2	25.4	25.6
	26.1	26.3	26.2	26.1	26.0
	25.7	25.1	24.6	23.9	23.3
	22.6	21.8	21.2	20.5	20.0
	19.6	18.7	18.0	17.5	15.9
	14.7	14.0	13.0	12.5	11.7
	11.0	10.7	10.4	10.0	9.8
	9.4	9.1	8.2	7.9	7.7
	7.7	7.3			
220	12.1	12.3	12.6	12.8	13.1
	13.1	13.4	13.7	14.0	14.3
	14.8	15.1	15.4	15.8	16.2
	16.6	17.1	17.5	18.0	18.8
	20.1	20.8	21.3	21.6	22.2
	22.2	21.8	21.8	21.9	21.7
	22.0	22.3	22.7	23.3	23.6
	23.8	24.1	24.3	24.4	24.6
	24.9	25.2	25.2	25.1	24.9
	24.6	24.3	23.7	23.2	22.6
	22.0	21.4	20.9	20.1	19.6
	19.1	18.8	18.3	17.5	16.8
	16.4	15.0	13.9	13.3	12.2
	11.7	11.0	10.3	10.0	9.7
	9.4	9.1	8.8	8.7	8.3
	7.4	7.1			
210	12.0	11.9	12.1	12.4	12.7
	12.9	13.2	13.5	13.8	14.3
	14.6	14.9	15.2	15.6	15.9
	16.5	17.2	17.7	18.4	19.4
	20.2	20.5	20.6	21.1	21.4
	21.9	21.2	21.2	21.3	21.0
	21.3	21.7	22.0	22.6	22.8
	23.1	23.3	23.4	23.6	23.7
	23.7	24.0	24.3	24.1	24.0
	23.7	23.4	23.0	22.5	22.0
	21.4	20.9	20.4	19.9	19.2
	18.8	18.3	17.9	17.5	17.3
	16.3	15.9	15.5	14.7	13.5
	12.6	11.6	11.1	9.9	9.6
	9.3	9.0	8.7	8.5	7.5
	7.3	7.0			
200	11.5	11.8	12.0	12.3	12.5
	12.8	13.1	13.3	13.6	14.1
	14.4	14.7	15.0	15.5	16.1
	16.6	17.1	18.0	18.7	19.2
	19.8	20.1	20.4	20.9	20.9
	20.9	20.6	20.6	20.8	20.5
	20.7	21.1	21.4	21.9	22.1
	22.3	22.5	22.6	22.8	22.8
	22.9	22.9	23.3	23.3	23.1
	22.9	22.6	22.3	22.0	21.4
	21.0	20.5	20.0	19.5	19.1
	18.6	18.0	17.6	17.2	16.8
	16.5	16.2	15.4	15.0	14.5
	14.2	12.8	11.7	10.9	10.5
	9.2	8.9	8.7	7.7	7.5
	7.2	7.0			
190	11.4	11.6	11.9	12.1	12.4
	12.7	12.9	13.2	13.7	13.9
	14.2	14.9	15.3	15.6	16.1
	16.9	17.4	17.8	18.6	19.1
	19.4	19.6	19.9	20.4	20.4
	20.4	20.1	20.1	20.2	20.4
	20.2	20.5	20.8	21.3	21.5
	21.7	21.8	21.9	22.0	22.1
	22.1	22.1	22.1	22.4	22.4
	22.2	21.9	21.7	21.3	21.0
	20.5	20.1	19.6	19.2	18.8
	18.4	17.9	17.5	17.0	16.6
	16.2	15.7	15.5	15.2	14.5
	14.2	13.7	13.4	12.2	11.1
	10.4	9.9	8.6	7.7	7.4
	7.1	6.9			
180	11.3	11.5	11.8	12.0	12.3
	12.5	12.8	13.0	13.5	14.1
	14.4	14.8	15.1	15.5	16.5
	16.9	17.2	18.0	18.3	18.8
	19.1	19.1	19.5	20.0	19.9
	19.9	19.6	19.6	19.7	19.9
	19.7	20.0	20.3	20.7	20.9
	21.0	21.2	21.2	21.3	21.4
	21.4	21.4	21.3	21.5	21.7
	21.5	21.3	21.1	20.8	20.5
	20.1	19.6	19.3	18.8	18.4
	18.1	17.6	17.3	16.9	16.6
	16.0	15.7	15.4	15.0	14.7
	14.4	13.8	13.3	13.0	12.8

	11.6	10.5	9.8	8.4	7.3
	7.1	6.8			
170	11.2	11.4	11.6	11.9	12.1
	12.4	12.6	13.4	13.7	13.9
	14.4	14.7	15.3	15.9	16.4
	16.6	17.4	17.7	18.2	18.5
	18.8	18.9	19.4	19.3	19.9
	19.4	19.2	19.1	19.2	19.4
	19.2	19.5	19.7	20.1	20.3
	20.4	20.5	20.6	20.7	20.7
	20.7	20.7	20.7	20.6	20.9
	20.9	20.7	20.5	20.2	20.0
	19.7	19.4	18.9	18.6	18.2
	17.8	17.4	17.0	16.7	16.3
	16.0	15.7	15.2	14.9	14.6
	14.3	14.0	13.4	12.9	12.6
	12.4	12.1	11.0	10.0	8.2
	7.9	6.7			
160	11.1	11.3	11.5	11.7	12.3
	12.6	12.8	13.3	13.5	14.0
	14.2	14.9	15.5	15.8	16.3
	16.6	17.2	17.4	17.9	18.2
	18.1	18.5	19.0	18.9	19.3
	18.9	18.8	18.7	18.8	18.9
	18.8	19.0	19.2	19.6	19.7
	19.9	20.0	20.0	20.1	20.1
	20.1	20.1	20.1	20.0	19.9
	20.2	20.2	20.0	19.8	19.5
	19.2	19.0	18.7	18.2	17.9
	17.6	17.1	16.8	16.4	16.1
	15.8	15.5	15.2	14.7	14.4
	14.1	13.9	13.6	13.3	12.2
	12.0	12.0	11.5	11.3	11.0
	8.9	7.3			
150	10.9	11.2	11.7	12.0	12.2
	12.4	12.6	13.1	13.6	14.2
	14.6	15.0	15.3	15.7	16.1
	16.6	16.9	17.4	17.7	17.9
	18.0	18.1	18.6	18.5	18.5
	18.2	18.3	18.3	18.3	18.4
	18.3	18.5	18.8	19.1	19.2
	19.3	19.4	19.5	19.5	19.5
	19.6	19.5	19.5	19.4	19.3
	19.4	19.5	19.5	19.3	19.1
	18.8	18.6	18.3	18.0	17.6
	17.3	17.0	16.6	16.3	15.9
	15.6	15.3	15.0	14.7	14.5
	14.0	13.7	13.4	12.9	12.9
	12.7	11.6	11.4	11.1	10.9
	10.7	10.1			
140	11.2	11.4	11.6	11.8	12.0
	12.3	12.5	13.2	13.8	14.2
	14.4	14.8	15.2	15.6	16.2
	16.4	16.6	17.1	17.4	17.3
	17.6	18.1	18.0	18.2	18.0
	17.8	17.9	17.9	17.9	18.0
	17.9	18.1	18.5	18.6	18.7
	18.8	18.9	18.9	19.0	19.0
	19.0	19.0	18.9	18.9	18.8
	18.7	19.0	18.8	18.8	18.6
	18.4	18.2	17.9	17.7	17.4
	17.0	16.7	16.4	16.0	15.7
	15.3	15.1	14.8	14.6	14.3
	14.0	13.8	13.3	13.1	12.8
	12.5	12.3	12.1	11.0	10.8
	10.2	10.0			
130	11.1	11.3	11.5	11.7	11.9
	12.1	13.2	13.6	13.8	14.0
	14.4	14.8	15.0	15.4	15.9
	16.2	16.6	16.9	17.1	16.9
	17.3	17.7	17.7	17.8	17.7
	17.4	17.6	17.4	17.5	17.6
	17.5	17.7	18.1	18.2	18.3
	18.4	18.4	18.4	18.5	18.5
	18.5	18.5	18.4	18.4	18.3
	18.2	18.3	18.4	18.2	18.2
	18.0	17.8	17.6	17.4	17.1
	16.9	16.4	16.2	15.9	15.5
	15.2	14.9	14.6	14.4	14.1
	13.9	13.6	13.4	13.2	12.7
	12.4	12.2	12.0	11.7	11.2
	10.1	9.9			
120	10.9	11.1	11.3	11.5	11.7
	12.8	13.2	13.4	13.6	14.2
	14.4	14.6	14.8	15.4	15.7
	15.9	16.4	16.6	16.5	16.8
	17.2	17.4	17.3	17.8	17.2
	17.1	17.2	17.0	17.1	17.2
	17.1	17.3	17.7	17.8	17.8
	17.9	17.9	18.0	18.0	18.0
	18.0	18.0	18.0	17.9	17.8
	17.7	17.6	17.7	17.8	17.8
	17.7	17.5	17.2	17.0	16.8
	16.6	16.3	15.9	15.7	15.4
	15.0	14.6	14.4	14.2	13.9
	13.7	13.5	13.2	13.0	12.8
	12.6	12.1	11.9	11.3	10.7
	10.5	10.3			
110	10.8	11.0	11.2	12.0	12.2
	12.8	13.0	13.2	13.8	14.0
	14.2	14.4	14.9	15.1	15.5
	16.0	16.1	16.3	16.1	16.5
	17.0	16.9	17.0	17.4	16.9
	16.7	16.8	16.7	16.8	16.8
	16.7	16.9	17.3	17.4	17.4
	17.5	17.5	17.5	17.6	17.6
	17.6	17.5	17.5	17.5	17.4
	17.3	17.2	17.3	17.1	17.3
	17.3	17.1	16.9	16.7	16.5
	16.3	16.1	15.6	15.4	15.2
	15.0	14.7	14.2	14.0	13.7
	13.5	13.3	13.1	12.9	12.6
	12.4	11.9	11.7	11.5	11.0
	10.4	10.2			
100	10.7	10.9	11.7	12.3	12.5
	12.7	12.9	13.4	13.6	13.8
	14.0	14.2	14.7	14.9	15.1
	15.7	15.9	15.6	15.8	16.2
	16.7	16.6	16.7	16.7	16.6
	16.4	16.4	16.3	16.3	16.5
	16.7	16.5	16.9	17.0	17.0

	17.1	17.0	17.1	17.1	17.1
	17.1	17.1	17.1	17.0	17.0
	16.9	16.8	16.6	16.8	16.9
	16.7	16.8	16.6	16.4	16.2
	16.0	15.8	15.6	15.2	14.9
	14.7	14.5	14.3	13.8	13.6
	13.3	13.1	12.9	12.7	12.5
	12.3	11.8	11.6	11.1	10.9
	10.3	10.1			
90	10.8	11.3	12.0	12.1	12.3
	12.5	13.0	13.2	13.4	13.6
	13.8	14.3	14.5	14.7	15.3
	15.5	15.5	15.4	15.8	16.2
	16.4	16.3	16.4	16.1	16.0
	16.1	16.1	16.0	16.0	16.1
	16.3	16.1	16.5	16.6	16.6
	16.7	16.6	16.7	16.7	16.7
	16.7	16.7	16.7	16.6	16.6
	16.5	16.4	16.3	16.4	16.3
	16.4	16.2	16.3	16.1	15.9
	15.7	15.5	15.3	15.1	14.7
	14.5	14.3	14.1	13.9	13.4
	13.2	13.0	12.7	12.5	12.3
	11.9	11.7	11.5	10.9	10.4
	10.2	10.0			
80	11.2	11.3	11.8	12.0	12.5
	12.7	12.9	13.1	13.2	13.4
	13.9	14.1	14.3	14.9	15.1
	15.1	15.3	15.1	15.5	16.0
	15.8	16.0	16.5	15.8	15.7
	15.8	15.8	15.7	15.6	15.8
	16.0	15.8	16.1	16.2	16.3
	16.2	16.3	16.3	16.3	16.3
	16.3	16.3	16.3	16.2	16.2
	16.1	16.0	15.9	15.8	15.9
	15.8	15.9	15.8	15.8	15.6
	15.5	15.3	15.1	14.9	14.7
	14.3	14.1	13.9	13.7	13.5
	13.0	12.8	12.6	12.4	12.2
	11.7	11.5	11.0	10.8	10.2
	10.0	9.9			
70	11.0	11.2	11.7	12.2	12.4
	12.5	12.7	12.9	13.1	13.2
	13.7	13.9	14.3	14.5	14.7
	14.9	14.7	14.9	15.3	15.7
	15.6	15.7	16.0	15.5	15.4
	15.3	15.5	15.3	15.3	15.4
	15.7	15.5	15.8	15.9	15.9
	15.8	15.9	15.9	15.9	16.0
	16.0	15.9	15.9	15.9	15.8
	15.7	15.6	15.5	15.4	15.6
	15.4	15.3	15.5	15.5	15.4
	15.2	15.0	14.9	14.7	14.5
	14.3	13.9	13.7	13.5	13.3
	13.1	12.6	12.4	12.2	11.8
	11.6	11.4	10.9	10.3	10.1
	9.9	9.7			
60	10.9	11.0	11.6	12.0	12.2
	12.4	12.5	12.7	12.9	13.4
	13.6	13.7	14.2	14.3	14.5
	14.6	14.5	14.9	15.3	15.4
	15.3	15.4	15.7	15.2	15.1
	15.0	15.2	15.0	15.0	15.1
	15.3	15.1	15.5	15.5	15.6
	15.5	15.5	15.6	15.6	15.6
	15.6	15.6	15.5	15.5	15.4
	15.4	15.3	15.2	15.1	15.0
	15.1	15.0	15.2	15.0	15.1
	14.9	14.8	14.6	14.4	14.3
	14.1	13.9	13.5	13.3	13.1
	12.9	12.8	12.2	11.8	11.6
	11.4	10.9	10.3	10.2	10.0
	9.8	9.6			
50	10.4	11.3	11.4	11.6	12.0
	12.2	12.4	12.5	13.0	13.2
	13.4	13.5	14.0	14.1	14.3
	14.1	14.3	14.7	15.1	14.9
	15.1	15.2	15.1	14.9	14.8
	14.7	14.9	14.7	14.7	14.8
	14.9	14.8	15.1	15.2	15.2
	15.1	15.2	15.2	15.2	15.2
	15.2	15.2	15.2	15.2	15.1
	15.0	15.0	14.9	14.8	14.7
	14.8	14.7	14.6	14.7	14.6
	14.7	14.5	14.4	14.2	14.0
	13.9	13.7	13.5	13.1	12.9
	12.8	12.6	12.2	11.6	11.4
	10.9	10.8	10.2	10.0	9.8
	9.7	9.5			
40	10.2	10.8	11.3	11.4	11.9
	12.1	12.2	12.4	12.9	13.0
	13.2	13.6	13.8	13.9	14.0
	13.9	14.0	14.7	14.8	14.7
	14.8	15.3	14.6	14.7	14.4
	14.5	14.6	14.3	14.4	14.5
	14.6	14.5	14.8	14.9	14.8
	14.8	14.9	14.9	14.9	14.9
	14.9	14.9	14.9	14.8	14.8
	14.7	14.6	14.6	14.5	14.4
	14.3	14.4	14.3	14.2	14.3
	14.2	14.3	14.1	14.0	13.8
	13.7	13.5	13.3	13.2	12.8
	12.6	12.2	12.0	11.8	11.6
	10.8	10.2	10.0	9.9	9.7
	9.5	8.8			
30	9.6	10.2	11.1	11.3	11.4
	11.9	12.0	12.5	12.7	12.8
	13.0	13.4	13.6	13.7	13.5
	13.7	14.1	14.5	14.6	14.4
	14.6	15.0	14.3	14.2	14.1
	14.2	14.2	14.0	14.1	14.2
	14.3	14.2	14.5	14.6	14.5
	14.5	14.5	14.6	14.6	14.6
	14.6	14.6	14.5	14.5	14.5
	14.4	14.3	14.3	14.2	14.1
	14.0	14.1	14.0	13.9	13.8
	13.9	13.8	13.9	13.8	13.6
	13.4	13.3	13.1	13.0	12.8
	12.4	12.0	11.8	11.6	11.2
	10.7	10.1	9.9	9.7	9.6
	8.9	8.1			

20		9.5	10.1	10.2	11.1	11.3
		11.4	12.2	12.4	12.5	12.7
		13.1	13.2	13.4	13.5	13.3
		13.5	13.8	14.2	14.1	14.2
		14.3	14.6	14.0	13.9	13.8
		13.9	13.9	13.7	13.8	13.9
		14.0	14.2	14.2	14.1	14.1
		14.2	14.2	14.2	14.3	14.3
		14.3	14.2	14.2	14.2	14.1
		14.1	14.0	14.0	13.9	13.8
		13.7	13.6	13.8	13.6	13.5
		13.7	13.6	13.4	13.5	13.4
		13.2	13.1	12.9	12.8	12.6
		12.0	11.8	11.6	11.2	10.7
		10.5	10.3	9.7	9.6	8.9
		8.7	7.2			
10		9.3	9.5	10.1	10.6	11.1
		11.3	11.8	12.2	12.3	12.5
		12.9	13.0	13.2	13.0	13.1
		13.5	13.9	14.0	13.9	14.0
		14.1	14.3	13.8	13.5	13.6
		13.7	13.6	13.5	13.5	13.6
		13.7	14.0	13.7	13.8	13.8
		13.9	13.9	13.9	14.0	14.0
		14.0	13.9	13.9	13.9	13.8
		13.8	13.7	13.7	13.6	13.5
		13.4	13.3	13.5	13.4	13.3
		13.2	13.3	13.2	13.3	13.2
		13.0	12.9	12.7	12.6	11.9
		11.8	11.6	11.2	10.7	10.5
		10.3	9.8	9.6	9.4	8.8
		7.2	7.1			
0		8.6	9.3	9.5	10.1	10.6
		11.5	11.6	11.7	12.2	12.6
		12.7	12.8	13.0	12.8	12.9
		13.3	13.7	13.8	13.6	13.7
		13.8	13.7	13.6	13.2	13.3
		13.4	13.4	13.2	13.3	13.3
		13.4	13.7	13.5	13.5	13.6
		13.6	13.6	13.6	13.7	13.7
		13.7	13.6	13.6	13.6	13.6
		13.5	13.4	13.4	13.3	13.2
		13.2	13.1	13.0	13.1	13.0
		12.9	12.8	13.0	12.9	13.0
		12.8	12.7	12.6	11.9	11.8
		11.6	11.1	10.6	10.5	10.3
		9.8	9.6	9.4	8.8	7.2
		7.1	6.9			

```
( x =      599 ,y =      249 ,z = 4.0 ):      13.6
( x =      588 ,y =      204 ,z = 4.0 ):      17.1
```

LAeq , dzień: wartość największa występuje w punkcie (280,350,4.0)
i wynosi 52.0 dB(A)

Koniec obliczeń

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

HAŁAS PRZEMYSŁOWY i DROGOWY
PROGRAM SON2 WERSJA 5.424

Właściciel licencji: NOVUM PROJEKT Norbert Piróg
ul. Planetarna 21C/4, Żalasewo 62-020 Swarzędz
Licencja nr NP/62020/Spd/21 z dnia 14.05.2021

DANE WEJŚCIOWE

Rodzaj obliczeń: Poziom hałasu równoważnego

- 1. Nazwa projektu:
- 2. Temperatura powietrza [st C.] = 10
- 3. Wilgotność względna powietrza [%] = 70
- 4. Tło akustyczne dB(A):
Pora dnia : 0.0
Pora nocy : 0.0
- 5. Rodzaj gruntu : grunt porowaty, wskaźnik gruntu G = 1
- 6. Punktowe źródła hałasu

Lp	Symbol	Współrzędne źródła			ht	Rodzaj źródła	LAW	tD	tN	Do
		x	y	z						
		m	m	m	m		dB(A)	h	h	dB
1	ZP 1	278.0	372.5	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
2	ZP 2	279.6	349.8	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
3	ZP 3	274.9	325.9	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
4	ZP 4	331.3	316.0	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
5	ZP 5	332.9	350.9	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
6	ZP 6	354.5	332.5	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
7	ZP 7	380.4	321.1	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
8	ZP 8	402.7	310.2	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
9	ZP 9	425.8	301.1	1.5	0.0	wszechkier.	68.0	8.000	1.000	3
10	ZP 10	448.2	291.0	1.5	0.0	wszechkier.	68.0	8.000	1.000	3

7. Liniowe źródła hałasu

Lp	Symbol	Początek			h1t	Koniec			h2t	LAW 8hD	LAW 1hN	D0
		x1	y1	z1		x2	y2	z2				
		m	m	m	m	m	m	m	m	dBA	dBA	dB
1	T1	310.2	376.0	0.0	0.0	303.1	329.0	0.0	0.0	61.4	66.4	
2	T2	361.1	353.3	0.0	0.0	360.8	349.4	0.0	0.0	52.1	58.1	
3	T3	386.6	342.3	0.0	0.0	385.8	337.2	0.0	0.0	52.1	58.2	
4	T4	410.2	332.5	0.0	0.0	409.8	326.6	0.0	0.0	52.2	58.2	
5	T5	432.5	323.1	0.0	0.0	431.7	317.6	0.0	0.0	52.2	58.2	
6	T6	455.6	311.7	0.0	0.0	454.9	306.6	0.0	0.0	52.1	58.2	

z - wysokość źródła nad gruntem ; ht - wysokość gruntu względem płaszczyzny odniesienia
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

LAW 8hD - równoważny poziom mocy akustycznej źródła w przedziale 8 kolejnych najmniej korzystnych godzin dnia
LAW 1hN - równoważny poziom mocy akustycznej źródła w przedziale 1 najmniej korzystnej godziny nocy

8. Ekran - budynki

Lp	Symbol	Wia	Współrzędne x,y wierzchołków ekranu[m]								ho	h1	ht	Współczynniki			
		ta	x1	y1	x2	y2	x3	y3	x4	y4	m	m	m	odbicia scian			
		(W)												nr 1 - 4			
1	EK-B 1	293.3	366.2	295.7	378.4	281.2	381.5	278.8	369.4	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
2	EK-B 2	294.1	341.5	296.1	354.9	281.9	357.2	279.6	344.7	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
3	EK-B 3	290.2	319.6	292.1	332.1	277.6	334.9	275.3	322.3	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
4	EK-B 4	329.4	314.5	331.0	326.6	316.8	329.8	314.1	317.2	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
5	EK-B 5	331.3	349.0	333.3	361.5	318.8	363.9	316.4	350.9	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
6	EK-B 6	364.7	332.1	366.6	345.9	354.1	348.2	352.1	334.5	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
7	EK-B 7	389.4	320.4	392.1	334.5	380.0	337.2	377.2	322.7	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
8	EK-B 8	413.3	310.2	415.3	324.3	402.7	326.6	400.4	312.1	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
9	EK-B 9	436.4	299.6	438.8	313.7	426.2	316.4	423.9	302.3	0.0	9.0	0.0	0.8	0.8	0.8	0.8	
10	EK-B 10	458.0	289.8	460.4	303.9	448.2	306.2	445.8	292.5	0.0	9.0	0.0	0.8	0.8	0.8	0.8	

Koniec danych

L_{Aeq} , 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			
630	7.1	7.3	7.5	7.6	7.8
	8.0	8.1	8.3	8.5	8.6
	8.8	8.9	9.1	9.2	9.3
	9.5	9.6	10.4	10.5	10.6
	10.7	10.8	10.9	10.9	11.0
	11.0	11.1	10.4	10.3	8.6
	8.6	7.4	7.7	7.3	8.3
	10.2	10.1	10.0	8.8	9.7

		9.1	10.0	9.9	9.9	9.8
		8.7	8.6	8.5	8.4	8.2
		8.1	8.0	7.8	7.7	7.5
		7.4	6.6	5.3	5.1	2.7
		2.5	2.4	2.2	2.0	1.9
		1.7	1.5	1.4	1.2	1.0
		0.9	0.7	0.5	0.4	0.2
	5.3E-0002	0.0				
620		7.3	7.5	7.6	7.8	8.0
		8.2	8.3	8.5	8.7	9.4
		9.5	9.2	9.3	9.5	9.6
		9.8	9.9	10.0	10.8	10.9
		11.0	11.1	11.2	11.3	11.3
		11.4	12.0	10.7	10.6	9.0
		9.0	7.7	7.5	7.6	8.6
		10.5	10.4	9.2	9.1	10.0
		9.4	10.3	10.2	10.1	10.0
		9.0	8.9	8.7	8.6	8.5
		8.3	8.2	8.0	7.9	7.7
		7.0	5.6	5.5	3.1	2.9
		2.7	2.5	2.4	2.2	2.0
		1.8	1.7	1.5	1.3	1.2
		1.0	0.8	0.7	0.5	0.3
		0.2	0.0			
610		7.5	7.6	7.8	8.0	8.2
		8.4	8.6	8.7	8.9	9.6
		9.8	9.9	9.6	9.7	9.9
		10.0	10.2	10.3	10.4	11.2
		11.3	11.4	11.5	11.6	11.7
		11.7	12.4	11.1	10.9	9.3
		8.5	8.0	7.8	8.0	9.0
		10.8	10.8	9.5	9.3	10.2
		9.7	10.6	10.5	10.4	9.4
		9.3	9.1	9.0	8.9	8.7
		8.6	8.4	8.3	8.1	8.0
		7.1	5.8	5.7	3.3	3.1
		2.9	2.7	2.5	2.4	2.2
		2.0	1.8	1.6	1.5	1.3
		1.1	0.9	0.8	0.6	0.4
	9.7E-0002					
600		7.6	7.8	8.0	8.2	8.4
		8.6	8.8	8.9	9.1	9.3
		10.0	10.2	10.4	10.0	10.2
		10.3	10.5	10.6	10.8	11.5
		11.6	11.7	11.8	11.9	12.0
		12.1	12.7	11.4	11.3	10.6
		8.8	8.3	8.2	8.3	9.3
		11.2	11.1	9.8	9.6	10.5
		10.0	10.9	10.8	10.7	9.7
		9.5	9.4	9.3	9.1	9.0
		8.8	8.7	8.5	8.3	7.5
		6.2	6.1	3.6	3.5	3.3
		3.1	2.9	2.7	2.5	2.3
		2.1	2.0	1.8	1.6	1.4
		1.2	1.1	0.9	0.7	0.5
		0.4	0.2			
590		7.8	8.6	8.2	8.4	8.6
		8.8	9.0	9.2	9.4	9.6
		9.7	10.4	10.6	10.8	10.5
		10.6	10.8	11.0	11.1	11.2
		12.0	12.1	12.2	12.3	12.4
		12.4	12.5	12.5	11.7	11.0
		9.1	9.4	8.6	8.7	9.7
		11.6	10.3	10.1	11.0	10.4
		11.3	11.2	11.1	11.0	10.0
		9.8	9.7	9.5	9.4	9.2
		9.1	8.9	8.7	7.9	7.5
		6.4	4.0	3.8	3.6	3.4
		3.3	3.1	2.9	2.7	2.5
		2.3	2.1	1.9	1.7	1.5
		1.4	1.2	1.0	0.8	0.6
		0.5	0.3			
580		8.0	8.2	9.1	8.6	8.8
		9.0	9.2	9.4	9.6	9.8
		10.0	10.2	10.9	11.1	11.3
		10.9	11.1	11.3	11.4	11.6
		11.7	12.5	12.6	12.7	12.7
		12.8	12.9	12.9	12.0	11.4
		9.5	10.2	9.0	9.7	10.1
		11.9	10.6	10.4	11.3	10.8
		11.7	11.6	11.5	10.4	10.3
		10.1	10.0	9.8	9.7	9.5
		9.3	9.2	8.3	8.0	6.8
		5.8	4.2	4.0	3.8	3.6
		3.4	3.2	3.0	2.8	2.6
		2.4	2.2	2.0	1.8	1.7
		1.5	1.3	1.1	0.9	0.7
		0.6	0.4			
570		8.1	8.3	8.6	8.8	9.0
		9.2	9.4	9.6	9.8	10.0
		10.3	10.5	10.7	11.3	11.5
		11.7	11.4	11.6	11.8	11.9
		12.1	12.8	12.9	13.0	13.1
		13.2	13.3	13.2	12.5	12.3
		9.8	10.5	9.4	10.1	10.6
		11.1	11.0	11.1	11.6	11.1
		12.0	11.9	11.8	10.7	10.6
		10.4	10.3	10.1	9.9	9.8
		9.6	9.4	8.5	8.0	6.3
		4.7	4.4	4.2	4.0	3.8
		3.6	3.4	3.2	3.0	2.8
		2.6	2.4	2.2	2.0	1.8
		1.6	1.4	1.2	1.0	0.8
		0.7	0.5			
560		8.3	8.5	8.7	8.9	9.2
		9.4	9.6	9.8	10.1	10.3
		10.5	10.7	11.0	11.2	11.8
		12.0	12.2	12.0	12.2	12.3
		12.5	12.6	13.3	13.5	13.6
		13.6	13.7	14.3	13.6	12.7
		10.2	10.9	9.9	10.5	11.0
		11.5	11.3	11.5	11.9	12.5
		11.4	12.3	12.1	11.1	10.9
		10.8	10.6	10.4	10.2	10.0
		9.8	8.9	8.5	7.5	6.3
		4.9	4.7	4.4	4.2	4.0
		3.8	3.6	3.3	3.1	2.9
		2.7	2.5	2.3	2.1	1.9
		1.7	1.5	1.3	1.1	0.9
		0.8	0.6			
550		8.5	8.7	8.9	9.1	9.4

		9.6	9.8	10.1	10.3	10.5
		10.8	11.0	11.2	11.5	11.7
		12.4	12.6	12.8	12.5	12.7
		12.9	13.0	13.8	13.9	14.0
		14.1	14.1	14.2	14.0	13.2
		11.4	10.8	10.3	11.0	11.5
		11.9	11.7	11.8	12.3	12.9
		12.8	12.6	11.6	11.4	11.3
		11.1	10.9	10.7	10.5	10.3
		9.4	9.0	7.9	6.8	5.3
		5.1	4.9	4.6	4.4	4.2
		3.9	3.7	3.5	3.3	3.1
		2.8	2.6	2.4	2.2	2.0
		1.8	1.6	1.4	1.2	1.0
		0.8	0.7			
540		8.6	8.8	9.1	9.3	9.6
		9.8	10.0	10.9	10.5	10.8
		11.0	11.3	11.5	11.8	12.0
		12.2	12.9	13.1	12.9	13.1
		13.3	13.5	13.6	14.3	14.4
		14.5	14.6	14.7	14.5	13.6
		11.9	11.2	10.8	11.5	11.8
		12.3	12.0	12.8	12.6	13.3
		13.1	13.0	12.0	11.8	11.6
		11.4	11.2	11.0	10.8	10.6
		9.5	9.1	7.3	5.8	5.5
		5.3	5.1	4.8	4.6	4.3
		4.1	3.9	3.6	3.4	3.2
		3.0	2.8	2.5	2.3	2.1
		1.9	1.7	1.5	1.3	1.1
		0.9	0.7			
530		8.8	9.0	9.2	9.5	9.7
		10.0	10.3	10.5	11.2	11.0
		11.3	11.6	11.8	12.1	12.3
		12.6	12.8	13.5	13.7	13.5
		13.8	13.9	14.1	14.3	14.9
		15.0	15.1	15.2	15.0	14.8
		12.4	11.7	11.4	12.0	12.2
		12.7	12.7	13.2	12.8	12.7
		13.6	12.5	12.4	12.2	12.0
		11.8	11.6	11.3	11.1	10.1
		9.6	7.8	7.2	6.0	5.8
		5.5	5.3	5.0	4.8	4.5
		4.3	4.0	3.8	3.6	3.3
		3.1	2.9	2.7	2.4	2.2
		2.0	1.8	1.6	1.4	1.2
		1.0	0.8			
520		8.9	9.2	9.4	9.7	9.9
		10.2	10.5	10.7	11.0	11.6
		11.6	11.8	12.1	12.4	12.7
		12.9	13.2	13.5	14.1	14.4
		14.2	14.4	14.6	14.8	15.4
		15.6	15.7	15.7	15.5	15.3
		13.2	12.2	11.9	12.5	12.7
		13.1	13.1	13.6	14.3	14.1
		14.0	12.9	12.8	12.6	12.3
		12.1	11.9	11.7	10.7	10.2
		9.0	7.8	6.5	6.3	6.0
		5.7	5.5	5.2	4.9	4.7
		4.4	4.2	3.9	3.7	3.5
		3.2	3.0	2.8	2.6	2.3
		2.1	1.9	1.7	1.5	1.3
		3.9	3.8			
510		9.6	9.3	9.6	9.8	10.1
		10.4	10.7	10.9	11.2	11.5
		12.1	12.1	12.4	12.7	13.0
		13.3	13.6	13.9	14.2	14.8
		15.0	14.9	15.1	15.3	15.5
		16.1	16.2	16.3	16.0	15.9
		14.2	12.7	12.5	10.5	13.8
		13.5	13.6	14.1	14.7	14.6
		14.4	13.4	13.2	13.0	12.7
		12.5	12.2	11.3	10.8	9.5
		8.3	7.1	6.8	6.5	6.2
		5.9	5.7	5.4	5.1	4.8
		4.6	4.3	4.1	3.8	3.6
		3.3	3.1	2.9	2.7	2.4
		2.2	2.0	1.8	4.4	4.2
		4.0	3.8			
500		10.6	10.7	10.2	10.0	10.3
		10.6	10.9	11.2	11.5	11.8
		12.1	12.7	13.1	13.0	13.3
		13.7	14.0	14.3	14.6	14.9
		15.5	15.8	15.7	15.9	16.1
		16.7	16.9	16.9	16.0	16.5
		15.5	13.4	13.2	10.9	14.3
		14.0	14.2	14.6	14.3	15.1
		14.0	13.8	13.6	13.4	13.1
		12.8	12.6	11.4	10.9	8.9
		8.3	7.3	7.0	6.7	6.4
		6.1	5.8	5.6	5.3	5.0
		4.7	4.5	4.2	4.0	3.7
		3.5	3.2	3.0	2.8	2.5
		2.3	4.9	4.7	4.5	4.3
		4.1	1.0			
490		11.2	11.5	11.2	11.4	10.9
		11.1	11.1	11.4	11.7	12.0
		12.3	12.7	13.2	13.7	13.7
		14.0	14.4	14.7	15.1	15.4
		15.7	16.2	16.6	16.6	16.9
		17.0	17.6	17.6	16.7	16.6
		16.1	14.3	14.0	11.2	14.8
		14.5	15.3	15.9	15.8	15.6
		14.5	14.3	14.1	13.8	13.5
		13.2	12.1	11.5	10.1	9.0
		7.9	7.6	7.3	7.0	6.6
		6.3	6.0	5.7	5.4	5.2
		4.9	4.6	4.3	4.1	3.8
		3.6	3.3	4.8	4.7	5.5
		5.2	5.0	4.8	6.0	5.5
		3.7	1.1			
480		12.0	12.3	12.2	12.1	12.2
		12.3	11.7	11.9	11.9	12.2
		12.6	12.9	13.3	13.8	14.3
		14.4	14.8	15.1	15.5	15.9
		16.3	16.6	17.0	17.5	17.5
		17.8	17.9	18.4	17.5	17.2
		16.9	15.0	11.3	11.5	15.3
		15.3	15.9	16.5	16.3	15.3
		15.1	14.8	14.5	14.2	13.9
		12.9	12.3	10.8	9.6	8.6

		8.2	7.8	7.5	7.2	6.8
		6.5	6.2	5.9	5.6	5.3
		5.0	4.7	4.5	4.2	5.4
		5.4	5.3	6.0	5.8	5.5
		5.3	6.5	5.9	5.6	5.5
		1.4	1.2			
470		12.2	12.6	12.8	12.9	12.9
		13.1	13.1	13.1	12.5	12.8
		12.8	13.2	13.6	14.0	14.5
		15.0	15.2	15.6	16.0	16.4
		16.8	17.2	17.6	18.0	18.5
		18.5	18.8	19.2	18.4	18.0
		17.6	16.6	11.6	11.8	16.0
		15.9	16.5	16.2	16.9	15.9
		15.6	15.3	15.0	14.7	14.3
		13.0	11.6	10.7	9.2	8.8
		8.5	8.1	7.7	7.4	7.0
		6.7	6.4	6.1	5.8	5.5
		5.2	6.1	6.0	6.0	5.8
		6.6	6.3	6.1	5.9	6.6
		6.4	7.2	4.4	1.9	1.7
		1.4	1.2			
460		11.9	12.2	12.6	13.1	13.5
		13.6	13.9	13.8	13.9	13.9
		13.8	13.7	14.0	14.3	14.7
		15.1	15.8	16.0	16.5	17.0
		17.4	17.9	18.3	18.7	19.2
		19.6	19.6	19.8	19.3	19.0
		18.6	15.2	12.3	12.4	16.8
		16.9	17.2	16.9	17.6	16.5
		16.2	15.9	15.5	15.1	13.9
		12.4	11.5	10.4	9.5	9.1
		8.7	8.3	8.0	7.6	7.2
		6.9	6.5	6.2	5.9	6.7
		6.7	6.6	6.5	7.2	7.0
		6.7	7.8	7.1	7.9	6.5
		4.5	2.4	2.2	1.9	1.7
		1.5	1.3			
450		12.0	11.8	12.4	12.7	13.1
		13.7	14.1	14.3	14.7	14.6
		14.8	14.9	14.8	14.8	15.2
		15.5	16.0	16.6	17.4	17.5
		18.0	18.6	19.1	19.6	20.0
		20.4	20.9	20.9	20.0	19.5
		19.5	15.8	12.4	13.2	17.7
		17.8	18.9	18.5	17.5	17.2
		16.8	16.4	16.0	14.8	13.3
		12.3	11.5	10.3	9.8	9.4
		9.0	8.6	8.2	7.8	7.4
		7.1	7.6	7.5	7.4	7.3
		7.1	7.9	8.4	8.2	8.4
		8.8	7.3	6.5	5.0	2.9
		2.7	2.5	2.2	2.0	1.8
		1.6	1.3			
440		12.2	12.4	12.6	12.4	13.0
		13.3	13.7	14.1	14.8	15.3
		15.5	15.8	16.1	16.0	16.0
		16.0	16.5	16.9	17.6	18.3
		18.7	19.3	19.9	20.4	21.0
		21.5	21.9	22.2	21.3	20.7
		20.7	16.4	15.4	13.9	18.6
		19.3	19.9	19.4	18.4	17.9
		17.5	17.0	15.8	15.0	13.3
		12.4	11.1	10.6	10.1	9.7
		9.2	8.8	8.4	8.0	8.4
		8.2	8.1	8.0	8.5	9.2
		9.0	8.8	9.7	8.2	7.8
		6.9	5.4	3.5	3.3	3.0
		2.8	2.5	2.3	2.1	1.8
		1.6	1.4			
430		11.8	12.1	13.1	13.3	13.2
		13.5	13.6	13.9	14.3	14.8
		15.5	16.1	16.5	16.8	17.2
		17.4	17.3	17.6	18.1	18.8
		19.4	20.0	20.7	21.4	22.1
		22.7	23.2	23.6	22.9	21.9
		19.2	16.7	15.8	15.1	19.9
		20.4	20.0	20.4	19.2	18.7
		18.1	17.6	16.1	14.3	13.3
		12.6	11.5	10.9	10.4	9.9
		9.5	9.6	9.3	9.1	8.9
		9.4	9.3	10.0	9.8	10.6
		9.2	8.8	7.9	7.3	5.8
		4.1	3.8	3.6	3.3	3.1
		2.8	2.6	2.3	2.1	1.9
		1.7	1.4			
420		12.2	12.3	12.5	12.7	13.3
		14.0	14.3	14.2	14.3	14.7
		15.1	15.6	16.2	16.9	17.6
		18.1	18.5	18.8	19.0	19.4
		20.0	20.9	21.5	22.4	23.3
		24.1	24.8	25.2	24.5	23.6
		19.9	17.2	16.7	16.3	21.2
		22.2	21.8	20.7	20.2	19.6
		19.0	17.5	15.5	14.4	13.6
		12.7	11.8	11.5	11.1	10.6
		10.3	10.0	10.3	10.2	10.1
		10.9	11.7	10.9	9.9	8.9
		8.3	7.8	6.3	4.8	4.5
		4.2	3.9	3.6	3.4	3.1
		2.9	2.6	2.4	2.1	1.9
		1.7	1.5			
410		12.1	12.3	12.6	13.1	13.4
		13.7	13.8	14.4	15.1	15.2
		15.6	15.6	16.0	16.6	17.2
		17.9	18.8	19.5	20.0	20.5
		21.0	21.6	22.5	23.5	24.5
		25.6	26.6	27.3	26.8	25.6
		19.7	18.3	17.9	19.3	22.7
		23.4	23.0	21.9	21.2	20.5
		19.0	17.2	15.7	14.8	13.9
		13.0	12.4	11.9	11.4	11.4
		11.2	11.2	12.4	11.8	11.5
		11.1	10.6	9.5	8.8	8.2
		7.7	5.5	5.1	4.8	4.5
		4.2	4.0	3.7	3.4	3.2
		2.9	2.7	2.4	2.2	2.0
		1.7	1.5			
400		11.9	12.2	12.7	13.0	13.3
		13.5	13.9	14.5	14.8	15.1
		16.1	16.5	16.6	16.7	17.2

	17.8	18.4	19.2	20.2	21.2
	22.0	22.9	23.6	24.6	25.9
	27.3	28.8	29.9	29.7	23.3
	18.1	20.3	19.5	20.7	24.5
	24.4	23.9	23.1	22.3	21.5
	18.9	17.4	16.2	15.3	14.6
	13.4	13.1	12.6	12.4	13.7
	12.2	12.8	12.5	12.0	10.8
	10.1	9.3	8.7	8.2	6.2
	5.8	5.5	6.6	4.9	4.6
	4.3	4.0	3.7	3.5	3.2
	2.9	2.7	2.5	2.2	2.0
	1.8	1.5			
390	12.7	12.6	13.0	13.3	13.4
	13.5	14.0	14.4	14.8	15.1
	15.6	16.3	16.7	17.7	18.1
	18.3	18.6	19.3	20.1	21.0
	22.1	23.4	24.7	25.9	27.3
	29.1	31.3	33.5	33.8	21.6
	20.7	22.6	22.5	22.5	26.8
	26.2	25.4	24.5	23.4	21.1
	19.5	18.3	17.2	16.2	15.2
	14.3	15.3	13.5	13.4	14.0
	14.2	12.9	11.5	10.7	9.9
	9.3	8.8	7.0	6.6	7.7
	7.1	5.6	5.2	4.9	4.6
	4.3	4.0	3.8	3.5	3.2
	3.0	2.7	2.5	2.2	2.0
	1.8	1.6			
380	12.7	13.0	13.5	13.8	13.9
	14.3	14.7	14.8	15.1	15.6
	16.3	16.4	16.8	17.2	17.8
	18.5	19.6	20.2	20.3	21.2
	22.3	23.4	24.8	26.5	28.5
	30.7	33.7	38.5	41.1	18.2
	25.6	29.1	24.9	24.6	30.0
	28.8	27.2	25.8	23.9	21.5
	20.3	19.1	18.2	18.3	16.5
	15.8	15.3	15.4	14.7	13.3
	12.3	11.4	10.6	10.0	9.5
	7.9	8.9	8.3	7.7	6.3
	5.9	5.6	5.3	5.0	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.7	2.5	2.3	2.0
	1.8	1.6			
370	12.5	12.6	13.1	13.6	14.0
	14.3	15.0	15.3	15.5	16.2
	16.7	16.9	17.2	17.5	18.3
	18.7	19.4	20.0	20.8	22.0
	22.8	23.8	25.2	26.9	28.9
	31.5	35.0	41.0	-1.0	-1.0
	29.4	35.5	27.3	24.6	33.0
	31.1	29.1	26.9	24.2	22.5
	21.3	20.0	19.2	18.6	18.0
	18.0	17.1	15.2	13.6	12.5
	11.8	11.2	10.7	9.4	9.6
	8.9	8.3	7.1	6.7	6.3
	6.0	5.6	5.3	5.0	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.8	2.5	2.3	2.0
	1.8	1.6			
360	12.4	12.6	13.2	13.4	13.9
	14.3	14.6	14.8	15.4	15.9
	16.5	16.9	17.4	17.9	18.7
	19.4	20.0	20.7	21.4	22.2
	23.1	24.6	25.9	27.4	29.3
	31.8	34.9	38.7	41.2	28.4
	31.0	35.2	-1.0	-1.0	37.9
	34.0	31.6	27.9	25.4	23.9
	22.6	21.5	20.8	21.1	19.0
	17.7	16.4	15.4	14.4	13.2
	12.6	11.9	10.7	9.4	9.0
	8.8	8.4	8.0	7.7	7.4
	8.0	7.7	6.5	6.2	6.1
	5.8	4.1	3.8	3.6	3.3
	3.0	2.8	2.5	2.3	2.0
	1.8	1.6			
350	12.0	12.3	12.9	13.2	13.7
	14.1	14.4	14.9	15.3	15.9
	16.4	16.8	17.3	17.7	18.5
	19.1	19.8	20.7	21.5	22.4
	23.5	24.7	26.1	27.8	29.9
	32.1	35.2	40.3	52.0	-1.0
	33.6	34.9	32.1	-1.0	42.1
	35.5	35.7	29.8	27.5	27.0
	25.1	24.3	22.4	21.2	20.0
	19.0	17.6	16.7	16.2	15.3
	14.0	12.6	11.7	10.9	10.6
	10.2	9.4	8.4	8.0	7.7
	7.4	7.1	6.8	6.5	6.2
	5.9	5.6	5.4	3.6	3.3
	3.0	2.8	2.5	2.3	2.1
	1.8	1.6			
340	12.4	12.9	13.2	13.5	13.9
	14.4	14.7	15.1	15.4	15.8
	16.3	16.8	17.4	18.0	18.6
	19.2	19.8	20.5	21.2	22.1
	23.3	24.5	26.0	27.7	29.8
	32.3	35.4	39.1	37.1	28.8
	34.1	34.1	33.2	39.1	39.7
	36.7	-1.0	25.4	30.5	32.4
	26.0	26.2	24.3	22.7	21.3
	20.3	18.2	17.0	15.8	14.7
	13.6	12.5	10.8	9.9	9.0
	8.6	7.5	7.1	6.7	6.3
	6.0	5.7	5.3	5.0	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.8	2.5	2.3	2.0
	1.8	1.6			
330	12.5	13.3	13.6	13.9	14.2
	14.5	14.9	15.2	15.5	15.9
	16.3	16.8	17.3	17.8	18.3
	18.9	19.6	20.4	21.2	22.1
	23.2	24.4	25.8	27.4	29.4
	32.1	36.2	43.1	-1.0	-1.0
	32.7	31.8	35.3	36.3	40.8
	46.2	45.4	38.4	-1.0	-1.0
	27.7	0.0	27.4	26.2	24.2
	21.5	19.8	18.0	15.8	14.7
	13.4	12.3	11.6	10.8	10.4
	10.5	9.6	8.8	8.4	7.4

	7.1	6.8	6.5	5.0	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.8	2.5	2.3	2.0
	1.8	1.6			
320	12.5	13.0	13.3	13.6	14.0
	14.5	14.8	15.3	15.7	16.1
	16.5	16.9	17.4	17.9	18.4
	18.9	19.6	20.3	21.1	22.0
	23.0	24.2	25.5	27.0	28.9
	31.5	35.5	41.4	27.1	-1.0
	26.5	26.5	-1.0	-1.0	42.2
	40.4	40.1	40.7	51.2	40.7
	30.7	-1.0	25.5	33.7	28.3
	25.2	24.0	20.1	16.7	14.4
	12.5	10.1	9.5	8.8	8.5
	8.1	8.0	9.4	8.5	8.2
	7.0	6.7	6.4	6.2	4.7
	4.4	4.1	3.8	3.5	3.3
	3.0	2.7	2.5	2.3	2.0
	1.8	1.6			
310	12.8	13.3	13.6	13.9	14.1
	14.5	14.8	15.1	15.5	15.8
	16.2	16.7	17.2	17.7	18.2
	18.9	19.5	20.2	21.1	21.9
	22.7	23.8	24.9	26.3	28.0
	30.3	32.9	35.1	28.0	24.8
	26.4	27.3	32.3	43.3	41.0
	37.9	37.1	38.0	39.7	39.8
	49.9	44.2	35.6	-1.0	24.0
	30.5	30.7	22.4	16.6	14.0
	11.8	10.5	9.2	8.2	7.1
	6.8	6.6	6.4	4.9	4.9
	4.5	4.2	3.9	3.8	5.9
	4.3	4.0	3.8	3.5	3.2
	3.0	2.7	2.5	2.2	2.0
	1.8	1.6			
300	12.4	12.9	13.2	13.5	13.8
	14.1	14.5	14.8	15.3	15.7
	16.1	16.6	17.2	17.7	18.4
	18.9	19.6	20.2	20.8	21.7
	22.6	23.4	24.5	25.8	27.1
	29.0	30.3	31.8	26.9	25.1
	26.3	31.3	33.9	35.8	35.4
	35.5	34.9	35.3	36.6	38.3
	41.0	40.5	44.1	45.9	33.2
	-1.0	17.0	20.0	16.8	14.7
	12.6	11.8	11.2	10.4	9.8
	8.8	7.9	7.5	6.2	5.6
	5.0	2.8	2.4	1.9	1.5
	1.1	0.7	0.3	0.0	0.0
	0.0	0.0	2.4	2.2	2.0
	1.8	1.5			
290	12.6	13.1	13.4	13.7	14.2
	14.5	14.6	15.0	15.3	15.9
	16.4	17.0	17.4	17.8	18.4
	18.9	19.7	20.2	20.8	21.4
	22.1	22.9	23.9	24.9	26.5
	27.5	28.3	28.8	25.5	24.7
	28.0	29.5	30.9	32.2	32.4
	33.5	33.3	33.6	34.4	35.4
	36.4	37.0	38.6	39.3	41.5
	49.6	32.4	26.0	22.3	19.5
	17.2	15.5	13.8	12.5	11.2
	10.3	9.6	9.0	8.4	7.9
	7.5	6.2	5.7	5.4	6.3
	6.2	5.9	4.3	4.0	3.8
	3.3	0.1	0.0	0.0	0.0
	0.0	0.0			
280	12.5	13.1	13.4	13.8	14.1
	14.6	15.1	15.7	16.1	16.5
	16.6	16.7	17.2	17.7	18.1
	18.8	19.3	19.7	20.2	20.9
	21.6	22.4	23.2	23.9	25.3
	26.1	26.8	26.3	26.8	26.0
	26.7	27.8	28.8	30.0	30.4
	30.6	31.6	31.9	32.4	33.0
	33.7	34.2	34.9	35.6	37.3
	38.5	35.2	31.6	27.8	25.2
	23.1	21.1	19.3	17.9	16.7
	15.8	11.1	10.3	9.0	8.3
	7.7	7.1	6.7	6.2	5.8
	5.4	5.0	4.7	4.3	1.9
	1.5	1.1	0.7	0.3	0.0
	0.0	0.0			
270	12.4	13.2	13.2	13.9	14.4
	14.7	15.0	15.3	15.6	15.9
	15.9	16.3	16.7	17.2	17.7
	18.2	18.7	19.2	19.6	20.2
	20.9	21.6	22.2	23.6	24.3
	24.8	25.4	25.8	25.9	25.1
	25.7	26.7	27.4	28.4	28.8
	29.1	29.5	30.4	30.7	31.2
	31.6	32.0	32.5	32.8	33.4
	33.3	32.0	30.0	28.1	26.2
	23.5	21.7	20.2	18.8	17.7
	17.0	15.6	14.4	13.6	12.7
	12.1	11.6	11.1	10.6	9.6
	9.2	5.4	3.5	4.8	2.6
	2.2	1.8	1.4	1.0	0.6
	0.3	0.0			
260	13.2	13.5	13.8	13.8	14.0
	14.3	14.4	14.7	15.1	15.4
	15.8	16.2	16.4	16.9	17.3
	17.8	18.3	18.8	19.3	19.7
	20.3	20.9	22.0	23.0	23.7
	24.4	25.1	24.9	25.0	24.5
	25.0	25.6	26.2	27.1	27.5
	27.8	28.2	28.9	29.3	29.7
	30.0	30.2	30.5	30.7	30.7
	30.4	29.5	28.3	27.0	25.7
	24.5	23.1	21.1	19.5	18.2
	17.1	16.2	15.5	14.5	14.0
	13.6	12.6	11.7	11.2	10.4
	9.9	9.5	9.2	8.9	8.5
	7.5	6.1	5.8	5.4	5.1
	4.8	0.4			
250	12.8	13.1	13.1	13.4	13.7
	14.0	14.3	14.4	14.7	15.1
	15.4	15.8	16.3	16.7	17.1
	17.3	17.7	18.3	18.8	19.4
	19.9	20.5	21.8	22.4	23.3

	24.2	24.9	24.1	24.1	23.7
	24.1	24.6	25.2	26.0	26.3
	26.7	27.0	27.3	27.9	28.3
	28.6	28.7	28.8	28.9	28.8
	28.3	27.7	26.8	25.8	24.9
	23.9	23.0	22.1	21.0	19.9
	17.9	16.9	15.8	14.9	14.3
	13.6	13.1	12.3	11.8	11.4
	11.5	10.5	10.1	9.1	8.7
	8.4	8.1	7.0	6.7	6.4
	6.2	5.9			
240	12.5	12.5	12.8	13.0	13.3
	13.6	13.9	14.3	14.6	14.9
	15.3	15.7	15.8	16.2	16.6
	17.0	17.5	18.0	18.5	19.0
	19.5	20.5	21.7	22.6	23.0
	23.5	23.6	23.3	23.3	23.0
	23.3	23.7	24.3	25.0	25.3
	25.6	25.9	26.2	26.4	26.9
	27.3	27.4	27.4	27.4	27.2
	26.8	26.3	25.6	24.9	24.0
	23.1	22.5	21.7	21.1	20.1
	19.4	18.7	17.0	15.6	14.7
	13.9	13.3	12.6	12.1	11.5
	11.1	10.7	10.3	10.0	9.8
	9.5	9.1	8.8	7.8	7.5
	6.2	6.0			
230	12.1	12.4	12.7	12.9	13.2
	13.5	13.8	14.1	14.1	14.4
	14.8	15.3	15.6	16.0	16.4
	16.8	17.3	17.8	18.2	18.7
	19.7	21.2	21.6	22.1	22.7
	22.8	22.8	22.6	22.6	22.3
	22.6	23.0	23.5	24.1	24.4
	24.7	25.0	25.2	25.4	25.6
	26.1	26.3	26.2	26.1	26.0
	25.7	25.1	24.6	23.9	23.3
	22.6	21.8	21.2	20.5	20.0
	19.6	18.7	18.0	17.5	15.9
	14.7	14.0	13.0	12.5	11.7
	11.0	10.7	10.4	10.0	9.8
	9.4	9.1	8.2	7.9	7.7
	7.7	7.3			
220	12.1	12.3	12.6	12.8	13.1
	13.1	13.4	13.7	14.0	14.3
	14.8	15.1	15.4	15.8	16.2
	16.6	17.1	17.5	18.0	18.8
	20.1	20.8	21.3	21.6	22.2
	22.2	21.8	21.8	21.9	21.7
	22.0	22.3	22.7	23.3	23.6
	23.8	24.1	24.3	24.4	24.6
	24.9	25.2	25.2	25.1	24.9
	24.6	24.3	23.7	23.2	22.6
	22.0	21.4	20.9	20.1	19.6
	19.1	18.8	18.3	17.5	16.8
	16.4	15.0	13.9	13.3	12.2
	11.7	11.0	10.3	10.0	9.7
	9.4	9.1	8.8	8.7	8.3
	7.4	7.1			
210	12.0	11.9	12.1	12.4	12.7
	12.9	13.2	13.5	13.8	14.3
	14.6	14.9	15.2	15.6	15.9
	16.5	17.2	17.7	18.4	19.4
	20.2	20.5	20.6	21.1	21.4
	21.9	21.2	21.2	21.3	21.0
	21.3	21.7	22.0	22.6	22.8
	23.1	23.3	23.4	23.6	23.7
	23.7	24.0	24.3	24.1	24.0
	23.7	23.4	23.0	22.5	22.0
	21.4	20.9	20.4	19.9	19.2
	18.8	18.3	17.9	17.5	17.3
	16.3	15.9	15.5	14.7	13.5
	12.6	11.6	11.1	9.9	9.6
	9.3	9.0	8.7	8.5	7.5
	7.3	7.0			
200	11.5	11.8	12.0	12.3	12.5
	12.8	13.1	13.3	13.6	14.1
	14.4	14.7	15.0	15.5	16.1
	16.6	17.1	18.0	18.7	19.2
	19.8	20.1	20.4	20.9	20.9
	20.9	20.6	20.6	20.8	20.5
	20.7	21.1	21.4	21.9	22.1
	22.3	22.5	22.6	22.8	22.8
	22.9	22.9	23.3	23.3	23.1
	22.9	22.6	22.3	22.0	21.4
	21.0	20.5	20.0	19.5	19.1
	18.6	18.0	17.6	17.2	16.8
	16.5	16.2	15.4	15.0	14.5
	14.2	12.8	11.7	10.9	10.5
	9.2	8.9	8.7	7.7	7.5
	7.2	7.0			
190	11.4	11.6	11.9	12.1	12.4
	12.7	12.9	13.2	13.7	13.9
	14.2	14.9	15.3	15.6	16.1
	16.9	17.4	17.8	18.6	19.1
	19.4	19.6	19.9	20.4	20.4
	20.4	20.1	20.1	20.2	20.4
	20.2	20.5	20.8	21.3	21.5
	21.7	21.8	21.9	22.0	22.1
	22.1	22.1	22.1	22.4	22.4
	22.2	21.9	21.7	21.3	21.0
	20.5	20.1	19.6	19.2	18.8
	18.4	17.9	17.5	17.0	16.6
	16.2	15.7	15.5	15.2	14.5
	14.2	13.7	13.4	12.2	11.1
	10.4	9.9	8.6	7.7	7.4
	7.1	6.9			
180	11.3	11.5	11.8	12.0	12.3
	12.5	12.8	13.0	13.5	14.1
	14.4	14.8	15.1	15.5	16.5
	16.9	17.2	18.0	18.3	18.8
	19.1	19.1	19.5	20.0	19.9
	19.9	19.6	19.6	19.7	19.9
	19.7	20.0	20.3	20.7	20.9
	21.0	21.2	21.2	21.3	21.4
	21.4	21.4	21.3	21.5	21.7
	21.5	21.3	21.1	20.8	20.5
	20.1	19.6	19.3	18.8	18.4
	18.1	17.6	17.3	16.9	16.6
	16.0	15.7	15.4	15.0	14.7
	14.4	13.8	13.3	13.0	12.8

	11.6	10.5	9.8	8.4	7.3
	7.1	6.8			
170	11.2	11.4	11.6	11.9	12.1
	12.4	12.6	13.4	13.7	13.9
	14.4	14.7	15.3	15.9	16.4
	16.6	17.4	17.7	18.2	18.5
	18.8	18.9	19.4	19.3	19.9
	19.4	19.2	19.1	19.2	19.4
	19.2	19.5	19.7	20.1	20.3
	20.4	20.5	20.6	20.7	20.7
	20.7	20.7	20.7	20.6	20.9
	20.9	20.7	20.5	20.2	20.0
	19.7	19.4	18.9	18.6	18.2
	17.8	17.4	17.0	16.7	16.3
	16.0	15.7	15.2	14.9	14.6
	14.3	14.0	13.4	12.9	12.6
	12.4	12.1	11.0	10.0	8.2
	7.9	6.7			
160	11.1	11.3	11.5	11.7	12.3
	12.6	12.8	13.3	13.5	14.0
	14.2	14.9	15.5	15.8	16.3
	16.6	17.2	17.4	17.9	18.2
	18.1	18.5	19.0	18.9	19.3
	18.9	18.8	18.7	18.8	18.9
	18.8	19.0	19.2	19.6	19.7
	19.9	20.0	20.0	20.1	20.1
	20.1	20.1	20.1	20.0	19.9
	20.2	20.2	20.0	19.8	19.5
	19.2	19.0	18.7	18.2	17.9
	17.6	17.1	16.8	16.4	16.1
	15.8	15.5	15.2	14.7	14.4
	14.1	13.9	13.6	13.3	12.2
	12.0	12.0	11.5	11.3	11.0
	8.9	7.3			
150	10.9	11.2	11.7	12.0	12.2
	12.4	12.6	13.1	13.6	14.2
	14.6	15.0	15.3	15.7	16.1
	16.6	16.9	17.4	17.7	17.9
	18.0	18.1	18.6	18.5	18.5
	18.2	18.3	18.3	18.3	18.4
	18.3	18.5	18.8	19.1	19.2
	19.3	19.4	19.5	19.5	19.5
	19.6	19.5	19.5	19.4	19.3
	19.4	19.5	19.5	19.3	19.1
	18.8	18.6	18.3	18.0	17.6
	17.3	17.0	16.6	16.3	15.9
	15.6	15.3	15.0	14.7	14.5
	14.0	13.7	13.4	12.9	12.9
	12.7	11.6	11.4	11.1	10.9
	10.7	10.1			
140	11.2	11.4	11.6	11.8	12.0
	12.3	12.5	13.2	13.8	14.2
	14.4	14.8	15.2	15.6	16.2
	16.4	16.6	17.1	17.4	17.3
	17.6	18.1	18.0	18.2	18.0
	17.8	17.9	17.9	17.9	18.0
	17.9	18.1	18.5	18.6	18.7
	18.8	18.9	18.9	19.0	19.0
	19.0	19.0	18.9	18.9	18.8
	18.7	19.0	18.8	18.8	18.6
	18.4	18.2	17.9	17.7	17.4
	17.0	16.7	16.4	16.0	15.7
	15.3	15.1	14.8	14.6	14.3
	14.0	13.8	13.3	13.1	12.8
	12.5	12.3	12.1	11.0	10.8
	10.2	10.0			
130	11.1	11.3	11.5	11.7	11.9
	12.1	13.2	13.6	13.8	14.0
	14.4	14.8	15.0	15.4	15.9
	16.2	16.6	16.9	17.1	16.9
	17.3	17.7	17.7	17.8	17.7
	17.4	17.6	17.4	17.5	17.6
	17.5	17.7	18.1	18.2	18.3
	18.4	18.4	18.4	18.5	18.5
	18.5	18.5	18.4	18.4	18.3
	18.2	18.3	18.4	18.2	18.2
	18.0	17.8	17.6	17.4	17.1
	16.9	16.4	16.2	15.9	15.5
	15.2	14.9	14.6	14.4	14.1
	13.9	13.6	13.4	13.2	12.7
	12.4	12.2	12.0	11.7	11.2
	10.1	9.9			
120	10.9	11.1	11.3	11.5	11.7
	12.8	13.2	13.4	13.6	14.2
	14.4	14.6	14.8	15.4	15.7
	15.9	16.4	16.6	16.5	16.8
	17.2	17.4	17.3	17.8	17.2
	17.1	17.2	17.0	17.1	17.2
	17.1	17.3	17.7	17.8	17.8
	17.9	17.9	18.0	18.0	18.0
	18.0	18.0	18.0	17.9	17.8
	17.7	17.6	17.7	17.8	17.8
	17.7	17.5	17.2	17.0	16.8
	16.6	16.3	15.9	15.7	15.4
	15.0	14.6	14.4	14.2	13.9
	13.7	13.5	13.2	13.0	12.8
	12.6	12.1	11.9	11.3	10.7
	10.5	10.3			
110	10.8	11.0	11.2	12.0	12.2
	12.8	13.0	13.2	13.8	14.0
	14.2	14.4	14.9	15.1	15.5
	16.0	16.1	16.3	16.1	16.5
	17.0	16.9	17.0	17.4	16.9
	16.7	16.8	16.7	16.8	16.8
	16.7	16.9	17.3	17.4	17.4
	17.5	17.5	17.5	17.6	17.6
	17.6	17.5	17.5	17.5	17.4
	17.3	17.2	17.3	17.1	17.3
	17.3	17.1	16.9	16.7	16.5
	16.3	16.1	15.6	15.4	15.2
	15.0	14.7	14.2	14.0	13.7
	13.5	13.3	13.1	12.9	12.6
	12.4	11.9	11.7	11.5	11.0
	10.4	10.2			
100	10.7	10.9	11.7	12.3	12.5
	12.7	12.9	13.4	13.6	13.8
	14.0	14.2	14.7	14.9	15.1
	15.7	15.9	15.6	15.8	16.2
	16.7	16.6	16.7	16.7	16.6
	16.4	16.4	16.3	16.3	16.5
	16.7	16.5	16.9	17.0	17.0

	17.1	17.0	17.1	17.1	17.1
	17.1	17.1	17.1	17.0	17.0
	16.9	16.8	16.6	16.8	16.9
	16.7	16.8	16.6	16.4	16.2
	16.0	15.8	15.6	15.2	14.9
	14.7	14.5	14.3	13.8	13.6
	13.3	13.1	12.9	12.7	12.5
	12.3	11.8	11.6	11.1	10.9
	10.3	10.1			
90	10.8	11.3	12.0	12.1	12.3
	12.5	13.0	13.2	13.4	13.6
	13.8	14.3	14.5	14.7	15.3
	15.5	15.5	15.4	15.8	16.2
	16.4	16.3	16.4	16.1	16.0
	16.1	16.1	16.0	16.0	16.1
	16.3	16.1	16.5	16.6	16.6
	16.7	16.6	16.7	16.7	16.7
	16.7	16.7	16.7	16.6	16.6
	16.5	16.4	16.3	16.4	16.3
	16.4	16.2	16.3	16.1	15.9
	15.7	15.5	15.3	15.1	14.7
	14.5	14.3	14.1	13.9	13.4
	13.2	13.0	12.7	12.5	12.3
	11.9	11.7	11.5	10.9	10.4
	10.2	10.0			
80	11.2	11.3	11.8	12.0	12.5
	12.7	12.9	13.1	13.2	13.4
	13.9	14.1	14.3	14.9	15.1
	15.1	15.3	15.1	15.5	16.0
	15.8	16.0	16.5	15.8	15.7
	15.8	15.8	15.7	15.6	15.8
	16.0	15.8	16.1	16.2	16.3
	16.2	16.3	16.3	16.3	16.3
	16.3	16.3	16.3	16.2	16.2
	16.1	16.0	15.9	15.8	15.9
	15.8	15.9	15.8	15.8	15.6
	15.5	15.3	15.1	14.9	14.7
	14.3	14.1	13.9	13.7	13.5
	13.0	12.8	12.6	12.4	12.2
	11.7	11.5	11.0	10.8	10.2
	10.0	9.9			
70	11.0	11.2	11.7	12.2	12.4
	12.5	12.7	12.9	13.1	13.2
	13.7	13.9	14.3	14.5	14.7
	14.9	14.7	14.9	15.3	15.7
	15.6	15.7	16.0	15.5	15.4
	15.3	15.5	15.3	15.3	15.4
	15.7	15.5	15.8	15.9	15.9
	15.8	15.9	15.9	15.9	16.0
	16.0	15.9	15.9	15.9	15.8
	15.7	15.6	15.5	15.4	15.6
	15.4	15.3	15.5	15.5	15.4
	15.2	15.0	14.9	14.7	14.5
	14.3	13.9	13.7	13.5	13.3
	13.1	12.6	12.4	12.2	11.8
	11.6	11.4	10.9	10.3	10.1
	9.9	9.7			
60	10.9	11.0	11.6	12.0	12.2
	12.4	12.5	12.7	12.9	13.4
	13.6	13.7	14.2	14.3	14.5
	14.6	14.5	14.9	15.3	15.4
	15.3	15.4	15.7	15.2	15.1
	15.0	15.2	15.0	15.0	15.1
	15.3	15.1	15.5	15.5	15.6
	15.5	15.5	15.6	15.6	15.6
	15.6	15.6	15.5	15.5	15.4
	15.4	15.3	15.2	15.1	15.0
	15.1	15.0	15.2	15.0	15.1
	14.9	14.8	14.6	14.4	14.3
	14.1	13.9	13.5	13.3	13.1
	12.9	12.8	12.2	11.8	11.6
	11.4	10.9	10.3	10.2	10.0
	9.8	9.6			
50	10.4	11.3	11.4	11.6	12.0
	12.2	12.4	12.5	13.0	13.2
	13.4	13.5	14.0	14.1	14.3
	14.1	14.3	14.7	15.1	14.9
	15.1	15.2	15.1	14.9	14.8
	14.7	14.9	14.7	14.7	14.8
	14.9	14.8	15.1	15.2	15.2
	15.1	15.2	15.2	15.2	15.2
	15.2	15.2	15.2	15.2	15.1
	15.0	15.0	14.9	14.8	14.7
	14.8	14.7	14.6	14.7	14.6
	14.7	14.5	14.4	14.2	14.0
	13.9	13.7	13.5	13.1	12.9
	12.8	12.6	12.2	11.6	11.4
	10.9	10.8	10.2	10.0	9.8
	9.7	9.5			
40	10.2	10.8	11.3	11.4	11.9
	12.1	12.2	12.4	12.9	13.0
	13.2	13.6	13.8	13.9	14.0
	13.9	14.0	14.7	14.8	14.7
	14.8	15.3	14.6	14.7	14.4
	14.5	14.6	14.3	14.4	14.5
	14.6	14.5	14.8	14.9	14.8
	14.8	14.9	14.9	14.9	14.9
	14.9	14.9	14.9	14.8	14.8
	14.7	14.6	14.6	14.5	14.4
	14.3	14.4	14.3	14.2	14.3
	14.2	14.3	14.1	14.0	13.8
	13.7	13.5	13.3	13.2	12.8
	12.6	12.2	12.0	11.8	11.6
	10.8	10.2	10.0	9.9	9.7
	9.5	8.8			
30	9.6	10.2	11.1	11.3	11.4
	11.9	12.0	12.5	12.7	12.8
	13.0	13.4	13.6	13.7	13.5
	13.7	14.1	14.5	14.6	14.4
	14.6	15.0	14.3	14.2	14.1
	14.2	14.2	14.0	14.1	14.2
	14.3	14.2	14.5	14.6	14.5
	14.5	14.5	14.6	14.6	14.6
	14.6	14.6	14.5	14.5	14.5
	14.4	14.3	14.3	14.2	14.1
	14.0	14.1	14.0	13.9	13.8
	13.9	13.8	13.9	13.8	13.6
	13.4	13.3	13.1	13.0	12.8
	12.4	12.0	11.8	11.6	11.2
	10.7	10.1	9.9	9.7	9.6
	8.9	8.1			

20		9.5	10.1	10.2	11.1	11.3
		11.4	12.2	12.4	12.5	12.7
		13.1	13.2	13.4	13.5	13.3
		13.5	13.8	14.2	14.1	14.2
		14.3	14.6	14.0	13.9	13.8
		13.9	13.9	13.7	13.8	13.9
		14.0	14.2	14.2	14.1	14.1
		14.2	14.2	14.2	14.3	14.3
		14.3	14.2	14.2	14.2	14.1
		14.1	14.0	14.0	13.9	13.8
		13.7	13.6	13.8	13.6	13.5
		13.7	13.6	13.4	13.5	13.4
		13.2	13.1	12.9	12.8	12.6
		12.0	11.8	11.6	11.2	10.7
		10.5	10.3	9.7	9.6	8.9
		8.7	7.2			
10		9.3	9.5	10.1	10.6	11.1
		11.3	11.8	12.2	12.3	12.5
		12.9	13.0	13.2	13.0	13.1
		13.5	13.9	14.0	13.9	14.0
		14.1	14.3	13.8	13.5	13.6
		13.7	13.6	13.5	13.5	13.6
		13.7	14.0	13.7	13.8	13.8
		13.9	13.9	13.9	14.0	14.0
		14.0	13.9	13.9	13.9	13.8
		13.8	13.7	13.7	13.6	13.5
		13.4	13.3	13.5	13.4	13.3
		13.2	13.3	13.2	13.3	13.2
		13.0	12.9	12.7	12.6	11.9
		11.8	11.6	11.2	10.7	10.5
		10.3	9.8	9.6	9.4	8.8
		7.2	7.1			
0		8.6	9.3	9.5	10.1	10.6
		11.5	11.6	11.7	12.2	12.6
		12.7	12.8	13.0	12.8	12.9
		13.3	13.7	13.8	13.6	13.7
		13.8	13.7	13.6	13.2	13.3
		13.4	13.4	13.2	13.3	13.3
		13.4	13.7	13.5	13.5	13.6
		13.6	13.6	13.6	13.7	13.7
		13.7	13.6	13.6	13.6	13.6
		13.5	13.4	13.4	13.3	13.2
		13.2	13.1	13.0	13.1	13.0
		12.9	12.8	13.0	12.9	13.0
		12.8	12.7	12.6	11.9	11.8
		11.6	11.1	10.6	10.5	10.3
		9.8	9.6	9.4	8.8	7.2
		7.1	6.9			

```
( x =      599 ,y =      249 ,z = 4.0 ):      13.6
( x =      588 ,y =      204 ,z = 4.0 ):      17.1
```

```
LAeq , noc: wartość największa występuje w punkcie (280,350,4.0)
i wynosi 52.0 dB(A)
```

```
Koniec obliczeń
```