

## MIDI Note Number to Frequency Conversion Chart

MIDI Note	Frequency	MIDI Note	Frequency	MIDI Note	Frequency
C1 0	8.1757989156	12	16.3515978313	24	32.7031956626
Db 1	8.6619572180	13	17.3239144361	25	34.6478288721
D 2	9.1770239974	14	18.3540479948	26	36.7080959897
Eb 3	9.7227182413	15	19.4454364826	27	38.8908729653
E 4	10.3008611535	16	20.6017223071	28	41.2034446141
F 5	10.9133822323	17	21.8267644646	29	43.6535289291
Gb 6	11.5623257097	18	23.1246514195	30	46.2493028390
G 7	12.2498573744	19	24.4997147489	31	48.9994294977
Ab 8	12.9782717994	20	25.9565435987	32	51.9130871975
A 9	13.7500000000	21	27.5000000000	33	55.0000000000
Bb 10	14.5676175474	22	29.1352350949	34	58.2704701898
B 11	15.4338531643	23	30.8677063285	35	61.7354126570
C4 36	65.4063913251	48	130.8127826503	60	261.6255653006
Db 37	69.2956577442	49	138.5913154884	61	277.1826309769
D 38	73.4161919794	50	146.8323839587	62	293.6647679174
Eb 39	77.7817459305	51	155.5634918610	63	311.1269837221
E 40	82.4068892282	52	164.8137784564	64	329.6275569129
F 41	87.3070578583	53	174.6141157165	65	349.2282314330
Gb 42	92.4986056779	54	184.9972113558	66	369.9944227116
G 43	97.9988589954	55	195.9977179909	67	391.9954359817
Ab 44	103.8261743950	56	207.6523487900	68	415.3046975799
A 45	110.0000000000	57	220.0000000000	69	440.0000000000
Bb 46	116.5409403795	58	233.0818807590	70	466.1637615181
B 47	123.4708253140	59	246.9416506281	71	493.8833012561
C7 72	523.2511306012	84	1046.5022612024	96	2093.0045224048
Db 73	554.3652619537	85	1108.7305239075	97	2217.4610478150
D 74	587.3295358348	86	1174.6590716696	98	2349.3181433393
Eb 75	622.2539674442	87	1244.5079348883	99	2489.0158697766
E 76	659.2551138257	88	1318.5102276515	100	2637.0204553030
F 77	698.4564628660	89	1396.9129257320	101	2793.8258514640
Gb 78	739.9888454233	90	1479.9776908465	102	2959.9553816931
G 79	783.9908719635	91	1567.9817439270	103	3135.9634878540
Ab 80	830.6093951599	92	1661.2187903198	104	3322.4375806396
A 81	880.0000000000	93	1760.0000000000	105	3520.0000000000
Bb 82	932.3275230362	94	1864.6550460724	106	3729.3100921447
B 83	987.7666025122	95	1975.5332050245	107	3951.0664100490
C10 108	4186.0090448096	120	8372.0180896192		
Db 109	4434.9220956300	121	8869.8441912599		
D 110	4698.6362866785	122	9397.2725733570		
Eb 111	4978.0317395533	123	9956.0634791066		
E 112	5274.0409106059	124	10548.0818212118		
F 113	5587.6517029281	125	11175.3034058561		
Gb 114	5919.9107633862	126	11839.8215267723		
G 115	6271.9269757080	127	12543.8539514160		
Ab 116	6644.8751612791				
A 117	7040.0000000000				
Bb 118	7458.6201842894				
B 119	7902.1328200980				

**NOTES:** Middle C is note #60. Frequency is in Hertz.

Here is C code to calculate an array with all of the above frequencies (ie, so that midi[0], which is midi note #0, is assigned the value of 8.1757989156). Tuning is based upon A=440.

```
float midi[127];
int a = 440; // a is 440 hz...
for (int x = 0; x < 127; ++x)
{
    midi[x] = (a / 32) * (2 ^ ((x - 9) / 12));
}
```