

List of Set Classes

The following list shows all the set classes containing between three and nine pitch classes. The first and last columns contain prime forms. (Those in the first column are in ascending numerical order.) In the prime forms, the letters T and E stand for the integers 10 and 11 respectively. The second and second-to-last columns provide the names of the set classes, according to Allen Forte's *The Structure of Atonal Music*. The third and third-to-last columns give the interval vector for each set class. For each set class with a Z in its name, there is another with an identical interval vector. In the middle column, the first number gives the degree of transpositional symmetry—that is, the number of levels at which both sets on that line will map onto themselves under transposition. (This number is always at least 1, since every set maps onto itself at T_0 .) The second number gives the degree of inversional symmetry—that is, the number of levels at which a set maps onto itself under inversion. Complementary set classes are listed across from each other.

TRICHORDS

(012)	3-1	210000	1, 1	876663	9-1	(012345678)
(013)	3-2	111000	1, 0	777663	9-2	(012345679)
(014)	3-3	101100	1, 0	767763	9-3	(012345689)
(015)	3-4	100110	1, 0	766773	9-4	(012345789)
(016)	3-5	100011	1, 0	766674	9-5	(012346789)
(024)	3-6	020100	1, 1	686763	9-6	(01234568T)
(025)	3-7	011010	1, 0	677673	9-7	(01234578T)
(026)	3-8	010101	1, 0	676764	9-8	(01234678T)
(027)	3-9	010020	1, 1	676683	9-9	(01235678T)
(036)	3-10	002001	1, 1	668664	9-10	(01234679T)
(037)	3-11	001110	1, 0	667773	9-11	(01235679T)
(048)	3-12	000300	3, 3	666963	9-12	(01245689T)

NONACHORDS

TETRACHORDS

(0123)	4-1	321000	1, 1	765442	8-1	(01234567)
(0124)	4-2	221100	1, 0	665542	8-2	(01234568)
(0125)	4-4	211110	1, 0	655552	8-4	(01234578)
(0126)	4-5	210111	1, 0	654553	8-5	(01234678)
(0127)	4-6	210021	1, 1	654463	8-6	(01235678)
(0134)	4-3	212100	1, 1	656542	8-3	(01234569)
(0135)	4-11	121110	1, 0	565552	8-11	(01234579)
(0136)	4-13	112011	1, 0	556453	8-13	(01234679)
(0137)	4-Z29	111111	1, 0	555553	8-Z29	(01235679)
(0145)	4-7	201210	1, 1	645652	8-7	(01234589)
(0146)	4-Z15	111111	1, 0	555553	8-Z15	(01234689)
(0147)	4-18	102111	1, 0	546553	8-18	(01235689)
(0148)	4-19	101310	1, 0	545752	8-19	(01245689)
(0156)	4-8	200121	1, 1	644563	8-8	(01234789)
(0157)	4-16	110121	1, 0	554563	8-16	(01235789)
(0158)	4-20	101220	1, 1	545662	8-20	(01245789)
(0167)	4-9	200022	2, 2	644464	8-9	(01236789)
(0235)	4-10	122010	1, 1	566452	8-10	(02345679)
(0236)	4-12	112101	1, 0	556543	8-12	(01345679)
(0237)	4-14	111120	1, 0	555562	8-14	(01245679)
(0246)	4-21	030201	1, 1	474643	8-21	(0123468T)
(0247)	4-22	021120	1, 0	465562	8-22	(0123568T)
(0248)	4-24	020301	1, 1	464743	8-24	(0124568T)
(0257)	4-23	021030	1, 1	465472	8-23	(0123578T)
(0258)	4-27	012111	1, 0	456553	8-27	(0124578T)
(0268)	4-25	020202	2, 2	464644	8-25	(0124678T)
(0347)	4-17	102210	1, 1	546652	8-17	(01345689)
(0358)	4-26	012120	1, 1	456562	8-26	(0134578T)
(0369)	4-28	004002	4, 4	448444	8-28	(0134679T)

PENTACHORDS

(01234)	5-1	432100	1, 1	654321	7-1	(0123456)
(01235)	5-2	332110	1, 0	554331	7-2	(0123457)
(01236)	5-4	322111	1, 0	544332	7-4	(0123467)
(01237)	5-5	321121	1, 0	543342	7-5	(0123567)
(01245)	5-3	322210	1, 0	544431	7-3	(0123458)
(01246)	5-9	231211	1, 0	453432	7-9	(0123468)
(01247)	5-Z36	222121	1, 0	444342	7-Z36	(0123568)
(01248)	5-13	221311	1, 0	443532	7-13	(0124568)
(01256)	5-6	311221	1, 0	533442	7-6	(0123478)
(01257)	5-14	221131	1, 0	443352	7-14	(0123578)
(01258)	5-Z38	212221	1, 0	434442	7-Z38	(0124578)
(01267)	5-7	310132	1, 0	532353	7-7	(0123678)
(01268)	5-15	220222	1, 1	442443	7-15	(0124678)
(01346)	5-10	223111	1, 0	445332	7-10	(0123469)
(01347)	5-16	213211	1, 0	435432	7-16	(0123569)
(01348)	5-Z17	212320	1, 1	434541	7-Z17	(0124569)
(01356)	5-Z12	222121	1, 1	444342	7-Z12	(0123479)
(01357)	5-24	131221	1, 0	353442	7-24	(0123579)
(01358)	5-27	122230	1, 0	344451	7-27	(0124579)
(01367)	5-19	212122	1, 0	434343	7-19	(0123679)
(01368)	5-29	122131	1, 0	344352	7-29	(0124679)
(01369)	5-31	114112	1, 0	336333	7-31	(0134679)
(01457)	5-Z18	212221	1, 0	434442	7-Z18	(0145679)
(01458)	5-21	202420	1, 0	424641	7-21	(0124589)
(01468)	5-30	121321	1, 0	343542	7-30	(0124689)
(01469)	5-32	113221	1, 0	335442	7-32	<u>(0134689)</u>
(01478)	5-22	202321	1, 1	424542	7-22	(0125689)
(01568)	5-20	211231	1, 0	433452	7-20	(0135679)
(02346)	5-8	232201	1, 1	454422	7-8	(0234568)
(02347)	5-11	222220	1, 0	444441	7-11	(0134568)
(02357)	5-23	132130	1, 0	354351	7-23	(0234579)
(02358)	5-25	123121	1, 0	345342	7-25	(0234679)
(02368)	5-28	122212	1, 0	344433	7-28	(0135679)
(02458)	5-26	122311	1, 0	344532	7-26	(0134579)
(02468)	5-33	040402	1, 1	262623	7-33	(012468T)
(02469)	5-34	032221	1, 1	254442	7-34	(013468T)
(02479)	5-35	032140	1, 1	254361	7-35	(013568T)
(03458)	5-Z37	212320	1, 1	434541	7-Z37	(0134578)

<All-combinatorial Hexachords>

1st Order: 6-1, 6-8, 6-32
 2nd Order: 6-7
 3rd Order: 6-20
 4th Order: 6-35

HEXACHORDS

The first column in this list of hexachords describes the combinatoriality of each set class. The four entries in the column provide the number of transpositional levels at which each hexachord is P-combinatorial, R-combinatorial, I-combinatorial, and RI-combinatorial. (Every hexachord is R-combinatorial at least at R₀.) Hexachords, like sets of other sizes, are listed across from their complements. Hexachords with nothing listed across from them are self-complementary.

P	R	I	RI	Hexachord	Complement
1	1	1	1	(012345) 6-1	543210 1, 1
0	1	1	0	(012346) 6-2	443211 1, 0
0	1	0	0	(012347) 6-Z36	433221 1, 0 6-Z3 (012356)
0	1	0	1	(012348) 6-Z37	432321 1, 1 6-Z4 (012456)
0	1	1	0	(012357) 6-9	342231 1, 0
0	1	0	0	(012358) 6-Z40	333231 1, 0 6-Z11 (012457)
0	1	1	0	(012367) 6-5	422232 1, 0
0	1	0	0	(012368) 6-Z41	332232 1, 0 6-Z12 (012467)
0	1	0	1	(012369) 6-Z42	324222 1, 1 6-Z13 (013467)
0	1	0	1	(012378) 6-Z38	421242 1, 1 6-Z6 (012567)
0	1	1	0	(012458) 6-15	323421 1, 0
0	1	1	0	(012468) 6-22	241422 1, 0
0	1	0	0	(012469) 6-Z46	233331 1, 0 6-Z24 (013468)
0	1	0	0	(012478) 6-Z17	322332 1, 0 6-Z43 (012568)
0	1	0	0	(012479) 6-Z47	233241 1, 0 6-Z25 (013568)
0	1	0	0	(012569) 6-Z44	313431 1, 0 6-Z19 (013478)
0	1	1	0	(012578) 6-18	322242 1, 0
0	1	0	0	(012579) 6-Z48	232341 1, 0 6-Z26 (013578)
2	2	2	2	(012678) 6-7	420243 2, 2
0	1	0	0	(013457) 6-Z10	333321 1, 0 6-Z39 (023458)
1	1	0	0	(013458) 6-14	323430 1, 0
0	1	1	0	(013469) 6-27	225222 1, 0
0	1	0	1	(013479) 6-Z49	224322 1, 1 6-Z28 (013569)
0	1	1	0	(013579) 6-34	142422 1, 0
0	1	1	0	(014579) 6-31	223431 1, 0
0	2	1	0	(013679) 6-30	224223 2, 0
0	1	0	1	(023679) 6-Z29	224232 1, 1 6-Z50 (014679)
0	1	1	0	(014568) 6-16	322431 1, 0
3	3	3	3	(014589) 6-20	303630 3, 3
1	1	1	1	(023457) 6-8	343230 1, 1
0	1	1	0	(023468) 6-21	242412 1, 0
0	1	0	0	(023469) 6-Z45	234222 1, 0 6-Z23 (023568)
0	1	1	0	(023579) 6-33	143241 1, 0
1	1	1	1	(024579) 6-32	143250 1, 1
6	6	6	6	(02468T) 6-35	060603 6, 6

* Z-hexachords can never be I-combinatorial.