

$\mathcal{N}1 \models 6, 16, 17, 23, 24, 31, 37, 63, 89, 91, 112, 114, 115, 116, 127, 130, 133, 134, 135, 147, 191, 217, 232, 233, 263, 273, 304, 305, 309, 313, 322, 325, 361, 363, 368, 369, 379, \text{ and } 380$ , but 15, 53, 64, 68, 69, 76, 106, 126, 128, 131, 146, 177, 200, 239, 267, 278, 292, 323, 328, 344, and 390 are false. References include Blass [1977a], Brunner [1981a], [1982a], [1983d], [1984b], [1984f], [1985a], Dawson/Howard [1976], De la Cruz/Di Prisco [1998a], Fraenkel [1922], Felgner/Jech [1973], Felgner [1971a], Jech [1973b], Jech/Sochor [1966a], Halpern [1964], Harper/Rubin [1976], Hickman [1976], Hodges [1974], Howard/Keremedis/Rubin/Stanley [1999], Howard/Rubin [1977], Läuchli [1962], Levy [1958], Pincus [1969], Specker [1957], Stavi [1975], notes 2(8,9), 18, 41, 46, 52, 64, 66, 88, 89, 105, 109, 116, 120(56) and 123.

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 89, 112, 114, 115, 116, 127, 133, 134, 135, 147, 191, 217, 232, 233, 263, 304, 322, 325, 379, 380.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 53, 69, 128, 131, 146, 177, 200, 267, 278, 292, 390.

A list of all forms known to be true in the model: 0, 5, 6, 10, 13, 16, 17, 18, 19, 23, 24, 25, 26, 27, 31, 32, 34, 35, 37, 38, 47, 48, 51, 58, 63, 70, 73, 74, 77, 79, 80, 84, 89, 90, 91, 92, 93, 94, 104, 108, 111, 112, 114, 115, 116, 118, 119, 122, 124, 127, 130, 132, 133, 134, 135, 137, 139, 142, 145, 147, 151, 165, 167, 169, 170, 173, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 207, 208, 209, 211, 212, 216, 217, 221, 222, 223, 231, 232, 233, 241, 242, 249, 250, 251, 252, 254, 263, 272, 273, 280, 288, 289, 294, 304, 305, 306, 307, 309, 313, 315, 316, 322, 324, 325, 327, 330, 337, 338, 340, 341, 342, 350, 352, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 379, 380, 389, 395, 396, 397, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 11, 12, 14, 15, 20, 28, 30, 36, 39, 40, 41, 43, 44, 45, 49, 50, 53, 57, 60, 61, 62, 64, 66, 67, 68, 69, 71, 75, 76, 82, 83, 85, 86, 87, 88, 95, 100, 101, 106, 107, 109, 113, 123, 126, 128, 129, 131, 146, 149, 152, 161, 168, 174, 177, 181, 188, 192, 193, 200, 201, 202, 213, 214, 215, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 267, 270, 278, 284, 286, 292, 295, 296, 303, 317, 323, 326, 328, 331, 332, 333, 334, 335, 336, 343, 344, 345, 346, 347, 359, 376, 377, 378, 384, 387, 388, 390, 391, 399, 404, 405, 407, 408, 409, 426, 427, 430, (430).)

$\mathcal{N}2 \models 6, 37, 65, 67, 83, 99, 130, 163, 191, 273, 305, 313, 334, 361, \text{ and } 363$ , but 18,  $45(n)$ , 80, 98, 128, 154, 163, 164, 198, 216, 341, 344, 358, and 388 are false. References Brunner [1982a], [1983c], [1984b], [1984f], De la Cruz, Hall, Howard, Keremedis, Rubin [2002a], Fraenkel [1922], Hickman [1978b], Howard [1984b], Jech [1973b], Keremedis [1999a], Pincus [1972a],[1972b], notes 18, 93, 95, 105, and 120(2 and 56).

(A minimal list of forms implying each form known to be true in the model: 65, 99, 163, 191, 334.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 18, 45, 98, 128, 163, 164, 198, 216, 388.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 25, 34, 35, 37, 38, 51, 52, 58, 64, 65, 67, 70, 74, 76, 77, 78, 79, 82, 83, 84, 89, 90, 91, 92, 93, 94, 99, 104, 106, 108, 112, 114, 115, 116, 118, 119, 125, 126, 127, 130, 131, 137, 139, 142, 144, 145, 147, 155, 163, 169, 170, 173, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 208, 211, 212, 221, 222, 223, 225, 232, 251, 252, 254, 272, 273, 280, 287, 289, 292, 294, 305, 306, 307, 309, 313, 315, 316, 328, 329, 330, 334, 337, 349, 350, 361, 362, 363, 364, 366, 367, 368, 369, 371, 375, 381, 382, 387, 389, 390, 395, 396, 397, 413, 414, 415, 416, 418, 419, 420, 425, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 10, 14, 15, 16, 17, 18, 20, 21, 23, 27, 29, 30, 31, 32, 36, 39, 40, 41, 43, 44, 45, 49, 50, 60, 61, 62, 66, 68, 71, 80, 85, 86, 87, 88, 95, 98, 100, 101, 107, 109, 110, 111, 113, 121, 122, 123, 128, 129, 132, 133, 150, 151, 152, 153, 154, 161, 163, 164, 165, 166, 167, 168, 174, 181, 192, 198, 201, 202, 213, 214, 215, 216, 217, 218, 231, 239, 250, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 302, 303, 317, 322, 323, 324, 325, 326, 327, 331, 332, 333, 335, 338, 340, 341, 343, 344, 345, 346, 347, 352, 354, 355, 358, 359, 376, 377, 378, 379, 380, 384, 385, 386, 388, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 406, 407, 408, 409, 410, 411, 412, 421, 422, 426, (430).)

$\mathcal{N}2(n) \models 6, 37, 67, 130, 191, 273, 305, 313, 361, \text{ and } 363$ , but  $46(n \in K)$ ,  $47(n)$ , 154, 164,  $288(n)$ , 344, and  $373(n)$  are false. References Fraenkel [1922], Mostowski [1945], Zuckerman [1971], notes 15, 18, and 120(2, 10, and 56).

(A minimal list of forms implying each form known to be true in the model: 67, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 46, 164, 373.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 25, 34, 35, 37, 38, 51, 52, 58, 64, 67, 70, 74, 76, 77, 78, 79, 82, 83, 84, 89, 90, 91, 92, 93, 94, 104, 106, 108, 112, 114, 115, 116, 118, 119, 125, 126,

127, 130, 131, 137, 139, 142, 144, 145, 147, 155, 169, 170, 173, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 208, 211, 212, 221, 222, 223, 232, 251, 252, 254, 272, 273, 280, 287, 289, 292, 294, 305, 306, 307, 309, 313, 315, 316, 328, 329, 330, 337, 349, 350, 361, 362, 363, 364, 366, 367, 368, 369, 371, 375, 381, 382, 387, 389, 390, 395, 396, 397, 413, 414, 415, 416, 418, 419, 420, 425, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 10, 14, 15, 16, 17, 20, 21, 23, 27, 29, 30, 31, 32, 33, 36, 39, 40, 41, 43, 44, 45, 46, 47, 49, 50, 60, 61, 62, 66, 68, 71, 85, 86, 87, 100, 101, 107, 109, 110, 113, 121, 122, 123, 129, 132, 133, 150, 151, 152, 153, 154, 161, 164, 165, 168, 174, 181, 192, 202, 213, 214, 218, 231, 239, 250, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 288, 295, 302, 303, 317, 322, 323, 324, 325, 327, 331, 332, 335, 338, 340, 341, 343, 344, 345, 346, 347, 352, 354, 355, 358, 359, 373, 374, 376, 377, 378, 380, 384, 385, 386, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 406, 407, 408, 409, 410, 411, 412, 421, 422, 423, 426, (430).

$\mathcal{N}2^*(3) \models 6, 37, 111, 130, 141, 191, 273, 305, 313, 333, 361,$  and 363, but 110, 154, 164, 288, 334, 344, 346, and 358 are false. References Howard [1984a], Keremedis [1996a], and notes 18, 93, and 120(2, 10, and 56).

(A minimal list of forms implying each form known to be true in the model: 111, 141, 191, 333.)

A minimal list of forms at least one of which is implied by each form known to be false in the model: 110, 164, 288, 334, 346.

A list of all forms known to be true in the model: 0, 5, 6, 13, 18, 19, 25, 34, 35, 37, 38, 51, 52, 58, 64, 67, 70, 74, 76, 77, 78, 79, 80, 82, 83, 84, 88, 89, 90, 91, 92, 93, 94, 104, 106, 108, 111, 112, 114, 115, 116, 118, 119, 125, 126, 127, 130, 131, 137, 139, 140, 141, 142, 144, 145, 147, 155, 169, 170, 173, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 208, 211, 212, 221, 222, 223, 232, 251, 252, 254, 268, 269, 272, 273, 276, 280, 287, 289, 292, 294, 305, 306, 307, 309, 313, 315, 316, 328, 329, 330, 333, 337, 349, 350, 361, 362, 363, 364, 366, 367, 368, 369, 371, 375, 381, 382, 387, 389, 390, 395, 396, 397, 413, 414, 415, 416, 418, 419, 420, 425, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 10, 14, 15, 16, 17, 20, 21, 23, 27, 29, 30, 31, 32, 33, 36, 39, 40, 41, 43, 44, 45, 47, 49, 50, 60, 61, 62, 66, 68, 71, 85, 86, 87, 100, 101, 107, 109, 110, 113, 121, 122, 123, 129, 132, 133, 150, 151, 152, 153, 154, 161, 164, 165, 168, 174, 181, 192, 202, 213, 214, 218, 231, 239, 250, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 288, 295, 302, 303, 317, 322, 323, 324, 325, 327, 331, 332, 334, 335, 338, 340, 341, 343, 344, 345, 346, 347, 352, 354, 355, 358, 359, 374, 376, 377, 378, 380, 384, 385, 386, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 406, 407, 408, 409, 410, 411, 412, 421, 422, 423, 426, (430).

$\mathcal{N}2(n, M) \models 6, 37, 46(\neg M), 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15,  $46(n \in K)$ ,  $47(n)$ , 192, and 344 are false. References Fraenkel [1922], Mostowski [1945], Pincus [1977a], notes 73 and 120(56).

(A minimal list of forms implying each form known to be true in the model: 46, 91, 191.)

A minimal list of forms at least one of which is implied by each form known to be false in the model: 46, 47, 192.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 46, 48, 70, 74, 79, 91, 92, 93, 94, 104, 108, 120, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 14, 15, 20, 21, 23, 30, 33, 36, 40, 45, 46, 47, 49, 50, 60, 61, 62, 68, 85, 100, 101, 107, 109, 121, 122, 123, 133, 151, 165, 168, 192, 202, 213, 218, 231, 250, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 302, 303, 317, 322, 323, 324, 327, 331, 332, 343, 344, 345, 347, 359, 384, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 407, 408, 409, 422, (430).

$\mathcal{N}2(\aleph_\alpha) \models 6, 37, 43$  (for  $\alpha > 0$ ), 44 (if  $\aleph_\alpha$  is regular and  $\alpha > 1$ ), 63 (if  $\alpha > 0$ ),  $87(\beta)$  (if  $\alpha > \beta$ ), 91, 130, 135 (if  $\aleph_\alpha$  is regular and  $\alpha > 1$ ), 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 3, 15, 40,  $45(n)$ , 88, 111 (for  $\alpha > 0$ ), 122, 163, 192, 193, 327, and 344 are false. References Blass [1979], Brunner [1982a], Jech [1966b], [1973b], Mostowski [1948], van Douwen [1980], notes 18, 60, 104, and 120(56).

(A minimal list of forms implying each form known to be true in the model: 44, 63, 87, 91, 135, 191.)

A minimal list of forms at least one of which is implied by each form known to be false in the model: 3, 45, 88, 111, 163, 192, 193.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 39, 41, 42, 43, 44, 57, 63, 64, 70, 71, 73, 74, 77, 78, 79, 80, 82, 83, 84, 86, 87, 91,

92, 93, 94, 98, 104, 106, 108, 113, 119, 124, 126, 127, 128, 130, 131, 132, 135, 137, 139, 142, 145, 150, 154, 155, 167, 169, 170, 174, 182, 183, 185, 189, 190, 191, 194, 196, 197, 198, 199, 203, 206, 209, 211, 212, 216, 217, 221, 222, 223, 243, 249, 251, 252, 272, 273, 279, 280, 282, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 365, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 418, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 14, 15, 20, 21, 23, 30, 36, 40, 45, 49, 50, 60, 61, 62, 66, 68, 85, 88, 95, 100, 101, 107, 109, 110, 111, 121, 122, 123, 133, 151, 163, 165, 168, 192, 193, 201, 202, 213, 218, 231, 239, 250, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 302, 303, 317, 322, 323, 324, 326, 327, 331, 332, 333, 335, 343, 344, 345, 347, 359, 384, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 407, 408, 409, 422, (430).

$\mathcal{N}2(\text{LO}) \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and  $369$ , but  $15, 62, 119, 323, 341,$  and  $344$  are false. References De la Cruz, Hall, Howard, Keremedis, Rubin [2002a] van Douwen [1985], notes 2(3, 6, and 56) and 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 62, 119, 341.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 8, 14, 15, 16, 20, 21, 23, 27, 28, 29, 30, 31, 32, 36, 39, 40, 43, 44, 49, 50, 60, 62, 66, 67, 68, 85, 86, 87, 89, 90, 95, 100, 101, 107, 109, 112, 113, 114, 115, 118, 119, 123, 133, 149, 150, 165, 168, 174, 181, 192, 202, 213, 218, 231, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 286, 292, 295, 302, 303, 317, 323, 331, 332, 333, 334, 335, 338, 340, 341, 343, 344, 345, 347, 352, 354, 359, 375, 384, 391, 392, 393, 394, 399, 407, 408, 409, 421, 426, 427, 430, (430).

$\mathcal{N}3 \models 6, 14, 16, 23, 24, 31, 37, 60, 83, 91, 128, 130, 164, 165, 191, 273, 305, 309, 313, 317, 325, 361, 363, 368,$   $369, 379,$  and  $381$ , but  $15, 84, 90, 97, 106, 118, 125, 126, 131, 147, 155, 156, 157, 200, 253, 290, 295, 296, 304,$   $355,$  and  $376$  are false. References Mostowski [1939] Blass [1977a], Brunner [1982a], [1983a], [1983c], [1983d], [1984c], [1984f], [1985c], Dawson/Howard [1976], De la Cruz/Di Prisco [1998b], Gonzalez [1995a], Halpern [1964], Howard [1973], Howard/Keremedis/Rubin/Rubin [1998b], Howard/Yorke [1989], Jech [1973b], Krom [1986], Läuchli [1964], Levy [1958], Pincus [1969], [1997], Sageev [1981], notes 2(8,9), 18 and 120(34 and 45).

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 60, 128, 164, 191, 317, 325, 379, 381.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 84, 97, 118, 125, 131, 147, 155, 156, 157, 200, 253, 290, 295, 296, 304, 355, 376.

A list of all forms known to be true in the model: 0, 5, 6, 10, 11, 12, 13, 14, 16, 17, 18, 19, 23, 24, 25, 26, 27, 30, 31, 32, 33, 34, 35, 37, 38, 45, 46, 47, 48, 49, 52, 60, 61, 62, 63, 64, 69, 70, 72, 73, 74, 79, 80, 83, 85, 88, 91, 92, 93, 94, 96, 99, 102, 104, 107, 108, 111, 119, 120, 121, 122, 123, 124, 127, 128, 130, 132, 137, 139, 140, 141, 142, 145, 146, 150, 151, 153, 154, 164, 165, 167, 169, 170, 178, 182, 189, 190, 191, 194, 197, 198, 199, 201, 203, 206, 207, 209, 211, 212, 213, 216, 221, 222, 223, 225, 226, 227, 228, 229, 231, 233, 235, 241, 242, 249, 250, 251, 252, 268, 269, 270, 271, 272, 273, 276, 280, 283, 285, 287, 288, 289, 293, 294, 298, 305, 306, 307, 308, 309, 311, 313, 314, 315, 317, 323, 324, 325, 326, 327, 329, 330, 331, 332, 336, 338, 342, 343, 344, 349, 350, 352, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 370, 371, 373, 374, 377, 378, 379, 380, 381, 382, 385, 386, 387, 389, 390, 401, 406, 410, 411, 412, 418, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 15, 20, 28, 39, 40, 41, 43, 44, 51, 66, 67, 71, 76, 77, 78, 82, 84, 86, 87, 89, 90, 95, 97, 100, 101, 106, 109, 112, 113, 114, 115, 118, 125, 126, 129, 131, 133, 144, 147, 149, 152, 155, 156, 157, 161, 168, 174, 179, 181, 185, 188, 192, 193, 200, 202, 214, 218, 239, 253, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 290, 292, 295, 296, 304, 316, 322, 328, 333, 334, 335, 345, 346, 347, 355, 359, 375, 376, 388, 391, 398, 407, 426, 427, 430, (430).

$\mathcal{N}4 \models 6, 37, 64, 90, 130, 191, 273, 305, 309, 313, 361,$  and  $363$ , but  $30, 83, 89, 114,$  and  $133$  are false. References Mathias [1967], Pincus [1969], Brunner [1985a], Felgner/Jech [1973], Jech [1973b], Krom [1986], notes 18 and 105.

(A minimal list of forms implying each form known to be true in the model: 64, 90, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 83, 89, 114, 133.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 25, 34, 35, 37, 38, 51, 58, 64, 70, 74, 77, 79, 84, 90, 91, 92, 93, 94, 104, 108, 118, 119, 127, 130, 137, 139, 142, 145, 169, 170, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 208, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 294, 305, 306, 307, 309, 313, 315, 316, 337, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, 390, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 14, 15, 20, 28, 30, 39, 40, 41, 43, 44, 49, 50, 66, 67, 71, 82, 83, 86, 87, 89, 95, 100, 101, 106, 109, 113, 114, 126, 129, 133, 149, 152, 161, 168, 174, 181, 188, 192, 193, 202, 214, 215, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 295, 303, 317, 328, 333, 334, 335, 345, 346, 347, 359, 384, 388, 407, 426, 427, 430, (430).

$\mathcal{N}5 \models$  6, 16, 23, 24, 30, 37, 60, 91, 130, 165, 191, 273, 305, 309, 313, 361, and 363, but 14, 40, 49, 84, 99, 118, 131, and 144 are false. References Krom [1986], Mathias [1967], Pincus [1969], Felgner/Jech [1973], Jech [1973b], Howard [1973], Howard/Rubin [1995b], Levy [1958], notes 2(2,8,9), 18, 33, 94, and 120(28, 34 and 49).

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 30, 60, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 49, 84, 99, 118, 131, 144.

A list of all forms known to be true in the model: 0, 5, 6, 10, 11, 12, 13, 16, 18, 19, 23, 24, 25, 26, 27, 30, 31, 32, 33, 34, 35, 37, 38, 45, 46, 47, 48, 60, 61, 62, 64, 70, 73, 74, 79, 80, 83, 85, 88, 91, 92, 93, 94, 102, 104, 108, 111, 119, 120, 121, 122, 127, 130, 132, 137, 139, 140, 142, 145, 146, 150, 151, 165, 169, 170, 178, 182, 189, 190, 191, 194, 197, 198, 199, 203, 206, 207, 209, 211, 212, 213, 216, 222, 223, 231, 249, 250, 251, 252, 268, 269, 270, 271, 272, 273, 276, 280, 283, 285, 288, 289, 293, 294, 305, 306, 307, 308, 309, 313, 314, 315, 323, 324, 327, 329, 330, 336, 338, 342, 349, 350, 352, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 377, 378, 380, 387, 389, 390, 401, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 14, 15, 20, 28, 39, 40, 41, 43, 44, 49, 50, 51, 66, 67, 71, 76, 77, 82, 84, 86, 87, 89, 90, 95, 99, 100, 101, 106, 109, 112, 113, 114, 115, 118, 126, 129, 131, 133, 144, 149, 152, 161, 168, 174, 179, 181, 185, 188, 192, 193, 202, 214, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 292, 303, 316, 317, 328, 333, 334, 335, 345, 346, 347, 359, 384, 388, 391, 407, 426, 427, 430, (430).

$\mathcal{N}6 \models$  6, 37, 61, 67, 95, 130, 191, 218, 273, 305, 313, 361, and 363, but 10, 154, 164, 171, 308( $p$ ), 314, 334, 344, 358, and 379 are false. References Bleicher [1965], Brunner [1984b], Degen [1988], Howard/Yorke [1987], Jech [1973b] (Theorem 7.11 and prob 7.15), Keremedis [1996a], Levy [1962], H. Rubin/J. Rubin [1985], Shannon [1990], notes 18, 35, 95, and 120(2 and 56).

(A minimal list of forms implying each form known to be true in the model: 191, 218.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 164, 171, 308, 314, 334, 358, 379.

A list of all forms known to be true in the model: 0, 5, 6, 11, 12, 13, 18, 19, 25, 33, 34, 35, 37, 38, 45, 46, 47, 48, 51, 52, 58, 61, 64, 67, 70, 73, 74, 76, 77, 78, 79, 80, 82, 83, 84, 88, 89, 90, 91, 92, 93, 94, 95, 104, 106, 108, 111, 112, 114, 115, 116, 118, 119, 120, 125, 126, 127, 130, 131, 137, 139, 140, 142, 144, 145, 147, 155, 169, 170, 173, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 208, 211, 212, 218, 221, 222, 223, 232, 250, 251, 252, 254, 268, 269, 272, 273, 276, 280, 287, 288, 289, 292, 294, 305, 306, 307, 309, 313, 315, 316, 328, 329, 330, 333, 336, 337, 342, 349, 350, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 381, 382, 387, 389, 390, 395, 396, 397, 413, 414, 415, 416, 418, 419, 420, 423, 425, 430, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 10, 14, 15, 16, 17, 20, 21, 23, 27, 29, 30, 31, 32, 36, 39, 40, 41, 43, 44, 49, 50, 60, 62, 68, 71, 85, 86, 87, 100, 101, 107, 113, 121, 122, 123, 129, 132, 133, 150, 151, 152, 153, 154, 161, 164, 165, 168, 171, 174, 181, 192, 202, 213, 214, 231, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 286, 295, 302, 303, 308, 314, 317, 322, 323, 324, 325, 327, 331, 332, 334, 338, 340, 341, 343, 344, 345, 347, 352, 354, 355, 358, 359, 376, 377, 378, 379, 380, 384, 385, 386, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 406, 407, 408, 409, 410, 411, 412, 421, 426, (430).

$\mathcal{N}7 \models$  16, 23, 24, 37, 60, 91, 123, 130, 165, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 30, 40, 99, 133, 152, 192, and 328 are false. References Läuchli [1964], Jech [1973b] (p 104, Thm 7.9), Pincus [1976], Howard/Rubin [1995b], notes 2(8,9), 18, 33, and 120(34 and 47).

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 60, 91, 123, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 30, 99, 133, 152, 192, 328.

A list of all forms known to be true in the model: 0, 5, 6, 10, 11, 12, 13, 16, 18, 19, 23, 24, 25, 26, 27, 31, 32, 33, 34, 35, 37, 38, 45, 46, 47, 48, 60, 61, 62, 63, 64, 70, 73, 74, 79, 80, 85, 88, 91, 92, 93, 94, 102, 104, 108, 111, 119, 120, 121, 122, 123, 127, 130, 132, 137, 139, 140, 142, 145, 146, 150, 151, 154, 165, 169, 170, 178, 182, 189, 190, 191, 194, 197, 199, 203, 206, 207, 209, 211, 212, 213, 216, 221, 222, 223, 231, 249, 250, 251, 252, 268, 269, 270, 271, 272, 273, 276, 280, 283, 285, 288, 289, 294, 305, 306, 307, 308, 309, 313, 314, 315, 323, 324, 327, 329, 330, 331, 332, 336, 338, 342, 343, 344, 349, 350, 352, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 378, 380, 389, 390, 401, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 14, 15, 20, 28, 30, 40, 49, 50, 66, 67, 95, 99, 100, 101, 109, 133, 149, 152, 168, 192, 202, 214, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 295, 303, 317, 328, 333, 334, 335, 345, 347, 359, 384, 407, 427, 430, (430).

$\mathcal{N}8 \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15 and 78 are false. References Lauchli [1962], Jech/Sochor [1966a], and note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 78.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 20, 28, 40, 43, 44, 66, 67, 78, 87, 95, 100, 101, 106, 109, 149, 168, 174, 188, 192, 193, 202, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 333, 334, 335, 345, 347, 359, 375, 388, 407, 427, 430, (430).

$\mathcal{N}9 \models 3, 6, 37, 63, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 88, 133, 192, and 344 are false. References Halpern/Howard [1974], notes 18 and 120(56).

(A minimal list of forms implying each form known to be true in the model: 3, 63, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 88, 133, 192.

A list of all forms known to be true in the model: 0, 3, 4, 5, 6, 9, 10, 11, 12, 13, 17, 18, 19, 34, 35, 37, 38, 53, 57, 63, 64, 70, 73, 74, 75, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 124, 127, 128, 130, 132, 137, 139, 142, 145, 167, 169, 170, 182, 185, 186, 189, 190, 191, 194, 197, 198, 199, 203, 204, 206, 211, 212, 216, 217, 221, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 342, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 387, 389, 390, 404, 405, 423, (430).

A list of all forms known to be false in the model: 1, 14, 15, 30, 36, 49, 50, 60, 61, 62, 68, 85, 88, 95, 107, 109, 123, 133, 192, 201, 213, 218, 270, 284, 295, 303, 317, 323, 326, 331, 332, 333, 335, 343, 344, 345, 384, 391, 399, 407, 408, 409, (430).

$\mathcal{N}10 \models 6, 9, 37, 63, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 77, 88, 106 and 344 are false. References Hoft/Howard [1994], notes 18, 113, and 120(55 and 56).

(A minimal list of forms implying each form known to be true in the model: 9, 63, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 77, 88, 106.

A list of all forms known to be true in the model: 0, 5, 6, 9, 10, 11, 12, 13, 17, 18, 19, 34, 35, 37, 38, 57, 63, 64, 70, 73, 74, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 124, 127, 128, 130, 132, 137, 139, 142, 145, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 211, 212, 216, 217, 221, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 342, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 387, 389, 390, 404, 423, (430).

A list of all forms known to be false in the model: 1, 14, 15, 20, 28, 30, 36, 40, 43, 44, 49, 50, 51, 60, 61, 62, 66, 67, 68, 77, 85, 87, 88, 89, 90, 95, 100, 101, 106, 107, 109, 112, 114, 123, 133, 149, 168, 174, 188, 192, 193, 201, 202, 213, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 292, 295, 303, 316, 317, 323, 326, 331, 332, 333, 334, 335, 343, 344, 345, 347, 359, 384, 388, 391, 399, 407, 408, 409, 427, 430, (430).

$\mathcal{N}11 \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15, 59( $\lesssim$ ), and 192 are false. References Jech [1966c] and note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 59, 192.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 59, 192, (430).

$\mathcal{N}12(\aleph_1) \models 9, 23, 40, 63, 130, 165, 187, 191, 202, 305, 309,$  and 313, but 3, 41,  $45(n)$ , 67, 88, 133, 152, 163, 192, 193, 323, 344, and 347 are false. See references for  $\mathcal{N}1$ , A. Rubin [1978], Higasikawa [1995], Jech [1973b] (pp 127 and 131), Truss [1978], Brunner [1982a], Blass [1979], notes 18, 60, 108, and 120(4, 34, 46, and 56).

(A minimal list of forms implying each form known to be true in the model: 23, 63, 187, 191, 202.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 3, 41, 45, 67, 88, 133, 152, 163, 192, 193, 347.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 23, 24, 25, 26, 27, 29, 31, 32, 33, 34, 35, 37, 38, 39, 40, 42, 43, 47, 48, 57, 58, 63, 64, 70, 73, 74, 77, 78, 79, 80, 82, 83, 84, 86, 91, 92, 93, 94, 98, 104, 106, 108, 111, 113, 119, 120, 121, 122, 124, 126, 127, 128, 130, 131, 132, 137, 139, 142, 145, 150, 151, 154, 155, 165, 167, 169, 170, 181, 182, 185, 186, 187, 189, 190, 191, 194, 196, 197, 198, 199, 202, 203, 206, 207, 208, 209, 211, 212, 216, 217, 221, 222, 223, 231, 243, 249, 250, 251, 252, 260, 272, 273, 279, 280, 282, 288, 289, 294, 296, 304, 305, 306, 307, 309, 313, 315, 322, 324, 325, 327, 328, 330, 336, 337, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 398, 400, 401, 402, 403, 404, 411, 412, 418, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 14, 15, 20, 28, 30, 36, 41, 44, 45, 49, 50, 60, 61, 62, 66, 67, 68, 85, 88, 95, 100, 101, 107, 109, 123, 133, 149, 152, 163, 168, 192, 193, 201, 213, 214, 218, 239, 270, 284, 295, 303, 317, 323, 326, 331, 332, 333, 334, 335, 343, 344, 345, 347, 359, 384, 391, 399, 407, 408, 409, 427, 430, (430).

$\mathcal{N}12(\aleph_2) \models 23, 40, 44, 63, 91, 130, 135, 165, 191, 305, 309, 313, 368,$  and 369, but 60, 62, 67, 133, 152, 161, 163, 192, 193, 344, and 347 are false. References Jech [1973b] (p 127), Häussler [1983] (p 197), Blass [1979], Brunner [1982a], van Douwen [1980], Higasikawa [1995], Howard [1973], Howard/Rubin [1995b], notes 18, 60, and 120(4, 46, and 56).

(A minimal list of forms implying each form known to be true in the model: 23, 40, 44, 63, 91, 135, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 62, 67, 133, 152, 161, 163, 192, 193, 347.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 23, 24, 25, 26, 27, 29, 31, 32, 34, 35, 37, 38, 39, 40, 41, 42, 43, 44, 47, 48, 57, 58, 63, 64, 70, 73, 74, 77, 78, 79, 80, 82, 83, 84, 86, 91, 92, 93, 94, 98, 104, 106, 108, 111, 113, 119, 122, 124, 126, 127, 128, 130, 131, 132, 135, 137, 139, 142, 145, 150, 151, 154, 155, 165, 167, 169, 170, 182, 185, 189, 190, 191, 194, 196, 197, 198, 199, 203, 206, 207, 208, 209, 211, 212, 216, 217, 221, 222, 223, 231, 243, 249, 250, 251, 252, 272, 273, 279, 280, 282, 288, 289, 294, 296, 304, 305, 306, 307, 309, 313, 315, 322, 324, 325, 327, 328, 330, 336, 337, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 365, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 418, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 14, 15, 20, 28, 30, 36, 49, 50, 60, 62, 66, 67, 68, 85, 95, 100, 101, 107, 109, 123, 133, 149, 152, 161, 163, 168, 192, 193, 213, 214, 218, 239, 270, 295, 303, 317, 323, 331, 332, 333, 334, 335, 343, 344, 345, 347, 359, 384, 391, 399, 407, 408, 409, 427, 430, (430).

$\mathcal{N}12(\aleph_\alpha) \models 63, 71(\alpha), 87(\beta)$  if  $\aleph_\beta < \text{cf}(\aleph_\alpha)$ , 91, 130, 191, 305, 309, 313, 368, and 369, but 3, 15, 133, 163, 192, and 193 are false. References Jech [1973b] (p 124, Thm 8.6), Monro [1974], Blass [1979], Brunner [1982a], notes 18, 60, 104, and 120(4).

(A minimal list of forms implying each form known to be true in the model: 63, 87, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 3, 15, 133, 163, 192, 193.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 42, 43, 57, 63, 64, 70, 71, 73, 74, 77, 78, 79, 80, 82, 83, 84, 86, 87, 91, 92, 93, 94, 98, 104, 106, 108, 113, 119, 124, 126, 127, 128, 130, 131, 132, 137, 139, 142, 145, 150, 154, 155, 167, 169,

170, 174, 182, 183, 185, 189, 190, 191, 194, 196, 197, 198, 199, 203, 206, 209, 211, 212, 216, 217, 221, 222, 223, 243, 249, 251, 252, 272, 273, 279, 280, 282, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 418, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 15, 133, 163, 192, 193, (430).)

$\mathcal{N}13 \models$  6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 9, 15, and 235 are false. References Läuchli [1962], Jech/Sochor [1966a], Jech [1973b] (p 149 prob 5), and note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 9, 15, 235.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 14, 15, 20, 39, 40, 41, 43, 44, 50, 71, 86, 87, 96, 100, 101, 107, 113, 129, 152, 161, 168, 174, 181, 192, 202, 214, 235, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 303, 317, 345, 347, 359, 384, 407, 426, (430).)

$\mathcal{N}14 \models$  6, 37, 43, 63, 91, 130, 144, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 15, 103, 133, 163, and 192 are false. References Jech [1973b] (p 164 prob 21), notes 18, 144, 120(1, 4, and 20), and 155.

(A minimal list of forms implying each form known to be true in the model: 43, 63, 91, 144, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 103, 133, 163, 192.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 42, 43, 57, 63, 64, 70, 73, 74, 77, 78, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 106, 108, 113, 119, 124, 125, 126, 127, 128, 130, 131, 132, 137, 139, 142, 144, 145, 150, 154, 155, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 209, 211, 212, 216, 217, 221, 222, 223, 243, 249, 251, 252, 272, 273, 279, 280, 282, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 413, 414, 415, 416, 418, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 15, 103, 133, 163, 192, (430).)

$\mathcal{N}15 \models$  8, 43, 63, 91, 122, 130, 144, 152, 191, 273, 305, 309, 313, 363, 368, and 369, but 3, 62, 67, 151, 163, 192, 193, 324, 330, and 344 are false. References Brunner/Howard [1992], Brunner [1982a], Blass [1979], Howard [1973], notes 18, 60, 120(32, 34, 41, and 56), 144, and 155.

(A minimal list of forms implying each form known to be true in the model: 43, 63, 91, 122, 144, 152, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 3, 62, 151, 163, 192, 193, 324, 330.

A list of all forms known to be true in the model: 0, 4, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 42, 43, 47, 48, 57, 63, 64, 70, 73, 74, 75, 77, 78, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 106, 108, 111, 113, 119, 122, 124, 125, 126, 127, 128, 130, 131, 132, 137, 139, 142, 144, 145, 150, 152, 154, 155, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 209, 211, 212, 216, 217, 221, 222, 223, 243, 249, 250, 251, 252, 272, 273, 279, 280, 282, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 327, 336, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 405, 411, 412, 413, 414, 415, 416, 418, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 14, 15, 20, 21, 23, 28, 30, 36, 40, 49, 50, 60, 62, 66, 67, 68, 85, 95, 100, 101, 107, 109, 112, 123, 133, 149, 151, 163, 165, 168, 192, 193, 202, 213, 218, 231, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 286, 292, 295, 302, 303, 317, 322, 323, 324, 328, 329, 330, 331, 332, 333, 334, 335, 343, 344, 345, 347, 359, 384, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 402, 403, 407, 408, 409, 427, 430, (430).)

$\mathcal{N}16 \models$  6, 9, 37, 41, 63, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 8, 15, 106, and 133 are false. References Levy [1964], Pincus [1969], Jech [1973b] (p 124), notes 18 and 120(55).

(A minimal list of forms implying each form known to be true in the model: 41, 63, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 8, 15, 106, 133.

A list of all forms known to be true in the model: 0, 5, 6, 9, 10, 11, 12, 13, 17, 18, 19, 34, 35, 37, 38, 41, 57, 63, 64, 70, 73, 74, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 124, 127, 128, 130, 132, 137, 139, 142, 145, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 211, 212, 216, 217, 221, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 342, 358, 361, 362, 363, 364, 365, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 387, 389, 390, 404, 423, (430).

A list of all forms known to be false in the model: 1, 8, 15, 20, 28, 39, 40, 43, 44, 66, 67, 86, 87, 95, 100, 101, 106, 109, 113, 133, 149, 168, 174, 181, 188, 192, 193, 202, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 333, 334, 335, 345, 347, 359, 388, 407, 426, 427, 430, (430).

$\mathcal{N}16(\mathbb{N}_\gamma) \models 6, 9, 37, 63, 71(\alpha)$  for  $\alpha < \gamma$ , 91, 130, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 8, 15,  $71(\gamma)$ , 106, and 133 are false. References Levy [1964], Pincus [1969], Jech [1973b] (p 124), notes 18 and 120(55).

(A minimal list of forms implying each form known to be true in the model: 63, 71, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 8, 15, 71, 106, 133.

A list of all forms known to be true in the model: 0, 5, 6, 9, 10, 11, 12, 13, 17, 18, 19, 34, 35, 37, 38, 57, 63, 64, 70, 71, 73, 74, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 124, 127, 128, 130, 132, 137, 139, 142, 145, 167, 169, 170, 182, 183, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 211, 212, 216, 217, 221, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 342, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 387, 389, 390, 404, 423, (430).

A list of all forms known to be false in the model: 1, 8, 15, 20, 28, 39, 40, 43, 44, 66, 67, 71, 86, 87, 95, 100, 101, 106, 109, 113, 133, 149, 168, 174, 181, 188, 192, 193, 202, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 333, 334, 335, 345, 347, 359, 388, 407, 426, 427, 430, (430).

$\mathcal{N}17 \models 31, 37, 91, 130, 144, 191, 273, 305, 309, 361, 363, 368,$  and 369, but 15, 27, 28, 62, 106, 131, 163, 165, 231, 323, and 344 are false. References Brunner/Howard [1992], notes 2(3, 5, and 6), 18, 120(30 49, 55, and 56) and 154.

(A minimal list of forms implying each form known to be true in the model: 31, 91, 144, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 27, 62, 131, 163, 165.

A list of all forms known to be true in the model: 0, 5, 6, 10, 13, 18, 19, 31, 32, 34, 35, 37, 38, 70, 74, 79, 80, 91, 92, 93, 94, 104, 108, 119, 125, 130, 137, 139, 142, 144, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 209, 211, 212, 216, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 305, 306, 307, 309, 313, 338, 350, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 389, 413, 414, 415, 416, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 8, 14, 15, 20, 21, 23, 27, 28, 29, 30, 36, 39, 40, 43, 44, 49, 50, 60, 62, 66, 67, 68, 76, 85, 86, 87, 95, 100, 101, 106, 107, 109, 113, 123, 126, 131, 133, 149, 163, 165, 168, 174, 181, 188, 192, 193, 202, 213, 214, 218, 231, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 286, 295, 302, 303, 317, 323, 328, 331, 332, 333, 334, 335, 343, 344, 345, 346, 347, 359, 384, 388, 391, 392, 393, 394, 399, 407, 408, 409, 426, 427, 430, (430).

$\mathcal{N}18 \models 6, 32, 37, 91, 130, 144, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15, 31, 62, 131, 163, 165, 231, 323, 341, and 344 are false. References De la Cruz, Hall, Howard, Keremedis, Rubin [2002a] Howard [1992], notes 2(3, 5, and 6), 18, 120(30, 49, and 56), and 155.

(A minimal list of forms implying each form known to be true in the model: 32, 91, 144, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 31, 62, 131, 163, 165, 341.

A list of all forms known to be true in the model: 0, 5, 6, 10, 13, 18, 19, 32, 34, 35, 37, 38, 70, 74, 79, 80, 91, 92, 93, 94, 104, 108, 119, 125, 130, 137, 139, 142, 144, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 216, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 305, 306, 307, 309, 313, 350, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 389, 413, 414, 415, 416, 423, (430).

A list of all forms known to be false in the model: 1, 8, 14, 15, 16, 20, 21, 23, 27, 28, 29, 30, 31, 36, 39, 40, 43, 44, 49, 50, 60, 62, 66, 67, 68, 76, 85, 86, 87, 95, 100, 101, 106, 107, 109, 113, 123, 126, 131, 133, 149, 163, 165, 168, 174, 181, 188, 192, 193, 202, 213, 214, 218, 231, 239, 255, 256, 257, 258, 259, 260, 261, 262,



264, 270, 286, 295, 302, 303, 317, 323, 328, 331, 332, 333, 334, 335, 340, 341, 343, 344, 345, 346, 347, 352, 359, 384, 388, 391, 392, 393, 394, 399, 407, 408, 409, 426, 427, 430, (430).)

$\mathcal{N}19(\lesssim) \models 14, 16, 23, 24, 37, 60, 91, 130, 165, 191, 273, 305, 317, 361, 363, 368,$  and  $369$ , but  $15, 40, 51, 59(\lesssim), 118, 144, 152, 192, 253,$  and  $328$  are false. References Tsukada [1977], Howard [1973], Howard/Rubin [1995b], Krom [1986], Morris [1969], notes 2(8,9), 18, 107, 120(28, 34, 45, and 47), and 121.

(A minimal list of forms implying each form known to be true in the model:  $16, 23, 24, 60, 91, 191, 317$ .)

A minimal list of forms at least one of which is implied by each form known to be false in the model:  $15, 51, 59, 118, 144, 152, 192, 253, 328$ .

A list of all forms known to be true in the model:  $0, 5, 6, 10, 11, 12, 13, 14, 16, 18, 19, 23, 24, 25, 26, 27, 30, 31, 32, 33, 34, 35, 37, 38, 45, 46, 47, 48, 49, 52, 60, 61, 62, 63, 64, 69, 70, 72, 73, 74, 79, 80, 83, 85, 88, 91, 92, 93, 94, 96, 99, 102, 104, 107, 108, 111, 119, 120, 121, 122, 123, 127, 130, 132, 137, 139, 140, 141, 142, 145, 146, 150, 151, 153, 154, 165, 169, 170, 178, 182, 189, 190, 191, 194, 197, 198, 199, 201, 203, 206, 207, 209, 211, 212, 213, 216, 221, 222, 223, 225, 226, 227, 228, 229, 231, 233, 235, 241, 242, 249, 250, 251, 252, 268, 269, 270, 271, 272, 273, 276, 280, 283, 285, 287, 288, 289, 293, 294, 298, 305, 306, 307, 308, 309, 311, 313, 314, 315, 317, 323, 324, 326, 327, 329, 330, 331, 332, 336, 338, 342, 343, 344, 349, 350, 352, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 370, 371, 373, 374, 377, 378, 380, 385, 386, 387, 389, 390, 401, 406, 410, 411, 412, 419, 420, 421, 423, (430).$

A list of all forms known to be false in the model:  $1, 15, 20, 28, 40, 51, 59, 66, 67, 89, 90, 95, 100, 101, 109, 112, 114, 115, 118, 133, 144, 149, 152, 168, 179, 192, 202, 214, 218, 239, 253, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 292, 328, 333, 334, 335, 347, 359, 391, 427, 430, (430).$

$\mathcal{N}20 \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and  $369$ , but  $15, 136(k)$ , for all  $k \in \omega - \{0, 1\}$ , and  $192$  are false. References Truss [1984] and note 18.

(A minimal list of forms implying each form known to be true in the model:  $91, 191$ .)

A minimal list of forms at least one of which is implied by each form known to be false in the model:  $15, 136, 192$ .

A list of all forms known to be true in the model:  $0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).$

A list of all forms known to be false in the model:  $1, 15, 136, 138, 192, (430).$

$\mathcal{N}21(\aleph_{\alpha+1}) \models 39$  (for  $\alpha \geq 1$ ),  $63, 71(\beta)$  (for  $\beta < \alpha + 1$ ),  $86(\beta)$  (for  $\beta < \alpha + 1$ ),  $91, 130, 191, 273, 305, 309, 313, 363, 368,$  and  $369$ , but  $15, 43, 106, 133, 163,$  and  $193$  are false. References Jensen [1966], [1967], Blass [1979], Brunner [1982a], and note 60. See, also, Jech [1973b] (p 130) and Felgner [1971a] (pp 151-159), notes 18 and 120(4 and 55).

(A minimal list of forms implying each form known to be true in the model:  $39, 63, 71, 86, 91, 191$ .)

A minimal list of forms at least one of which is implied by each form known to be false in the model:  $15, 106, 133, 163$ .

A list of all forms known to be true in the model:  $0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 39, 57, 63, 64, 70, 71, 73, 74, 79, 80, 82, 83, 84, 86, 91, 92, 93, 94, 98, 104, 108, 119, 124, 126, 127, 128, 130, 131, 132, 137, 139, 142, 145, 150, 167, 169, 170, 182, 183, 185, 189, 190, 191, 194, 196, 197, 198, 199, 203, 206, 209, 211, 212, 216, 217, 221, 222, 223, 249, 251, 252, 272, 273, 280, 282, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 338, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 379, 380, 387, 389, 390, 404, 418, 419, 420, 423, (430).$

A list of all forms known to be false in the model:  $1, 15, 20, 28, 40, 43, 44, 66, 67, 87, 95, 100, 101, 106, 109, 133, 149, 163, 168, 174, 188, 192, 193, 202, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 333, 334, 335, 345, 347, 359, 388, 407, 427, 430, (430).$

$\mathcal{N}22(p) \models 6, 37, 45(n)$  (for  $n < p$ ),  $46(K)$  (for  $K \subset p$ ),  $88$  (if  $p > 2$ ),  $91, 130, 191, 273, 305, 308(p), 309, 313, 361, 363, 368,$  and  $369$ , but  $285$  and  $373(p)$  are false. References Howard/Yorke [1987], Makowski/Wiśniewski [1969], Mostowski [1945], and note 120(56).

(A minimal list of forms implying each form known to be true in the model:  $45, 46, 88, 91, 191, 308$ .)

A minimal list of forms at least one of which is implied by each form known to be false in the model:  $285, 373$ .

A list of all forms known to be true in the model: 0, 5, 6, 13, 18, 19, 33, 34, 35, 37, 38, 45, 46, 47, 48, 64, 70, 74, 79, 80, 88, 91, 92, 93, 94, 104, 108, 120, 127, 130, 137, 139, 140, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 268, 269, 272, 273, 276, 280, 288, 289, 305, 306, 307, 308, 309, 313, 336, 342, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 389, 390, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 10, 14, 15, 16, 17, 20, 21, 23, 27, 29, 30, 31, 32, 33, 36, 39, 40, 41, 43, 44, 45, 47, 49, 50, 60, 61, 62, 66, 68, 71, 85, 86, 87, 100, 101, 107, 109, 110, 113, 121, 122, 123, 129, 132, 133, 150, 151, 152, 153, 154, 161, 165, 168, 174, 181, 192, 202, 213, 214, 218, 231, 239, 250, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 285, 286, 288, 295, 302, 303, 317, 322, 323, 324, 325, 327, 331, 332, 335, 338, 340, 341, 343, 344, 345, 346, 347, 352, 354, 355, 358, 359, 373, 374, 376, 377, 378, 380, 384, 385, 386, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 406, 407, 408, 409, 410, 411, 412, 421, 422, 423, 426, (430).

$\mathcal{N}23 \models 8, 63, 91, 130, 191, 273, 305, 309, 313, 363, 368,$  and 369, but 88, 133, 163, 192, 193, and 344 are false. References Brunner [1982a], Blass [1979], notes 18, 60, 100, and 120(4 and 56).

(A minimal list of forms implying each form known to be true in the model: 8, 63, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 88, 133, 163, 192, 193.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 57, 63, 64, 70, 73, 74, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 119, 124, 126, 127, 128, 130, 131, 132, 137, 139, 142, 145, 150, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 209, 211, 212, 216, 217, 221, 222, 223, 249, 251, 252, 272, 273, 280, 282, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 338, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 379, 380, 387, 389, 390, 404, 418, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 14, 15, 30, 36, 49, 50, 60, 61, 62, 68, 85, 88, 95, 107, 109, 123, 133, 163, 192, 193, 201, 213, 218, 270, 284, 295, 303, 317, 323, 326, 331, 332, 333, 335, 343, 344, 345, 384, 391, 399, 407, 408, 409, (430).

$\mathcal{N}24 \models 10, 16, 23, 24, 37, 121, 130, 133, 191, 273, 305, 309, 313, 340, 361,$  and 363, but 64, 67, 124, 127, 131, 132, 166, and 344 are false. References Hickman [1976], Brunner [1982a], [1983b],[1984a],[1984b], notes 2(8,9), 18, and 120(49 and 56).

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 121, 133, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 124, 127, 131, 132, 166.

A list of all forms known to be true in the model: 0, 5, 6, 10, 13, 16, 18, 19, 23, 24, 25, 26, 27, 31, 32, 33, 34, 35, 37, 38, 47, 48, 51, 58, 63, 70, 74, 77, 79, 80, 84, 90, 91, 92, 93, 94, 104, 108, 111, 118, 119, 120, 121, 122, 130, 133, 137, 139, 142, 145, 151, 165, 169, 170, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 207, 208, 209, 211, 212, 216, 221, 222, 223, 231, 249, 250, 251, 252, 272, 273, 280, 288, 289, 294, 305, 306, 307, 309, 313, 315, 316, 324, 327, 330, 337, 338, 340, 341, 350, 352, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 389, 401, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 11, 12, 14, 15, 17, 20, 28, 30, 36, 39, 40, 41, 43, 44, 45, 49, 50, 57, 60, 61, 62, 64, 66, 67, 68, 71, 76, 82, 83, 85, 86, 87, 88, 95, 100, 101, 106, 107, 109, 113, 123, 124, 126, 127, 129, 131, 132, 149, 150, 152, 161, 166, 168, 174, 181, 188, 192, 193, 201, 202, 213, 214, 215, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 296, 303, 317, 323, 325, 326, 328, 331, 332, 333, 334, 335, 336, 343, 344, 345, 346, 347, 359, 376, 377, 378, 380, 384, 387, 388, 391, 399, 407, 408, 409, 426, 427, 430, (430).

$\mathcal{N}24(n) \models 10, 16, 23, 24, 37, 121, 130, 133, 191, 273, 305, 309, 313, 340, 361,$  and 363, but  $45(n)$ , 64, 67, 131, and 344 are false. References Brunner [1982a], Hickman [1976], Truss [1973a], notes 2(8,9), 18, and 120(49 and 56).

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 121, 133, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 64, 131.

A list of all forms known to be true in the model: 0, 5, 6, 10, 13, 16, 18, 19, 23, 24, 25, 26, 27, 31, 32, 33, 34, 35, 37, 38, 47, 48, 51, 58, 63, 70, 74, 77, 79, 80, 84, 90, 91, 92, 93, 94, 104, 108, 111, 118, 119, 120, 121, 122, 130, 133, 137, 139, 142, 145, 151, 165, 169, 170, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 207, 208, 209, 211, 212, 216, 221, 222, 223, 231, 249, 250, 251, 252, 272, 273, 280, 288, 289, 294, 305, 306,

307, 309, 313, 315, 316, 324, 327, 330, 337, 338, 340, 341, 350, 352, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 389, 401, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 11, 12, 14, 15, 20, 28, 30, 36, 39, 40, 41, 43, 44, 45, 49, 50, 57, 60, 61, 62, 64, 66, 67, 68, 71, 76, 82, 83, 85, 86, 87, 88, 95, 100, 101, 106, 107, 109, 113, 123, 126, 129, 131, 149, 152, 161, 168, 174, 181, 188, 192, 193, 201, 202, 213, 214, 215, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 296, 303, 317, 323, 326, 328, 331, 332, 333, 334, 335, 336, 343, 344, 345, 346, 347, 359, 376, 377, 378, 384, 387, 388, 391, 399, 407, 408, 409, 426, 427, 430, (430).

$\mathcal{N}24(n, LO) \models 6, 37, 91, 122, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and  $369,$  but  $33(n), 67, 192,$  and  $344$  are false. References Truss [1973a], notes 18 and 120(56).

(A minimal list of forms implying each form known to be true in the model: 91, 122, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 33, 67, 192.

A list of all forms known to be true in the model: 0, 5, 6, 10, 13, 18, 19, 34, 35, 37, 38, 47, 48, 70, 74, 79, 80, 91, 92, 93, 94, 104, 108, 111, 122, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 216, 222, 223, 249, 250, 251, 252, 272, 273, 280, 288, 289, 305, 306, 307, 309, 313, 327, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 389, 423, (430).

A list of all forms known to be false in the model: 1, 14, 15, 20, 28, 30, 33, 36, 45, 49, 50, 60, 61, 62, 66, 67, 68, 85, 95, 107, 109, 121, 123, 149, 192, 202, 213, 218, 239, 264, 270, 284, 295, 302, 303, 317, 323, 331, 332, 333, 334, 335, 343, 344, 345, 359, 384, 391, 392, 393, 399, 407, 408, 409, 427, 430, (430).

$\mathcal{N}25 \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and  $369,$  but 15, 158, and 192 are false. References Brunner [1983b], and note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 158, 192.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 158, 192, (430).

$\mathcal{N}26 \models 16, 23, 24, 37, 130, 133, 191, 273, 305, 309, 313, 340, 361, 363,$  and  $380$  but 64, 131, 167, 344, and 355, are false. References Brunner [1982a], De la Cruz/Di Prisco [1998a], Pincus [1976], notes 2(8,9), 18, and 120(56).

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 133, 191, 380.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 64, 131, 167, 355.

A list of all forms known to be true in the model: 0, 5, 6, 10, 13, 16, 18, 19, 23, 24, 25, 26, 27, 31, 32, 34, 35, 37, 38, 47, 48, 51, 58, 63, 70, 73, 74, 77, 79, 80, 84, 90, 91, 92, 93, 94, 104, 108, 111, 118, 119, 122, 130, 132, 133, 137, 139, 142, 145, 151, 165, 169, 170, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 207, 208, 209, 211, 212, 216, 221, 222, 223, 231, 249, 250, 251, 252, 272, 273, 280, 288, 289, 294, 305, 306, 307, 309, 313, 315, 316, 324, 327, 330, 337, 338, 340, 341, 342, 350, 352, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 380, 389, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 11, 12, 14, 15, 20, 28, 30, 36, 39, 40, 41, 43, 44, 45, 49, 50, 57, 60, 61, 62, 64, 66, 67, 68, 71, 76, 82, 83, 85, 86, 87, 88, 95, 100, 101, 106, 107, 109, 113, 123, 126, 129, 131, 149, 152, 161, 167, 168, 174, 181, 188, 192, 193, 201, 202, 213, 214, 215, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 296, 303, 317, 322, 323, 326, 328, 331, 332, 333, 334, 335, 336, 343, 344, 345, 346, 347, 355, 359, 376, 377, 378, 379, 384, 387, 388, 391, 398, 399, 407, 408, 409, 426, 427, 430, (430).

$\mathcal{N}27 \models 6, 37, 43, 63, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and  $369,$  but 15, 133, 163,  $183(\alpha)$ , for  $\aleph_\alpha$  a successor cardinal, and 192 are false. References Hickman [1980b], notes 18, 56, 120(1, 4, and 20) and 144.

(A minimal list of forms implying each form known to be true in the model: 43, 63, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 133, 163, 183, 192.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 42, 43, 57, 63, 64, 70, 73, 74, 77, 78, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 106, 108, 113, 119, 124, 126, 127, 128, 130, 131, 132, 137, 139, 142, 145, 150, 154, 155, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 209, 211, 212, 216, 217, 221, 222, 223, 243, 249, 251, 252, 272, 273, 279, 280, 282, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 418, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 15, 71, 87, 133, 163, 183, 192, (430).)

$\mathcal{N}28 \models$  6, 37, 91, 130, 273, 305, 309, 313, 361, 363, 368, and 369, but 129, 190, and 293 are false. References Blass [1979], and note 18.

(A minimal list of forms implying each form known to be true in the model: 91.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 129, 190, 293.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 14, 15, 30, 49, 50, 129, 189, 190, 191, 293, 295, 303, 317, 345, 384, 407, (430).)

$\mathcal{N}29 \models$  6, 14, 16, 23, 24, 37, 60, 91, 130, 165, 191, 273, 305, 317, 361, 363, 368, and 369, but 15, 51, 118, 126, 131, 133, 144, 152, 167, 200, 253, and 291 are false. References Dawson/Howard [1976], Howard [1973], notes 2(3, 8, 9, ), 18, 64, 120(3, 4, 6, 16, 28, 34, 45, 47, and 49), and 136.

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 60, 91, 191, 317.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 51, 118, 131, 144, 167, 200, 253, 291.

A list of all forms known to be true in the model: 0, 5, 6, 10, 11, 12, 13, 14, 16, 18, 19, 23, 24, 25, 26, 27, 30, 31, 32, 33, 34, 35, 37, 38, 45, 46, 47, 48, 49, 52, 60, 61, 62, 63, 64, 69, 70, 72, 73, 74, 79, 80, 83, 85, 88, 91, 92, 93, 94, 96, 99, 102, 104, 107, 108, 111, 119, 120, 121, 122, 123, 127, 130, 132, 137, 139, 140, 141, 142, 145, 146, 150, 151, 153, 154, 165, 169, 170, 178, 182, 189, 190, 191, 194, 197, 198, 199, 201, 203, 206, 207, 209, 211, 212, 213, 216, 221, 222, 223, 225, 226, 227, 228, 229, 231, 233, 235, 241, 242, 249, 250, 251, 252, 268, 269, 270, 271, 272, 273, 276, 280, 283, 285, 287, 288, 289, 293, 294, 298, 305, 306, 307, 308, 309, 311, 313, 314, 315, 317, 323, 324, 326, 327, 329, 330, 331, 332, 336, 338, 342, 343, 344, 349, 350, 352, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 370, 371, 373, 374, 377, 378, 380, 385, 386, 387, 389, 390, 401, 406, 410, 411, 412, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 15, 20, 28, 39, 40, 41, 43, 44, 51, 66, 67, 71, 76, 86, 87, 89, 90, 95, 100, 101, 106, 109, 112, 113, 114, 115, 118, 126, 129, 131, 133, 144, 149, 152, 161, 167, 168, 174, 179, 181, 188, 192, 193, 200, 202, 214, 218, 239, 253, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 291, 292, 328, 333, 334, 335, 345, 346, 347, 359, 376, 379, 388, 391, 407, 426, 427, 430, (430).)

$\mathcal{N}30 \models$  6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 15, 192, and 210 are false. References Läuchli [1962], and note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 192, 210.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 68, 192, 210, (430).)

$\mathcal{N}31 \models$  6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 15, 241, 243, and 244 are false. References Hodges [1976a], Läuchli [1962], notes 18 and 84.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 241, 243, 244.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 14, 15, 20, 40, 43, 44, 50, 87, 100, 101, 168, 174, 192, 202, 233, 241, 242, 243, 244, 255, 256, 257, 258, 259, 260, 261, 262, 264, 278, 286, 303, 317, 345, 347, 359, 384, 407, (430).

$\mathcal{N}32 \models$  6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 15, 192, 237, 238, and 240 are false. References Hickman [1976], and note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 192, 237, 238, 240.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 192, 237, 238, 240, (430).

$\mathcal{N}33 \models$  23, 40, 63, 91, 130, 165, 191, 305, 309, 313, 368, and 369, but 3, 60, 62, 133, 152, 163, 192, 193, 260, 344, 349 and 356 are false. References Howard/H.Rubin/J.Rubin [1973], Blass [1979], Brunner [1982a], Howard [1973], Howard/Rubin [1995b], notes 18, 60, 107, and 120(4, 34, 46, 56).

(A minimal list of forms implying each form known to be true in the model: 23, 40, 63, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 3, 62, 133, 152, 163, 192, 193, 260, 349, 356.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 23, 24, 25, 26, 27, 29, 31, 32, 34, 35, 37, 38, 39, 40, 42, 43, 47, 48, 57, 58, 63, 64, 70, 73, 74, 77, 78, 79, 80, 82, 83, 84, 86, 91, 92, 93, 94, 98, 104, 106, 108, 111, 113, 119, 122, 124, 126, 127, 128, 130, 131, 132, 137, 139, 142, 145, 150, 151, 154, 155, 165, 167, 169, 170, 182, 185, 189, 190, 191, 194, 196, 197, 198, 199, 203, 206, 207, 208, 209, 211, 212, 216, 217, 221, 222, 223, 231, 243, 249, 250, 251, 252, 272, 273, 279, 280, 282, 288, 289, 294, 296, 304, 305, 306, 307, 309, 313, 315, 322, 324, 325, 327, 328, 330, 336, 337, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 418, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 14, 15, 28, 30, 36, 49, 50, 60, 62, 66, 67, 68, 85, 95, 107, 109, 123, 133, 149, 152, 163, 192, 193, 202, 213, 214, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 295, 303, 317, 323, 329, 331, 332, 333, 334, 335, 343, 344, 345, 349, 356, 384, 391, 399, 407, 408, 409, 427, 430, (430).

$\mathcal{N}34 \models$  6, 37, 91, 130, 191, 216, 273, 305, 309, 313, 361, 363, 368, and 369, but 15 and 217 are false. References Pincus [1972a], notes 18 and 105.

(A minimal list of forms implying each form known to be true in the model: 91, 191, 216.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 217.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 216, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 15, 20, 39, 40, 41, 43, 44, 71, 86, 87, 100, 101, 113, 129, 152, 161, 168, 174, 181, 192, 202, 214, 217, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 345, 347, 359, 407, 426, (430).

$\mathcal{N}35 \models$  6, 37, 91, 130, 191, 250, 273, 305, 309, 313, 361, 363, 368, and 369, but 249 and 344 are false. References Truss [1975], notes 18, 87, and 120(56).

(A minimal list of forms implying each form known to be true in the model: 91, 191, 250.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 249.

A list of all forms known to be true in the model: 0, 5, 6, 13, 18, 19, 34, 35, 37, 38, 47, 48, 70, 74, 79, 80, 91, 92, 93, 94, 104, 108, 111, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203,

206, 211, 212, 222, 223, 250, 251, 252, 272, 273, 280, 288, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 389, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 10, 14, 15, 16, 17, 20, 21, 23, 27, 29, 30, 31, 32, 36, 39, 40, 41, 43, 44, 49, 50, 60, 62, 68, 71, 85, 86, 87, 100, 101, 107, 113, 121, 122, 123, 129, 132, 133, 150, 151, 152, 153, 154, 161, 165, 168, 174, 181, 192, 202, 213, 214, 231, 249, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 286, 295, 302, 303, 317, 323, 325, 331, 332, 338, 340, 341, 343, 344, 345, 347, 352, 354, 359, 376, 377, 378, 380, 384, 385, 386, 391, 392, 393, 394, 399, 406, 407, 408, 409, 410, 411, 412, 421, 426, (430).

$\mathcal{N}36(\beta) \models 39$ , (if  $\beta \geq 1$ ), 43, 63,  $86(\beta)$ , 91, 122, 130, 144, 191, 273, 305, 309, 313, 363, 368, and 369, but 15, 67, 133, 152, 163, 192, and 193 are false. References Brunner/Howard [1992], Blass [1979], Brunner [1982a], notes 18, 60, 120(4 and 41), 144, and 155.

(A minimal list of forms implying each form known to be true in the model: 39, 43, 63, 86, 91, 122, 144, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 67, 133, 152, 163, 192, 193.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 39, 42, 43, 47, 48, 57, 63, 64, 70, 73, 74, 77, 78, 79, 80, 82, 83, 84, 86, 91, 92, 93, 94, 98, 104, 106, 108, 111, 113, 119, 122, 124, 125, 126, 127, 128, 130, 131, 132, 137, 139, 142, 144, 145, 150, 154, 155, 167, 169, 170, 182, 185, 189, 190, 191, 194, 196, 197, 198, 199, 203, 206, 209, 211, 212, 216, 217, 221, 222, 223, 243, 249, 250, 251, 252, 272, 273, 279, 280, 282, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 327, 336, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 413, 414, 415, 416, 418, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 15, 28, 66, 67, 95, 109, 133, 149, 152, 163, 192, 193, 214, 218, 239, 333, 334, 335, 427, 430, (430).

$\mathcal{N}37 \models 6, 37, 91, 130, 144, 191, 273, 305, 309, 313, 316, 361, 363, 368$ , and 369, but 51, 129, 192, and 293 are false. References Höft/Howard [1994], note 18, and note 155.

(A minimal list of forms implying each form known to be true in the model: 91, 144, 191, 316.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 51, 129, 192, 293.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 77, 79, 84, 91, 92, 93, 94, 104, 108, 125, 130, 137, 139, 142, 144, 145, 169, 170, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 316, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, 413, 414, 415, 416, (430).

A list of all forms known to be false in the model: 1, 14, 15, 28, 30, 49, 50, 51, 66, 67, 89, 90, 95, 109, 112, 114, 129, 133, 149, 192, 218, 239, 256, 259, 261, 292, 293, 295, 303, 317, 333, 334, 335, 345, 384, 391, 407, 427, 430, (430).

$\mathcal{N}38 \models 8, 14, 23, 60, 91, 113, 130, 165, 191, 273, 295, 305, 317, 363, 368$ , and 369, but 3, 15, 43, 51, 106, 118, 144, 152, 163, 181, 253, and 328 are false. References Howard/Rubin [1996], Kelley [1955], Krom [1986], Blass [1979], Brunner [1982a], [1984b], Howard [1973], Morris [1969], Pincus [1997], notes 2(3), 18, 60, 95, 104, 120(28, 34, 45, and 47) and 121.

(A minimal list of forms implying each form known to be true in the model: 23, 60, 91, 113, 191, 295, 317.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 3, 15, 51, 106, 118, 144, 152, 163, 181, 253, 328.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35, 37, 38, 45, 46, 47, 48, 49, 52, 57, 60, 61, 62, 63, 64, 69, 70, 72, 73, 74, 79, 80, 82, 83, 84, 85, 88, 91, 92, 93, 94, 96, 98, 99, 102, 104, 107, 108, 111, 113, 119, 120, 121, 122, 123, 124, 126, 127, 128, 130, 131, 132, 137, 139, 140, 141, 142, 145, 146, 150, 151, 153, 154, 165, 167, 169, 170, 178, 182, 185, 189, 190, 191, 194, 197, 198, 199, 201, 203, 206, 207, 209, 211, 212, 213, 216, 217, 221, 222, 223, 225, 226, 227, 228, 229, 231, 233, 235, 241, 242, 249, 250, 251, 252, 268, 269, 270, 271, 272, 273, 276, 280, 282, 283, 285, 287, 288, 289, 293, 294, 295, 296, 298, 304, 305, 306, 307, 308, 309, 311, 313, 314, 315, 317, 323, 324, 325, 326, 327, 329, 330, 331, 332, 336, 338, 340, 341, 342, 343, 344, 349, 350, 351, 352, 353, 354,

355, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 370, 371, 373, 374, 376, 377, 378, 379, 380, 385, 386, 387, 389, 390, 401, 404, 406, 410, 411, 412, 418, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 15, 20, 28, 40, 43, 44, 51, 66, 67, 87, 89, 90, 95, 100, 101, 106, 109, 112, 114, 115, 118, 133, 144, 149, 152, 163, 168, 174, 179, 181, 188, 192, 193, 202, 214, 218, 239, 253, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 292, 328, 333, 334, 335, 345, 347, 359, 388, 391, 407, 427, 430, (430).

$\mathcal{N}39 \models$  16, 23, 24, 37, 91, 130, 191, 231, 273, 305, 309, 313, 361, 363, 368, and 369, but 15, 29, 67, 131, 152, and 328 are false. References Howard [1994], notes 2(8, 9), 18 and 120(33, 47, and 49).

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 91, 191, 231.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 29, 131, 152.

A list of all forms known to be true in the model: 0, 5, 6, 10, 13, 16, 18, 19, 23, 24, 25, 26, 27, 31, 32, 34, 35, 37, 38, 47, 48, 70, 74, 79, 80, 91, 92, 93, 94, 104, 108, 111, 119, 122, 130, 137, 139, 142, 145, 151, 165, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 207, 209, 211, 212, 216, 222, 223, 231, 249, 250, 251, 252, 272, 273, 280, 288, 289, 294, 305, 306, 307, 309, 313, 315, 324, 327, 330, 338, 350, 352, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 389, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 8, 15, 20, 21, 28, 29, 39, 40, 43, 44, 66, 67, 76, 86, 87, 95, 100, 101, 106, 109, 113, 126, 131, 149, 152, 168, 174, 181, 188, 192, 193, 202, 214, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 328, 333, 334, 335, 345, 346, 347, 359, 388, 407, 426, 427, 430, (430).

$\mathcal{N}40 \models$  8, 14, 23, 43, 60, 91, 113, 130, 165, 191, 295, 305, 317, 345, 368, and 369, but 3, 15, 40, 51, 118, 144, 152, 163, 181, 192, 193, 253, and 328 are false. References Blass [1979], Brunner [1982a], Howard [1973], Howard/Rubin [1995b],[1996], Krom [1986], Pincus [1997], notes 2(3), 18, 60, and 120(28, 34, 45, and 47).

(A minimal list of forms implying each form known to be true in the model: 23, 60, 91, 191, 295, 317, 345.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 3, 15, 51, 118, 144, 152, 163, 181, 192, 193, 253, 328.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35, 37, 38, 42, 43, 45, 46, 47, 48, 49, 52, 57, 60, 61, 62, 63, 64, 69, 70, 72, 73, 74, 77, 78, 79, 80, 82, 83, 84, 85, 88, 91, 92, 93, 94, 96, 98, 99, 102, 104, 106, 107, 108, 111, 113, 119, 120, 121, 122, 123, 124, 126, 127, 128, 130, 131, 132, 137, 139, 140, 141, 142, 145, 146, 150, 151, 153, 154, 155, 165, 167, 169, 170, 178, 182, 185, 189, 190, 191, 194, 197, 198, 199, 201, 203, 206, 207, 209, 211, 212, 213, 216, 217, 221, 222, 223, 225, 226, 227, 228, 229, 231, 233, 235, 241, 242, 243, 249, 250, 251, 252, 268, 269, 270, 271, 272, 273, 276, 279, 280, 282, 283, 285, 287, 288, 289, 293, 294, 295, 296, 298, 304, 305, 306, 307, 308, 309, 311, 313, 314, 315, 317, 323, 324, 325, 326, 327, 329, 330, 331, 332, 336, 338, 339, 340, 341, 342, 343, 344, 345, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 370, 371, 373, 374, 375, 376, 377, 378, 379, 380, 385, 386, 387, 388, 389, 390, 401, 404, 406, 410, 411, 412, 418, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 15, 20, 28, 40, 51, 66, 67, 89, 90, 95, 100, 101, 109, 112, 114, 115, 118, 133, 144, 149, 152, 163, 168, 179, 181, 192, 193, 202, 214, 218, 239, 253, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 292, 328, 333, 334, 335, 347, 359, 391, 427, 430, (430).

$\mathcal{N}41 \models$  6, 9, 37, 63, 91, 122, 130, 144, 191, 273, 305, 309, 313, 361, 363, 368, and 369, but 88, 163, 294, 344, 350, and 357 are false. References De la Cruz, Hall, Howard, Keremedis, Rubin [2002a] notes 18, 112, 120(56), 123, and 155.

(A minimal list of forms implying each form known to be true in the model: 9, 63, 91, 122, 144, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 88, 163, 294, 350, 357.

A list of all forms known to be true in the model: 0, 5, 6, 9, 10, 11, 12, 13, 17, 18, 19, 34, 35, 37, 38, 47, 48, 57, 63, 64, 70, 73, 74, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 111, 122, 124, 125, 127, 128, 130, 132, 137, 139, 142, 144, 145, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 211, 212, 216, 217, 221, 222, 223, 249, 250, 251, 252, 272, 273, 280, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 327, 336, 342, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 387, 389, 390, 404, 413, 414, 415, 416, 423, (430).

A list of all forms known to be false in the model: 1, 8, 14, 15, 16, 20, 21, 23, 27, 28, 29, 30, 31, 32, 36, 39, 40, 43, 44, 49, 50, 51, 60, 61, 62, 66, 67, 68, 85, 86, 87, 88, 89, 90, 95, 100, 101, 106, 107, 109, 112, 113, 114, 123, 126, 133, 149, 150, 163, 165, 168, 174, 181, 188, 192, 193, 201, 202, 213, 218, 231, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 292, 294, 295, 302, 303, 317, 322, 323, 324, 326, 328, 329, 330, 331, 332, 333, 334, 335, 338, 343, 344, 345, 346, 347, 349, 350, 351, 352, 353, 354, 355, 356, 357, 359, 384, 388, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 402, 403, 407, 408, 409, 421, 426, 427, 430, (430).

$\mathcal{N}42(p) \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15, 192, and  $220(p)$ , for  $p \geq 5$ , are false. References Hickman [1977b], note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 192, 220.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 192, 220, (430).

$\mathcal{N}43 \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 64, 67, 80, and 344 are false. References Brunner [1986], notes 18, 120(56), and 122.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 64, 80.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 20, 21, 23, 27, 28, 29, 30, 31, 32, 36, 39, 40, 41, 43, 44, 45, 49, 50, 57, 60, 61, 62, 64, 66, 67, 68, 71, 80, 82, 83, 85, 86, 87, 88, 95, 100, 101, 106, 107, 109, 110, 111, 113, 121, 122, 123, 126, 129, 132, 133, 149, 150, 151, 152, 153, 154, 161, 165, 168, 174, 181, 188, 192, 193, 201, 202, 213, 214, 215, 218, 231, 239, 250, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 296, 302, 303, 317, 322, 323, 324, 325, 326, 327, 328, 331, 332, 333, 334, 335, 336, 338, 340, 341, 343, 344, 345, 346, 347, 352, 354, 355, 358, 359, 376, 377, 378, 380, 384, 385, 386, 387, 388, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 406, 407, 408, 409, 410, 411, 412, 421, 422, 426, 427, 430, (430).

$\mathcal{N}44 \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15, 192, and 236 are false. References Gross [1975], [1976], and note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 192, 236.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 109, 192, 236, (430).

$\mathcal{N}45(p) \models 6, 37, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15, 192, and  $220(p)$  are false. References Howard/Rubin [1995a], and note 18.

(A minimal list of forms implying each form known to be true in the model: 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 192, 220.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 192, 220, (430).

$\mathcal{N}46 \models 6, 37, 84, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15 and 185 are false. References Höft/Howard [1994], note 18.

(A minimal list of forms implying each form known to be true in the model: 84, 91, 191.



A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 185.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 84, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 15, 20, 28, 39, 40, 41, 43, 44, 51, 66, 67, 71, 77, 86, 87, 89, 90, 95, 100, 101, 106, 109, 112, 113, 114, 126, 129, 133, 149, 152, 161, 168, 174, 181, 185, 188, 192, 193, 202, 214, 218, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 292, 316, 328, 333, 334, 335, 345, 346, 347, 359, 388, 391, 407, 426, 427, 430, (430).

$\mathcal{N}47 \models 6, 37, 77, 91, 130, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 15, 192, and 316 are false. References Höft/Howard [1994] and note 18.

(A minimal list of forms implying each form known to be true in the model: 77, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 192, 316.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 77, 79, 84, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 28, 51, 66, 67, 89, 90, 95, 109, 112, 114, 133, 149, 192, 218, 239, 256, 259, 261, 292, 316, 333, 334, 335, 391, 427, 430, (430).

$\mathcal{N}48 \models 6, 14, 16, 23, 24, 37, 60, 91, 130, 165, 191, 273, 295, 305, 317, 361, 363, 368,$  and 369, but 51, 106, 118, 126, 131, 144, 253, 296, and 328 are false. References Pincus [1997], Brunner [1983c], Howard [1973], Krom [1986], notes 2(3, 8, 9), 18, 95, and 120(28, 32, 34, 45, and 49).

(A minimal list of forms implying each form known to be true in the model: 16, 23, 24, 60, 91, 191, 295, 317.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 51, 118, 131, 144, 253, 296.

A list of all forms known to be true in the model: 0, 5, 6, 10, 11, 12, 13, 14, 16, 18, 19, 23, 24, 25, 26, 27, 30, 31, 32, 33, 34, 35, 37, 38, 45, 46, 47, 48, 49, 52, 60, 61, 62, 63, 64, 69, 70, 72, 73, 74, 79, 80, 83, 85, 88, 91, 92, 93, 94, 96, 99, 102, 104, 107, 108, 111, 119, 120, 121, 122, 123, 127, 130, 132, 137, 139, 140, 141, 142, 145, 146, 150, 151, 153, 154, 165, 169, 170, 178, 182, 189, 190, 191, 194, 197, 198, 199, 201, 203, 206, 207, 209, 211, 212, 213, 216, 221, 222, 223, 225, 226, 227, 228, 229, 231, 233, 235, 241, 242, 249, 250, 251, 252, 268, 269, 270, 271, 272, 273, 276, 280, 283, 285, 287, 288, 289, 293, 294, 295, 298, 305, 306, 307, 308, 309, 311, 313, 314, 315, 317, 323, 324, 326, 327, 329, 330, 331, 332, 336, 338, 342, 343, 344, 349, 350, 352, 356, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 370, 371, 373, 374, 377, 378, 380, 385, 386, 387, 389, 390, 401, 406, 410, 411, 412, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 15, 20, 28, 39, 40, 41, 43, 44, 51, 66, 67, 71, 76, 86, 87, 89, 90, 95, 100, 101, 106, 109, 112, 113, 114, 115, 118, 126, 129, 131, 133, 144, 149, 152, 161, 168, 174, 179, 181, 188, 192, 193, 202, 214, 218, 239, 253, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 292, 296, 328, 333, 334, 335, 345, 346, 347, 359, 388, 391, 407, 426, 427, 430, (430).

$\mathcal{N}49 \models 6, 9, 37, 63, 91, 130, 191, 305, 309, 313, 361,$  and 363, but 47(n), 106, 163, 167, 344, 379 and 380 are false. References De la Cruz/Di Prisco [1998a], notes 18 and 120(20, 23, 55 and 56).

(A minimal list of forms implying each form known to be true in the model: 9, 63, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 47, 106, 163, 167, 380.

A list of all forms known to be true in the model: 0, 5, 6, 9, 10, 11, 12, 13, 17, 18, 19, 34, 35, 37, 38, 57, 63, 64, 70, 73, 74, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 124, 127, 128, 130, 132, 137, 139, 142, 145, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 211, 212, 216, 217, 221, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 342, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 387, 389, 390, 404, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 14, 15, 20, 21, 23, 28, 30, 33, 36, 39, 40, 41, 43, 44, 45, 47, 49, 50, 60, 61, 62, 66, 67, 68, 71, 85, 86, 87, 95, 100, 101, 106, 107, 109, 113, 121,

122, 123, 129, 133, 149, 151, 152, 161, 163, 165, 167, 168, 174, 181, 188, 192, 193, 202, 213, 214, 218, 231, 239, 250, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 302, 303, 317, 322, 323, 324, 327, 331, 332, 333, 334, 335, 343, 344, 345, 347, 359, 376, 379, 380, 384, 388, 391, 392, 393, 394, 398, 399, 400, 401, 402, 403, 407, 408, 409, 422, 426, 427, 430, (430).)

$\mathcal{N}50(E) \models 6, 37, 67, 130, 191, 273, 305, 313, 322, 361,$  and 363 but 10, 154, 164, 342( $n$ ) (for  $n$  as described above) and 344 are false. References Brunner [1990], notes 18 and 120(2, 10, and 56).

(A minimal list of forms implying each form known to be true in the model: 67, 191, 322.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 10, 164, 342.

A list of all forms known to be true in the model: 0, 5, 6, 13, 18, 19, 25, 34, 35, 37, 38, 47, 48, 51, 52, 58, 64, 67, 70, 74, 76, 77, 78, 79, 80, 82, 83, 84, 89, 90, 91, 92, 93, 94, 104, 106, 108, 111, 112, 114, 115, 116, 118, 119, 125, 126, 127, 130, 131, 137, 139, 142, 144, 145, 147, 155, 169, 170, 173, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 208, 211, 212, 221, 222, 223, 232, 250, 251, 252, 254, 272, 273, 280, 287, 288, 289, 292, 294, 305, 306, 307, 309, 313, 315, 316, 322, 324, 327, 328, 329, 330, 337, 349, 350, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 381, 382, 387, 389, 390, 395, 396, 397, 413, 414, 415, 416, 418, 419, 420, 423, 425, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 10, 11, 12, 14, 15, 16, 17, 20, 21, 23, 27, 29, 30, 31, 32, 36, 39, 40, 41, 43, 44, 45, 49, 50, 60, 61, 62, 68, 71, 73, 85, 86, 87, 100, 101, 107, 109, 113, 121, 122, 123, 129, 132, 133, 150, 151, 152, 153, 154, 161, 164, 165, 168, 174, 181, 192, 202, 213, 214, 218, 231, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 295, 302, 303, 317, 323, 325, 331, 332, 338, 340, 341, 342, 343, 344, 345, 347, 352, 354, 359, 376, 377, 378, 379, 380, 384, 385, 386, 391, 392, 393, 394, 399, 406, 407, 408, 409, 410, 411, 412, 421, 426, (430).)

$\mathcal{N}51 \models 6, 37, 64, 90, 130, 191, 273, 305, 309, 313, 361,$  and 363, but 9, 30, 49, 192, 221, and 344 are false. References Węglorz [1969], notes 18, 120(3, 6, 16, 20, and 56) and 128.

(A minimal list of forms implying each form known to be true in the model: 64, 90, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 9, 30, 221, 344.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 25, 34, 35, 37, 38, 51, 58, 64, 70, 74, 77, 79, 84, 90, 91, 92, 93, 94, 104, 108, 118, 119, 127, 130, 137, 139, 142, 145, 169, 170, 182, 185, 189, 190, 191, 194, 197, 199, 203, 206, 208, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 294, 305, 306, 307, 309, 313, 315, 316, 337, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, 390, (430).

A list of all forms known to be false in the model: 1, 2, 3, 4, 7, 8, 9, 14, 15, 20, 28, 30, 39, 40, 41, 43, 44, 49, 50, 52, 63, 66, 67, 71, 86, 87, 95, 100, 101, 109, 113, 123, 129, 133, 149, 152, 161, 168, 174, 181, 192, 202, 214, 218, 221, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 295, 303, 317, 333, 334, 335, 344, 345, 347, 359, 384, 407, 426, 427, 430, (430).)

$\mathcal{N}52 \models 6, 37, 49, 91, 130, 191, 305, 309, 313, 361,$  and 363, but 14, 15, 51, 99, 118, 192, and 253 are false. References Felgner/Truss [1999], notes 18, 120(3, 16, 29, and 45).

(A minimal list of forms implying each form known to be true in the model: 49, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 51, 99, 118, 192, 253.

A list of all forms known to be true in the model: 0, 5, 6, 10, 11, 12, 13, 18, 19, 30, 33, 34, 35, 37, 38, 45, 46, 47, 48, 49, 61, 62, 64, 70, 73, 74, 79, 80, 83, 88, 91, 92, 93, 94, 102, 104, 108, 111, 120, 121, 122, 127, 130, 132, 137, 139, 140, 142, 145, 146, 169, 170, 178, 182, 189, 190, 191, 194, 197, 198, 199, 201, 203, 206, 211, 212, 216, 222, 223, 249, 250, 251, 252, 268, 269, 272, 273, 276, 280, 283, 285, 288, 289, 293, 305, 306, 307, 308, 309, 313, 326, 327, 336, 342, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 377, 378, 387, 389, 390, 401, 423, (430).

A list of all forms known to be false in the model: 1, 14, 15, 28, 50, 51, 66, 67, 89, 90, 95, 99, 109, 112, 114, 115, 118, 133, 149, 192, 218, 239, 253, 256, 259, 261, 292, 303, 317, 333, 334, 335, 345, 384, 391, 407, 427, 430, (430).)

$\mathcal{N}53 \models 6, 9, 37, 63, 91, 130, 273, 305, 309, 313, 361,$  and 363, but 88, 133, 192, 232, 337, 344, and 382 are false. References Good/Tree/Watson [1996], Howard/Keremedis/Rubin/Rubin [1998b], Howard/Keremedis/

Rubin/Stanley/Tachtsis  
[1999], notes 18 and 120(4, 20, and 56).

(A minimal list of forms implying each form known to be true in the model: 9, 63, 91.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 88, 192, 232, 337, 382.

A list of all forms known to be true in the model: 0, 5, 6, 9, 10, 11, 12, 13, 17, 18, 19, 34, 35, 37, 38, 57, 63, 64, 70, 73, 74, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 124, 127, 128, 130, 132, 137, 139, 142, 145, 167, 169, 170, 182, 185, 194, 197, 198, 199, 203, 206, 211, 212, 216, 217, 221, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 342, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 387, 389, 390, 404, 423, (430).

A list of all forms known to be false in the model: 1, 14, 15, 20, 28, 30, 36, 40, 49, 50, 51, 60, 61, 62, 66, 67, 68, 85, 88, 89, 90, 95, 100, 101, 107, 109, 112, 114, 123, 133, 149, 168, 192, 201, 202, 213, 218, 232, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 270, 284, 286, 292, 295, 302, 303, 317, 323, 326, 331, 332, 333, 334, 335, 337, 343, 344, 345, 347, 359, 381, 382, 384, 391, 392, 394, 399, 407, 408, 409, 427, 430, (430).

$\mathcal{N}54 \models 6, 37, 91, 130, 273, 305, 309, 313, 361,$  and 363, but 15, 173, and 192 are false. References Good/Tree/Watson [1996], Howard/Keremedis/Rubin/Stanley [1999], and note 18.

(A minimal list of forms implying each form known to be true in the model: 91.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 173, 192.

A list of all forms known to be true in the model: 0, 5, 6, 13, 19, 34, 35, 37, 38, 70, 74, 79, 91, 92, 93, 94, 104, 108, 130, 137, 139, 142, 145, 169, 170, 182, 194, 197, 199, 203, 206, 211, 212, 222, 223, 251, 252, 272, 273, 280, 289, 305, 306, 307, 309, 313, 361, 362, 363, 364, 366, 367, 368, 369, 371, 389, (430).

A list of all forms known to be false in the model: 1, 15, 28, 66, 67, 76, 95, 109, 149, 173, 192, 214, 218, 232, 239, 333, 334, 335, 426, 427, 430, (430).

$\mathcal{N}55 \models 6, 9, 37, 91, 92, 130, 182, 189, 190, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369 are true but, 15, 116, 131, 154, 165, 343, and 421 are false. References Keremedis/Tachtsis [1999a], [2000] and note 18.

(A minimal list of forms implying each form known to be true in the model: 9, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 15, 116, 131, 154, 165, 421.

A list of all forms known to be true in the model: 0, 5, 6, 9, 10, 11, 12, 13, 17, 18, 19, 34, 35, 37, 38, 57, 64, 70, 73, 74, 79, 80, 82, 83, 84, 91, 92, 93, 94, 98, 104, 108, 124, 127, 128, 130, 132, 137, 139, 142, 145, 167, 169, 170, 182, 185, 189, 190, 191, 194, 197, 198, 199, 203, 206, 211, 212, 216, 217, 222, 223, 249, 251, 252, 272, 273, 280, 288, 289, 296, 304, 305, 306, 307, 309, 313, 325, 336, 342, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 376, 377, 378, 387, 389, 390, 404, 423, (430).

A list of all forms known to be false in the model: 1, 8, 14, 15, 20, 28, 36, 39, 40, 43, 44, 50, 60, 66, 67, 76, 86, 87, 95, 100, 101, 106, 109, 113, 116, 123, 126, 131, 133, 149, 154, 165, 168, 174, 181, 188, 192, 193, 202, 214, 218, 231, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 302, 303, 317, 328, 331, 332, 333, 334, 335, 343, 345, 346, 347, 359, 384, 388, 391, 392, 393, 394, 407, 421, 426, 427, 430, (430).

$\mathcal{N}56 \models 6, 37, 40, 91, 92, 130, 182, 189, 190, 191, 273, 305, 309, 313, 361, 363, 368,$  and 369, but 3, 15, 62, 67, 152, and 192 are false. References Howard [1990], Howard/Rubin/Rubin [1973], and notes 18, 120(46).

(A minimal list of forms implying each form known to be true in the model: 40, 91, 191.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 3, 62, 67, 152, 192.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 37, 38, 39, 40, 42, 43, 47, 48, 57, 58, 64, 70, 73, 74, 77, 78, 79, 80, 82, 83, 84, 86, 91, 92, 93, 94, 98, 104, 106, 108, 111, 113, 119, 122, 124, 126, 127, 128, 130, 131, 132, 137, 139, 142, 145, 150, 151, 154, 155, 165, 167, 169, 170, 182, 185, 189, 190, 191, 194, 196, 197, 198, 199, 203, 206, 208, 209, 211, 212, 216, 217, 222, 223, 231, 243, 249, 250, 251, 252, 272, 273, 279, 280, 282, 288, 289, 294, 296, 304, 305, 306, 307, 309, 313, 322, 324, 325, 327, 328, 330, 336, 337, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 363, 364, 366, 367, 368, 369, 371, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 418, 419, 420, 421, 423, (430).

A list of all forms known to be false in the model: 1, 2, 3, 14, 15, 28, 30, 36, 49, 50, 60, 62, 66, 67, 68, 85, 95, 107, 109, 123, 149, 152, 192, 213, 214, 218, 239, 270, 295, 303, 317, 323, 331, 332, 333, 334, 335, 343,

344, 345, 384, 391, 399, 407, 408, 409, 427, 430, (430).)

$\mathcal{N}57 \models 8, 43, 340, 341$ , but 173, 232, 381, and 382 are false. References De la Cruz/Hall/howard/Keremedis/Rubin [2002a].

(A minimal list of forms implying each form known to be true in the model: 43.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 173, 382.

A list of all forms known to be true in the model: 0, 5, 6, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 24, 26, 27, 29, 31, 32, 34, 35, 38, 42, 43, 57, 64, 73, 74, 77, 78, 80, 82, 83, 84, 94, 98, 104, 106, 108, 113, 119, 124, 126, 127, 128, 131, 132, 150, 154, 155, 167, 182, 185, 194, 198, 199, 209, 211, 216, 217, 243, 249, 279, 282, 288, 296, 304, 325, 336, 338, 339, 340, 341, 342, 350, 351, 352, 353, 354, 355, 357, 358, 361, 362, 373, 374, 375, 376, 377, 378, 379, 380, 387, 388, 389, 390, 404, 411, 412, 418, 419, 420, 423, (430).

A list of all forms known to be false in the model: 1, 28, 66, 67, 76, 95, 109, 149, 173, 214, 218, 232, 239, 333, 334, 335, 381, 382, 426, 427, 430, (430).)

$\mathcal{N}58 \models 9$ , but 126, 131, 154, 165, 341, and 343 are false. References Keremedis/Tachtsis [2000] and Keremedis/Tachtsis [2001]

(A minimal list of forms implying each form known to be true in the model: 9.

A minimal list of forms at least one of which is implied by each form known to be false in the model: 131, 154, 165, 341.

A list of all forms known to be true in the model: 0, 9, 10, 11, 12, 13, 17, 18, 57, 64, 73, 80, 82, 83, 84, 98, 124, 127, 128, 132, 167, 185, 198, 199, 216, 217, 249, 288, 296, 304, 325, 336, 342, 358, 373, 374, 376, 377, 378, 387, 389, 390, 404, 423, (430).

A list of all forms known to be false in the model: 1, 8, 14, 20, 28, 36, 39, 40, 43, 44, 50, 60, 66, 67, 76, 86, 87, 95, 100, 101, 106, 109, 113, 123, 126, 131, 133, 149, 154, 165, 168, 174, 181, 188, 192, 193, 202, 214, 218, 231, 239, 255, 256, 257, 258, 259, 260, 261, 262, 264, 286, 302, 303, 317, 328, 331, 332, 333, 334, 335, 340, 341, 343, 345, 346, 347, 359, 384, 388, 391, 392, 393, 394, 407, 426, 427, 430, (430).)