

$$t_1 = 4$$

$$t_{1+(n-1)d} = 208$$

$$t_4 = 41 \Rightarrow t_{1+3d} = 41$$

$$4 + 3d = 41$$

$$3d = 37$$

$$d = 12.33$$

$$V_{(n-1)} = 178$$

$$(n-1) \cdot 22$$

$$n = 28$$

1

$$1, 1.4, 1.8, 2.2, 2.6, 3, 3.4, 3.8, 4.2, 4.6, 5, 5.4, 5.8, 6.2, 6.6, 7, 7.4, 7.8, 8.2, 8.6, 9, 9.4, 9.8, 10.2, 10.6, 11, 11.4, 11.8, 12.2, 12.6, 13, 13.4, 13.8, 14.2, 14.6, 15, 15.4, 15.8, 16.2, 16.6, 17, 17.4, 17.8, 18.2, 18.6, 19, 19.4, 19.8, 20.2, 20.6, 21, 21.4, 21.8, 22.2, 22.6, 23, 23.4, 23.8, 24.2, 24.6, 25, 25.4, 25.8, 26.2, 26.6, 27, 27.4, 27.8, 28.2, 28.6, 29, 29.4, 29.8, 30.2, 30.6, 31, 31.4, 31.8, 32.2, 32.6, 33, 33.4, 33.8, 34.2, 34.6, 35, 35.4, 35.8, 36.2, 36.6, 37, 37.4, 37.8, 38.2, 38.6, 39, 39.4, 39.8, 40.2, 40.6, 41, 41.4, 41.8, 42.2, 42.6, 43, 43.4, 43.8, 44.2, 44.6, 45, 45.4, 45.8, 46.2, 46.6, 47, 47.4, 47.8, 48.2, 48.6, 49, 49.4, 49.8, 50.2, 50.6, 51, 51.4, 51.8, 52.2, 52.6, 53, 53.4, 53.8, 54.2, 54.6, 55, 55.4, 55.8, 56.2, 56.6, 57, 57.4, 57.8, 58.2, 58.6, 59, 59.4, 59.8, 60.2, 60.6, 61, 61.4, 61.8, 62.2, 62.6, 63, 63.4, 63.8, 64.2, 64.6, 65, 65.4, 65.8, 66.2, 66.6, 67, 67.4, 67.8, 68.2, 68.6, 69, 69.4, 69.8, 70.2, 70.6, 71, 71.4, 71.8, 72.2, 72.6, 73, 73.4, 73.8, 74.2, 74.6, 75, 75.4, 75.8, 76.2, 76.6, 77, 77.4, 77.8, 78.2, 78.6, 79, 79.4, 79.8, 80.2, 80.6, 81, 81.4, 81.8, 82.2, 82.6, 83, 83.4, 83.8, 84.2, 84.6, 85, 85.4, 85.8, 86.2, 86.6, 87, 87.4, 87.8, 88.2, 88.6, 89, 89.4, 89.8, 90.2, 90.6, 91, 91.4, 91.8, 92.2, 92.6, 93, 93.4, 93.8, 94.2, 94.6, 95, 95.4, 95.8, 96.2, 96.6, 97, 97.4, 97.8, 98.2, 98.6, 99, 99.4, 99.8, 100.2, 100.6, 101, 101.4, 101.8, 102.2, 102.6, 103, 103.4, 103.8, 104.2, 104.6, 105, 105.4, 105.8, 106.2, 106.6, 107, 107.4, 107.8, 108.2, 108.6, 109, 109.4, 109.8, 110.2, 110.6, 111, 111.4, 111.8, 112.2, 112.6, 113, 113.4, 113.8, 114.2, 114.6, 115, 115.4, 115.8, 116.2, 116.6, 117, 117.4, 117.8, 118.2, 118.6, 119, 119.4, 119.8, 120.2, 120.6, 121, 121.4, 121.8, 122.2, 122.6, 123, 123.4, 123.8, 124.2, 124.6, 125, 125.4, 125.8, 126.2, 126.6, 127, 127.4, 127.8, 128.2, 128.6, 129, 129.4, 129.8, 130.2, 130.6, 131, 131.4, 131.8, 132.2, 132.6, 133, 133.4, 133.8, 134.2, 134.6, 135, 135.4, 135.8, 136.2, 136.6, 137, 137.4, 137.8, 138.2, 138.6, 139, 139.4, 139.8, 140.2, 140.6, 141, 141.4, 141.8, 142.2, 142.6, 143, 143.4, 143.8, 144.2, 144.6, 145, 145.4, 145.8, 146.2, 146.6, 147, 147.4, 147.8, 148.2, 148.6, 149, 149.4, 149.8, 150.2, 150.6, 151, 151.4, 151.8, 152.2, 152.6, 153, 153.4, 153.8, 154.2, 154.6, 155, 155.4, 155.8, 156.2, 156.6, 157, 157.4, 157.8, 158.2, 158.6, 159, 159.4, 159.8, 160.2, 160.6, 161, 161.4, 161.8, 162.2, 162.6, 163, 163.4, 163.8, 164.2, 164.6, 165, 165.4, 165.8, 166.2, 166.6, 167, 167.4, 167.8, 168.2, 168.6, 169, 169.4, 169.8, 170.2, 170.6, 171, 171.4, 171.8, 172.2, 172.6, 173, 173.4, 173.8, 174.2, 174.6, 175, 175.4, 175.8, 176.2, 176.6, 177, 177.4, 177.8, 178.2, 178.6, 179, 179.4, 179.8, 180.2, 180.6, 181, 181.4, 181.8, 182.2, 182.6, 183, 183.4, 183.8, 184.2, 184.6, 185, 185.4, 185.8, 186.2, 186.6, 187, 187.4, 187.8, 188.2, 188.6, 189, 189.4, 189.8, 190.2, 190.6, 191, 191.4, 191.8, 192.2, 192.6, 193, 193.4, 193.8, 194.2, 194.6, 195, 195.4, 195.8, 196.2, 196.6, 197, 197.4, 197.8, 198.2, 198.6, 199, 199.4, 199.8, 200.2, 200.6, 201, 201.4, 201.8, 202.2, 202.6, 203, 203.4, 203.8, 204.2, 204.6, 205, 205.4, 205.8, 206.2, 206.6, 207, 207.4, 207.8, 208.2, 208.6, 209, 209.4, 209.8, 210.2, 210.6, 211, 211.4, 211.8, 212.2, 212.6, 213, 213.4, 213.8, 214.2, 214.6, 215, 215.4, 215.8, 216.2, 216.6, 217, 217.4, 217.8, 218.2, 218.6, 219, 219.4, 219.8, 220.2, 220.6, 221, 221.4, 221.8, 222.2, 222.6, 223, 223.4, 223.8, 224.2, 224.6, 225, 225.4, 225.8, 226.2, 226.6, 227, 227.4, 227.8, 228.2, 228.6, 229, 229.4, 229.8, 230.2, 230.6, 231, 231.4, 231.8, 232.2, 232.6, 233, 233.4, 233.8, 234.2, 234.6, 235, 235.4, 235.8, 236.2, 236.6, 237, 237.4, 237.8, 238.2, 238.6, 239, 239.4, 239.8, 240.2, 240.6, 241, 241.4, 241.8, 242.2, 242.6, 243, 243.4, 243.8, 244.2, 244.6, 245, 245.4, 245.8, 246.2, 246.6, 247, 247.4, 247.8, 248.2, 248.6, 249, 249.4, 249.8, 250.2, 250.6, 251, 251.4, 251.8, 252.2, 252.6, 253, 253.4, 253.8, 254.2, 254.6, 255, 255.4, 255.8, 256.2, 256.6, 257, 257.4, 257.8, 258.2, 258.6, 259, 259.4, 259.8, 260.2, 260.6, 261, 261.4, 261.8, 262.2, 262.6, 263, 263.4, 263.8, 264.2, 264.6, 265, 265.4, 265.8, 266.2, 266.6, 267, 267.4, 267.8, 268.2, 268.6, 269, 269.4, 269.8, 270.2, 270.6, 271, 271.4, 271.8, 272.2, 272.6, 273, 273.4, 273.8, 274.2, 274.6, 275, 275.4, 275.8, 276.2, 276.6, 277, 277.4, 277.8, 278.2, 278.6, 279, 279.4, 279.8, 280.2, 280.6, 281, 281.4, 281.8, 282.2, 282.6, 283, 283.4, 283.8, 284.2, 284.6, 285, 285.4, 285.8, 286.2, 286.6, 287, 287.4, 287.8, 288.2, 288.6, 289, 289.4, 289.8, 290.2, 290.6, 291, 291.4, 291.8, 292.2, 292.6, 293, 293.4, 293.8, 294.2, 294.6, 295, 295.4, 295.8, 296.2, 296.6, 297, 297.4, 297.8, 298.2, 298.6, 299, 299.4, 299.8, 300.2, 300.6, 301, 301.4, 301.8, 302.2, 302.6, 303, 303.4, 303.8, 304.2, 304.6, 305, 305.4, 305.8, 306.2, 306.6, 307, 307.4, 307.8, 308.2, 308.6, 309, 309.4, 309.8, 310.2, 310.6, 311, 311.4, 311.8, 312.2, 312.6, 313, 313.4, 313.8, 314.2, 314.6, 315, 315.4, 315.8, 316.2, 316.6, 317, 317.4, 317.8, 318.2, 318.6, 319, 319.4, 319.8, 320.2, 320.6, 321, 321.4, 321.8, 322.2, 322.6, 323, 323.4, 323.8, 324.2, 324.6, 325, 325.4, 325.8, 326.2, 326.6, 327, 327.4, 327.8, 328.2, 328.6, 329, 329.4, 329.8, 330.2, 330.6, 331, 331.4, 331.8, 332.2, 332.6, 333, 333.4, 333.8, 334.2, 334.6, 335, 335.4, 335.8, 336.2, 336.6, 337, 337.4, 337.8, 338.2, 338.6, 339, 339.4, 339.8, 340.2, 340.6, 341, 341.4, 341.8, 342.2, 342.6, 343, 343.4, 343.8, 344.2, 344.6, 345, 345.4, 345.8, 346.2, 346.6, 347, 347.4, 347.8, 348.2, 348.6, 349, 349.4, 349.8, 350.2, 350.6, 351, 351.4, 351.8, 352.2, 352.6, 353, 353.4, 353.8, 354.2, 354.6, 355, 355.4, 355.8, 356.2, 356.6, 357, 357.4, 357.8, 358.2, 358.6, 359, 359.4, 359.8, 360.2, 360.6, 361, 361.4, 361.8, 362.2, 362.6, 363, 363.4, 363.8, 364.2, 364.6, 365, 365.4, 365.8, 366.2, 366.6, 367, 367.4, 367.8, 368.2, 368.6, 369, 369.4, 369.8, 370.2, 370.6, 371, 371.4, 371.8, 372.2, 372.6, 373, 373.4, 373.8, 374.2, 374.6, 375, 375.4, 375.8, 376.2, 376.6, 377, 377.4, 377.8, 378.2, 378.6, 379, 379.4, 379.8, 380.2, 380.6, 381, 381.4, 381.8, 382.2, 382.6, 383, 383.4, 383.8, 384.2, 384.6, 385, 385.4, 385.8, 386.2, 386.6, 387, 387.4, 387.8, 388.2, 388.6, 389, 389.4, 389.8, 390.2, 390.6, 391, 391.4, 391.8, 392.2, 392.6, 393, 393.4, 393.8, 394.2, 394.6, 395, 395.4, 395.8, 396.2, 396.6, 397, 397.4, 397.8, 398.2, 398.6, 399, 399.4, 399.8, 400.2, 400.6, 401, 401.4, 401.8, 402.2, 402.6, 403, 403.4, 403.8, 404.2, 404.6, 405, 405.4, 405.8, 406.2, 406.6, 407, 407.4, 407.8, 408.2, 408.6, 409, 409.4, 409.8, 410.2, 410.6, 411, 411.4, 411.8, 412.2, 412.6, 413, 413.4, 413.8, 414.2, 414.6, 415, 415.4, 415.8, 416.2, 416.6, 417, 417.4, 417.8, 418.2, 418.6, 419, 419.4, 419.8, 420.2, 420.6, 421, 421.4, 421.8, 422.2, 422.6, 423, 423.4, 423.8, 424.2, 424.6, 425, 425.4, 425.8, 426.2, 426.6, 427, 427.4, 427.8, 428.2, 428.6, 429, 429.4, 429.8, 430.2, 430.6, 431, 431.4, 431.8, 432.2, 432.6, 433, 433.4, 433.8, 434.2, 434.6, 435, 435.4, 435.8, 436.2, 436.6, 437, 437.4, 437.8, 438.2, 438.6, 439, 439.4, 439.8, 440.2, 440.6, 441, 441.4, 441.8, 442.2, 442.6, 443, 443.4, 443.8, 444.2, 444.6, 445, 445.4, 445.8, 446.2, 446.6, 447, 447.4, 447.8, 448.2, 448.6, 449, 449.4, 449.8, 450.2, 450.6, 451, 451.4, 451.8, 452.2, 452.6, 453, 453.4, 453.8, 454.2, 454.6, 455, 455.4, 455.8, 456.2, 456.6, 457, 457.4, 457.8, 458.2, 458.6, 459, 459.4, 459.8, 460.2, 460.6, 461, 461.4, 461.8, 462.2, 462.6, 463, 463.4, 463.8, 464.2, 464.6, 465, 465.4, 465.8, 466.2, 466.6, 467, 467.4, 467.8, 468.2, 468.6, 469, 469.4, 469.8, 470.2, 470.6, 471, 471.4, 471.8, 472.2, 472.6, 473, 473.4, 473.8, 474.2, 474.6, 475, 475.4, 475.8, 476.2, 476.6, 477, 477.4, 477.8, 478.2, 478.6, 479, 479.4, 479.8, 480.2, 480.6, 481, 481.4, 481.8, 482.2, 482.6, 483, 483.4, 483.8, 484.2, 484.6, 485, 485.4, 485.8, 486.2, 486.6, 487, 487.4, 487.8, 488.2, 488.6, 489, 489.4, 489.8, 490.2, 490.6, 491, 491.4, 491.8, 492.2, 492.6, 493, 493.4, 493.8, 494.2, 494.6, 495, 495.4, 495.8, 496.2, 496.6, 497, 497.4, 497.8, 498.2, 498.6, 499, 499.4, 499.8, 500.2, 500.6, 501, 501.4, 501.8, 502.2, 502.6, 503, 503.4, 503.8, 504.2, 504.6, 505, 505.4, 505.8, 506.2, 506.6, 507, 507.4, 507.8, 508.2, 508.6, 509, 509.4, 509.8, 510.2, 510.6, 511, 511.4, 511.8, 512.2, 512.6, 513, 513.4, 513.8, 514.2, 514.6, 515, 515.4, 515.8, 516.2, 516.6, 517, 517.4, 517.8, 518.2, 518.6, 519, 519.4, 519.8, 520.2, 520.6, 521, 521.4, 521.8, 522.2, 522.6, 523, 523.4, 523.8, 524.2, 524.6, 525, 525.4, 525.8, 526.2, 526.6, 527, 527.4, 527.8, 528.2, 528.6, 529, 529.4, 529.8, 530.2, 530.6, 531, 531.4, 531.8, 532.2, 532.6, 533, 533.4, 533.8, 534.2, 534.6, 535, 535.4, 535.8, 536.2, 536.6, 537, 537.4, 537.8, 538.2, 538.6, 539, 539.4, 539.8, 540.2, 540.6, 541, 541.4, 541.8, 542.2, 542.6, 543, 543.4, 543.8, 544.2, 544.6, 545, 545.4, 545.8, 546.2, 546.6, 547, 547.4, 547.8, 548.2, 548.6, 549, 549.4, 549.8, 550.2, 550.6, 551, 551.4, 551.8, 552.2, 552.6, 553, 553.4, 553.8, 554.2, 554.6, 555, 555.4, 555.8, 556.2, 556.6, 557, 557.4, 557.8, 558.2, 558.6, 559, 559.4, 559.8, 560.2, 560.6, 561, 561.4, 561.8, 562.2, 562.6, 563, 563.4, 563.8, 564.2, 564.6, 565, 565.4, 565.8, 566.2, 566.6, 567, 567.4, 567.8, 568.2, 568.6, 569, 569.4, 569.8, 570.2, 570.6, 571, 571.4, 571.8, 572.2, 572.6, 573, 573.4, 573.8, 574.2, 574.6, 575, 575.4, 575.8, 576.2, 576.6, 577, 577.4, 577.8, 578.2, 578.6, 579, 579.4, 579.8, 580.2, 580.6, 581, 581.4, 581.8, 582.2, 582.6, 583, 583.4, 583.8, 584.2, 584.6, 585, 585.4, 585.8, 586.2, 586.6, 587, 587.4, 587.8, 588.2, 588.6, 589, 589.4, 589.8, 590.2, 590.6, 591, 591.4, 591.8, 592.2, 592.6, 593, 593.4, 593.8, 594.2, 594.6, 595, 595.4, 595.8, 596.2, 596.6, 597, 597.4, 597.8, 598.2, 598.6, 599, 599.4, 599.8, 600.2, 600.6, 601, 601.4, 601.8, 602.2, 602.6, 603, 603.4, 603.8, 604.2, 604.6, 605, 605.4, 605.8, 606.2, 606.6, 607, 607.4, 607.8, 608.2, 608.6, 609, 609.4, 609.8, 610.2, 610.6, 611, 611.4, 611.8, 612.2, 612.6, 613, 613.4, 613.8, 614.2, 614.6, 615, 615.4, 615.8, 616.2, 616.6, 617, 617.4, 617.8, 618.2, 618.6, 619, 619.4, 619.8, 620.2, 620.6, 621, 621.4, 621.8, 622.2, 622.6, 623, 623.4, 623.8, 624.2, 624.6, 625, 625.4, 625.8, 626.2, 626.6, 627, 627.4, 627.8, 628.2, 628.6, 629, 629.4, 629.8, 630.2, 630.6, 631, 631.4, 631.8, 632.2, 632.6, 633, 633.4, 633.8, 634.2, 634.6, 635, 635.4, 635.8, 636.2, 636.6, 637, 637.4, 637.8, 638.2, 638.6, 639, 639.4, 639.8, 640.2, 640.6, 641, 641.4, 641.8, 642.2, 642.6, 643, 643.4, 643.8, 644.2, 644.6, 645, 645.4, 645.8, 646.2, 646.6, 647, 647.4, 647.8, 648.2, 648.6, 649, 649.4, 649.8, 650.2, 650.6, 651, 651.4, 651.8, 652.2, 652.6, 653, 653.4, 653.8, 654.2, 654.6, 655, 655.4, 655.8, 656.2, 656.6, 657, 657.4, 657.8, 658.2, 658.6, 659, 659.4, 659.8, 660.2, 660.6, 661, 661.4, 661.8, 662.2, 662.6, 663, 663.4, 663.8, 664.2, 664.6, 665, 665.4, 665.8, 666.2, 666.6, 667, 667.4, 667.8, 668.2, 668.6, 669, 669.4, 669.8, 670.2, 670.6, 671, 671.4, 671.8, 672.2, 672.6, 673, 673.4, 673.8, 674.2, 674.6, 675, 675.4, 675.8, 676.2, 676.6, 677, 677.4, 677.8, 678.2, 678.6, 679, 679.4, 679.8, 680.2, 680.6, 681, 681.4, 681.8, 682.2, 682.6, 683, 683.4, 683.8, 684.2, 684.6, 685, 685.4, 685.8, 686.2, 686.6, 687, 687.4, 687.8, 688.2, 688.6, 689, 689.4, 689.8, 690.2, 690.6, 691, 691.4, 691.8, 692.2, 692.6, 693, 693.4, 693.8, 694.2, 694.6, 695, 695.4, 695.8, 696.2, 696.6, 697, 697.4, 697.8, 698.2, 698.6, 699, 699.4, 699.8, 700.2, 700.6, 701, 701.4, 701.8, 702.2, 702.6, 703, 703.4, 703.8, 704.2, 704.6, 705, 705.4, 705.8, 706.2, 706.6, 707, 707.4, 707.8, 708.2, 708.6, 709, 709.4, 709.8, 710.2, 710.6, 711, 711.4, 711.8, 712.2, 712.6, 713, 713.4, 713.8, 714.2, 714.6, 715, 715.4, 715.8, 716.2, 716.6, 717, 717.4, 717.8, 718.2, 718.6, 719, 719.4, 719.8, 720.2, 720.6, 721, 721.4, 721.8, 722.2, 722.6, 723, 723.4, 723.8, 724.2, 724.6, 725, 725.4, 725.8, 726.2, 726.6, 727, 727.4, 727.8, 728.2, 728.6, 729, 729.4, 729.8, 730.2, 730.6, 731, 731.4, 731.8, 732.2, 732.6, 733, 733.4, 733.8, 734.2, 734.6, 735, 735.4, 735.8, 736.2, 736.6, 737, 737.4, 737.8, 738.2, 738.6, 739, 739.4, 739.8, 740.2, 740.6, 741, 741.4, 741.8, 742.2, 742.6, 743, 743.4, 743.8, 744.2, 744.6, 745, 745.4, 745.8, 746.2, 746.6$$

$$\frac{1}{r} (r a_1 + (1-r)d) - \frac{d}{r} (r a_1 + (1-r)d) = \frac{d}{r} (r a_1 + (1-r)d) \times r$$

$$r a_1 + \frac{r d}{r} - (d a_1 + \frac{1}{r} d)$$

$$r a_1 + r d = \frac{1}{r} a_1 + r d$$

$$r d = \frac{1}{r} a_1 \quad \frac{d}{r} = a_1$$

$$\frac{a_1 + d}{a_1} = \frac{\frac{d}{r} + d}{\frac{d}{r}} = \frac{r d}{\frac{d}{r}} = \boxed{\frac{r}{r} = 1}$$

$$\frac{(t r + 1 d)^r - (t r + 1 d)^r}{(t r + 1 d)^r}$$

$$\frac{(t + r)^r - (t + r)^r}{(t + r)^r} = \frac{t^r + r t^{r-1} + \dots - t^r - r t^{r-1} - \dots}{t^r + r \dots + r t}$$

$$t r = t r + 1 d$$

$$t r - t r = r d \quad r d = 1 d$$

$$\frac{r}{t r + r} = \boxed{\frac{r}{r}}$$

$$\frac{r t + 1 r}{t r + r \dots + r t} = \frac{r (t + 1)}{t r + r (t + r)}$$

$$r + \sqrt{r} - r + 1 \sqrt{r} = 1 \sqrt{r}$$

$$1 \sqrt{r} = 1 \sqrt{r}$$

$$d = \sqrt{r}$$

$$\frac{r r - r}{r n - 1} = \frac{1 d}{r n - 1} = d$$

$$a_n = 11 \Rightarrow r + (n-1) \quad \frac{1 d}{r n - 1} = 11 \Rightarrow r = \frac{1 d (n-1)}{r n - 1}$$

$$\Rightarrow \cancel{r} (r n - 1) = \frac{1}{r} d (n-1) \Rightarrow r n - r = \frac{d}{r} (n-1) \Rightarrow r n = \frac{d}{r} (n-1) + r$$

$$n = \frac{d (n-1) + r}{r} \quad r = r + \frac{1 d}{r} = 11 \quad \frac{d \times r}{r} = h = h = r$$

$$a_n + a_n + r = a_1 + r a_1 + a_1 + 1 r d$$

$$a_n + a_n + r d = r a_1 + 1 n d \Rightarrow r a_n + r d = r a_1 + 1 n d \Rightarrow a_n + r d = a_1 + n d$$

$$a_n = a_1 + n d \Rightarrow a_n = a_n \Rightarrow n = n$$

$$a_n = r \times \frac{1}{r} \Rightarrow a_1 + n d = r a_1 + n d \Rightarrow r a_1 = - n d \Rightarrow a_1 = -d$$

$$a_n = a_1 + (n-1) d = -d + n d - d = 0 \quad -r d + n d = 0 \Rightarrow n d = r d = \boxed{n = r}$$