

a. Use trazadores para graficar la figura dada.

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In [9]: import numpy as np
import scipy.interpolate as si
import matplotlib.pyplot as plt

xi1, yi1 = [4.15, 3.73, 3.23, 2.53, 2.09, 1.52, 0.98, 0.63, 0.51, 0.45, 0.58, 0.82, 1.23, 1.43, 1.51, 1.66, 2.11, 2.87, 3.42, 4.14, 4.4, 4.54, 4.57], [3.68, 4.25, 4.64, 5.03, 5.4, 5.78, 6.17, 6.56, 6.95, 7.34, 7.73, 8.12, 8.51, 8.9, 9.29, 9.68, 10.07, 10.46, 10.85, 11.24, 11.63, 12.02, 12.41, 12.8, 13.19, 13.58, 13.97, 14.36, 14.75, 15.14, 15.53, 15.92, 16.31, 16.7, 17.09, 17.48, 17.87, 18.26, 18.65, 19.04, 19.43, 19.82, 20.21, 20.6, 21.0, 21.39, 21.78, 22.17, 22.56, 22.95, 23.34, 23.73, 24.12, 24.51, 24.9, 25.29, 25.68, 26.07, 26.46, 26.85, 27.24, 27.63, 28.02, 28.41, 28.8, 29.19, 29.58, 29.97, 30.36, 30.75, 31.14, 31.53, 31.92, 32.31, 32.7, 33.09, 33.48, 33.87, 34.26, 34.65, 35.04, 35.43, 35.82, 36.21, 36.6, 36.99, 37.38, 37.77, 38.16, 38.55, 38.94, 39.33, 39.72, 40.11, 40.5, 40.89, 41.28, 41.67, 42.06, 42.45, 42.84, 43.23, 43.62, 44.01, 44.4, 44.79, 45.18, 45.57, 45.96, 46.35, 46.74, 47.13, 47.52, 47.91, 48.3, 48.69, 49.08, 49.47, 49.86, 50.25, 50.64, 51.03, 51.42, 51.81, 52.2, 52.59, 52.98, 53.37, 53.76, 54.15, 54.54, 54.93, 55.32, 55.71, 56.1, 56.49, 56.88, 57.27, 57.66, 58.05, 58.44, 58.83, 59.22, 59.61, 59.99, 60.38, 60.77, 61.16, 61.55, 61.94, 62.33, 62.72, 63.11, 63.5, 63.89, 64.28, 64.67, 65.06, 65.45, 65.84, 66.23, 66.62, 67.01, 67.4, 67.79, 68.18, 68.57, 68.96, 69.35, 69.74, 70.13, 70.52, 70.91, 71.3, 71.69, 72.08, 72.47, 72.86, 73.25, 73.64, 74.03, 74.42, 74.81, 75.2, 75.59, 75.98, 76.37, 76.76, 77.15, 77.54, 77.93, 78.32, 78.71, 79.1, 79.49, 79.88, 80.27, 80.66, 81.05, 81.44, 81.83, 82.22, 82.61, 83.0, 83.39, 83.78, 84.17, 84.56, 84.95, 85.34, 85.73, 86.12, 86.51, 86.9, 87.29, 87.68, 88.07, 88.46, 88.85, 89.24, 89.63, 90.02, 90.41, 90.8, 91.19, 91.58, 91.97, 92.36, 92.75, 93.14, 93.53, 93.92, 94.31, 94.7, 95.09, 95.48, 95.87, 96.26, 96.65, 97.04, 97.43, 97.82, 98.21, 98.6, 98.99, 99.38, 99.77, 100.16, 100.55, 100.94, 101.33, 101.72, 102.11, 102.5, 102.89, 103.28, 103.67, 104.06, 104.45, 104.84, 105.23, 105.62, 106.01, 106.4, 106.79, 107.18, 107.57, 107.96, 108.35, 108.74, 109.13, 109.52, 109.91, 110.3, 110.69, 111.08, 111.47, 111.86, 112.25, 112.64, 113.03, 113.42, 113.81, 114.2, 114.59, 114.98, 115.37, 115.76, 116.15, 116.54, 116.93, 117.32, 117.71, 118.1, 118.49, 118.88, 119.27, 119.66, 120.05, 120.44, 120.83, 121.22, 121.61, 122.0, 122.39, 122.78, 123.17, 123.56, 123.95, 124.34, 124.73, 125.12, 125.51, 125.9, 126.29, 126.68, 127.07, 127.46, 127.85, 128.24, 128.63, 129.02, 129.41, 129.8, 130.19, 130.58, 130.97, 131.36, 131.75, 132.14, 132.53, 132.92, 133.31, 133.7, 134.09, 134.48, 134.87, 135.26, 135.65, 136.04, 136.43, 136.82, 137.21, 137.6, 137.99, 138.38, 138.77, 139.16, 139.55, 139.94, 140.33, 140.72, 141.11, 141.5, 141.89, 142.28, 142.67, 143.06, 143.45, 143.84, 144.23, 144.62, 145.01, 145.4, 145.79, 146.18, 146.57, 146.96, 147.35, 147.74, 148.13, 148.52, 148.91, 149.3, 149.69, 150.08, 150.47, 150.86, 151.25, 151.64, 152.03, 152.42, 152.81, 153.2, 153.59, 153.98, 154.37, 154.76, 155.15, 155.54, 155.93, 156.32, 156.71, 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206.24, 206.63, 207.02, 207.41, 207.8, 208.19, 208.58, 208.97, 209.36, 209.75, 210.14, 210.53, 210.92, 211.31, 211.7, 212.09, 212.48, 212.87, 213.26, 213.65, 214.04, 214.43, 214.82, 215.21, 215.6, 215.99, 216.38, 216.77, 217.16, 217.55, 217.94, 218.33, 218.72, 219.11, 219.5, 219.89, 220.28, 220.67, 221.06, 221.45, 221.84, 222.23, 222.62, 223.01, 223.4, 223.79, 224.18, 224.57, 224.96, 225.35, 225.74, 226.13, 226.52, 226.91, 227.3, 227.69, 228.08, 228.47, 228.86, 229.25, 229.64, 230.03, 230.42, 230.81, 231.2, 231.59, 231.98, 232.37, 232.76, 233.15, 233.54, 233.93, 234.32, 234.71, 235.1, 235.49, 235.88, 236.27, 236.66, 237.05, 237.44, 237.83, 238.22, 238.61, 239.0, 239.39, 239.78, 240.17, 240.56, 240.95, 241.34, 241.73, 242.12, 242.51, 242.9, 243.29, 243.68, 244.07, 244.46, 244.85, 245.24, 245.63, 246.02, 246.41, 246.8, 247.19, 247.58, 247.97, 248.36, 248.75, 249.14, 249.53, 249.92, 250.31, 250.7, 251.09, 251.48, 251.87, 252.26, 252.65, 253.04, 253.43, 253.82, 254.21, 254.6, 254.99, 255.38, 255.77, 256.16, 256.55, 256.94, 257.33, 257.72, 258.11, 258.5, 258.89, 259.28, 259.67, 260.06, 260.45, 260.84, 261.23, 261.62, 262.01, 262.4, 262.79, 263.18, 263.57, 263.96, 264.35, 264.74, 265.13, 265.52, 265.91, 266.3, 266.69, 267.08, 267.47, 267.86, 268.25, 268.64, 269.03, 269.42, 269.81, 270.2, 270.59, 270.98, 271.37, 271.76, 272.15, 272.54, 272.93, 273.32, 273.71, 274.1, 274.49, 274.88, 275.27, 275.66, 276.05, 276.44, 276.83, 277.22, 277.61, 278.0, 278.39, 278.78, 279.17, 279.56, 279.95, 280.34, 280.73, 281.12, 281.51, 281.9, 282.29, 282.68, 283.07, 283.46, 283.85, 284.24, 284.63, 285.02, 285.41, 285.8, 286.19, 286.58, 286.97, 287.36, 287.75, 288.14, 288.53, 288.92, 289.31, 289.7, 290.09, 290.48, 290.87, 291.26, 291.65, 292.04, 292.43, 292.82, 293.21, 293.6, 293.99, 294.38, 294.77, 295.16, 295.55, 295.94, 296.33, 296.72, 297.11, 297.5, 297.89, 298.28, 298.67, 299.06, 299.45, 299.84, 300.23, 300.62, 301.01, 301.4, 301.79, 302.18, 302.57, 302.96, 303.35, 303.74, 304.13, 304.52, 304.91, 305.3, 305.69, 306.08, 306.47, 306.86, 307.25, 307.64, 308.03, 308.42, 308.81, 309.2, 309.59, 309.98, 310.37, 310.76, 311.15, 311.54, 311.93, 312.32, 312.71, 313.1, 313.49, 313.88, 314.27, 314.66, 315.05, 315.44, 315.83, 316.22, 316.61, 317.0, 317.39, 317.78, 318.17, 318.56, 318.95, 319.34, 319.73, 320.12, 320.51, 320.9, 321.29, 321.68, 322.07, 322.46, 322.85, 323.24, 323.63, 324.02, 324.41, 324.8, 325.19, 325.58, 325.97, 326.36, 326.75, 327.14, 327.53, 327.92, 328.31, 328.7, 329.09, 329.48, 329.87, 330.26, 330.65, 331.04, 331.43, 331.82, 332.21, 332.6, 332.99, 333.38, 333.77, 334.16, 334.55, 334.94, 335.33, 335.72, 336.11, 336.5, 336.89, 337.28, 337.67, 338.06, 338.45, 338.84, 339.23, 339.62, 340.01, 340.4, 340.79, 341.18, 341.57, 341.96, 342.35, 342.74, 343.13, 343.52, 343.91, 344.3, 344.69, 345.08, 345.47, 345.86, 346.25, 346.64, 347.03, 347.42, 347.81, 348.2, 348.59, 348.98, 349.37, 349.76, 350.15, 350.54, 350.93, 351.32, 351.71, 352.1, 352.49, 352.88, 353.27, 353.66, 354.05, 354.44, 354.83, 355.22, 355.61, 356.0, 356.39, 356.78, 357.17, 357.56, 357.95, 358.34, 358.73, 359.12, 359.51, 359.9, 360.29, 360.68, 361.07, 361.46, 361.85, 362.24, 362.63, 363.02, 363.41, 363.8, 364.19, 364.58, 364.97, 365.36, 365.75, 366.14, 366.53, 366.92, 367.31, 367.7, 368.09, 368.48, 368.87, 369.26, 369.65, 370.04, 370.43, 370.82, 371.21, 371.6, 371.99, 372.38, 372.77, 373.16, 373.55, 373.94, 374.33, 374.72, 375.11, 375.5, 375.89, 376.28, 376.67, 377.06, 377.45, 377.84, 378.23, 378.62, 379.01, 379.4, 379.79, 380.18, 380.57, 380.96, 381.35, 381.74, 382.13, 382.52, 382.91, 383.3, 383.69, 384.08, 384.47, 384.86, 385.25, 385.64, 386.03, 386.42, 386.81, 387.2, 387.59, 387.98, 388.37, 388.76, 389.15, 389.54, 389.93, 390.32, 390.71, 391.1, 391.49, 391.88, 392.27, 392.66, 393.05, 393.44, 393.83, 394.22, 394.61, 395.0, 395.39, 395.78, 396.17, 396.56, 396.95, 397.34, 397.73, 398.12, 398.51, 398.9, 399.29, 399.68, 400.07, 400.46, 400.85, 401.24, 401.63, 402.02, 402.41, 402.8, 403.19, 403.58, 403.97, 404.36, 404.75, 405.14, 405.53, 405.92, 406.31, 406.7, 407.09, 407.48, 407.87, 408.26, 408.65, 409.04, 409.43, 409.82, 410.21, 410.6, 410.99, 411.38, 411.77, 412.16, 412.55, 412.94, 413.33, 413.72, 414.11, 414.5, 414.89, 415.28, 415.67, 416.06, 416.45, 416.84, 417.23, 417.62, 418.01, 418.4, 418.79, 419.18, 419.57, 419.96, 420.35, 420.74, 421.13, 421.52, 421.91, 422.3, 422.69, 423.08, 423.47, 423.86, 424.25, 424.64, 425.03, 425.42, 425.81, 426.2, 426.59, 426.98, 427.37, 427.76, 428.15, 428.54, 428.93, 429.32, 429.71, 430.1, 430.49, 430.88, 431.27, 431.66, 432.05, 432.44, 432.83, 433.22, 433.61, 434.0, 434.39, 434.78, 435.17, 435.56, 435.95, 436.34, 436.73, 437.12, 437.51, 437.9, 438.29, 438.68, 439.07, 439.46, 439.85, 440.24, 440.63, 441.02, 441.41, 441.8, 442.19, 442.58, 442.97, 443.36, 443.75, 444.14, 444.53, 444.92, 445.31, 445.7, 446.09, 446.48, 446.87, 447.26, 447.65, 448.04, 448.43, 448.82, 449.21, 449.6, 449.99, 450.38, 450.77, 451.16, 451.55, 451.94, 452.33, 452.72, 453.11, 453.5, 453.89, 454.28, 454.67, 455.06, 455.45, 455.84, 456.23, 456.62, 457.01, 457.4, 457.79, 458.18, 458.57, 458.96, 459.35, 459.74, 460.13, 460.52, 460.91, 461.3, 461.69, 462.08, 462.47, 462.86, 463.25, 463.64, 464.03, 464.42, 464.81, 465.2, 465.59, 465.98, 466.37, 466.76, 467.15, 467.54, 467.93, 468.32, 468.71, 469.1, 469.49, 469.88, 470.27, 470.66, 471.05, 471.44, 471.83, 472.22, 472.61, 473.0, 473.39, 473.78, 474.17, 474.56, 474.95, 475.34, 475.73, 476.12, 476.51, 476.9, 477.29, 477.68, 478.07, 478.46, 478.85, 479.24, 479.63, 480.02, 480.41, 480.8, 481.19, 481.58, 481.97, 482.36, 482.75, 483.14, 483.53, 483.92, 484.31, 484.7, 485.09, 485.48, 485.87, 486.26, 486.65, 487.04, 487.43, 487.82, 488.21, 488.6, 488.99, 489.38, 489.77, 490.16, 490.55, 490.94, 491.33, 491.72, 492.11, 492.5, 492.89, 493.28, 493.67, 494.06, 494.45, 494.84, 495.23, 495.62, 496.01, 496.4, 496.79, 497.18, 497.57, 497.96, 498.35, 498.74, 499.13, 499.52, 499.91, 500.3, 500.69, 501.08, 501.47, 501.86, 502.25, 502.64, 503.03, 503.42, 503.81, 504.2, 504.59, 504.98, 505.37, 505.76, 506.15, 506.54, 506.93, 507.32, 507.71, 508.1, 508.49, 508.88, 509.27, 509.66, 510.05, 510.44, 510.83, 511.22, 511.61, 512.0, 512.39, 512.78, 513.17, 513.56, 513.95, 514.34, 514.73, 515.12, 515.51, 515.9, 516.29, 516.68, 517.07, 517.46, 517.85, 518.24, 518.63, 519.02, 519.41, 519.8, 520.19, 520.58, 520.97, 521.36, 521.75, 522.14, 522.53, 522.92, 523.31, 523.7, 524.09, 524.48, 524.87, 525.26, 525.65, 526.04, 526.43, 526.82, 527.21, 527.6, 527.99, 528.38, 528.77, 529.16, 529.55, 529.94, 530.33, 530.72, 531.11, 531.5, 531.89, 532.28, 532.67, 533.06, 533.45, 533.84, 534.23, 534.62, 535.01, 535.4, 535.79, 536.18, 536.57, 536.96, 537.35, 537.74, 538.13, 538.52, 538.91, 539.3, 539.69, 540.08, 540.47, 540.86, 541.25, 541.64, 542.03, 542.42, 542.81, 543.2, 543.59, 543.98, 544.37, 544.76, 545.15, 545.54, 545.93, 546.32, 546.71, 547.1, 547.49, 547.88, 548.27, 548.66, 549.05, 549.44, 549.83, 550.22, 550.61, 551.0, 551.39, 551.78, 552.17, 552.56, 552.95, 553.34, 553.73, 554.12, 554.51, 554.9, 555.29, 555.68, 556.07, 556.46, 556.85, 557.24, 557.63, 558.02, 558.41, 558.8, 559.19, 559.58, 559.97, 560.36, 560.75, 561.14, 561.53, 561.92, 562.31, 562.7, 563.09, 563.48, 563.87, 564.26, 564.65, 565.04, 565.43, 565.82, 566.21, 566.6, 566.99, 567.38, 567.77, 568.16, 568.55, 568.94, 569.33, 569.72, 570.11, 570.5, 570.89, 571.28, 571.67, 572.06, 572.45, 572.84, 573.23, 573.62, 574.01, 574.4, 574.79, 575.18, 575.57, 575.96, 576.35, 576.74, 577.13, 577.52, 577.91, 578.3, 578.69, 579.08, 579.47, 579.86, 580.25, 580.64, 581.03, 581.42, 581.81, 582.2, 582.59, 582.98, 583.37, 583.76, 584.15, 584.54, 584.93, 585.32, 585.71, 586.1, 586.49, 586.88, 587.27, 587.66, 588.05, 588.44, 588.83, 589.22, 589.61, 589.99, 590.38, 590.77, 591.16, 591.55, 591.94, 592.33, 592.72, 593.11, 593.5, 593.89, 594.28, 594.67, 595.06, 595.45, 595.84, 596.23, 596.62, 597.01, 597.4, 597.79, 598.18, 598.57, 598.96, 599.35, 599.74, 600.13, 600.52, 600.91, 601.3, 601.69, 602.08, 602.47, 602.86, 603.25, 603.64, 604.03, 604.42, 604.81, 605.2, 605.59, 605.98, 606.37, 606.76, 607.15, 607.54, 607.93, 608.32, 608.71, 609.1, 609.49, 609.88, 610.27, 61
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