

سایه قرانانی (مجموعه تیرگی و قران) پیچیده

$$t_n = 5, 9, 13, 17$$

$$\rightarrow \rightarrow \rightarrow$$

$$+ + + +$$

$$t_{n+1} = t_n + 4$$

$$t_{10} = 5 + 4 \times 9 = 41$$

$$t_n = 9, 10, 14, 18$$

$$\rightarrow \rightarrow \rightarrow$$

$$+ + + +$$

$$S_n = \frac{n}{2} (a_1 + a_n)$$

$$S_{10} = 5 (9 + 41) = 250$$

$$t_{n+1} = t_n + 4$$

$$5 + 4 \times 9 = 41$$

$$t_{n+1} = 22 \rightarrow 24, 28, 32, 36$$

$$S_4 = \frac{4}{2} (2 \times 22 + 3 \times 4) = 2 (44 + 12) = 112$$

$$2 (112 + 2) = 236$$

$$1 + \sqrt{3}, 2, 3 - \sqrt{3}$$

$$2 - 1 - \sqrt{3} = 1 - \sqrt{3} = d$$

$$a_{20} - a_{13} = 7d \rightarrow 7(1 - \sqrt{3}) = 7 - 7\sqrt{3}$$

$$a_n = 5, 12, 19, 26, 33, 40, 47, 54, 61, 68, 75, 82, 89, 96, 103, 110, 117, 124, 131, 138, 145, 152, 159, 166, 173, 180, 187, 194, 201, 208, 215, 222, 229, 236, 243, 250, 257, 264, 271, 278, 285, 292, 299, 306, 313, 320, 327, 334, 341, 348, 355, 362, 369, 376, 383, 390, 397, 404, 411, 418, 425, 432, 439, 446, 453, 460, 467, 474, 481, 488, 495, 502, 509, 516, 523, 530, 537, 544, 551, 558, 565, 572, 579, 586, 593, 600, 607, 614, 621, 628, 635, 642, 649, 656, 663, 670, 677, 684, 691, 698, 705, 712, 719, 726, 733, 740, 747, 754, 761, 768, 775, 782, 789, 796, 803, 810, 817, 824, 831, 838, 845, 852, 859, 866, 873, 880, 887, 894, 901, 908, 915, 922, 929, 936, 943, 950, 957, 964, 971, 978, 985, 992, 999, 1006, 1013, 1020, 1027, 1034, 1041, 1048, 1055, 1062, 1069, 1076, 1083, 1090, 1097, 1104, 1111, 1118, 1125, 1132, 1139, 1146, 1153, 1160, 1167, 1174, 1181, 1188, 1195, 1202, 1209, 1216, 1223, 1230, 1237, 1244, 1251, 1258, 1265, 1272, 1279, 1286, 1293, 1300, 1307, 1314, 1321, 1328, 1335, 1342, 1349, 1356, 1363, 1370, 1377, 1384, 1391, 1398, 1405, 1412, 1419, 1426, 1433, 1440, 1447, 1454, 1461, 1468, 1475, 1482, 1489, 1496, 1503, 1510, 1517, 1524, 1531, 1538, 1545, 1552, 1559, 1566, 1573, 1580, 1587, 1594, 1601, 1608, 1615, 1622, 1629, 1636, 1643, 1650, 1657, 1664, 1671, 1678, 1685, 1692, 1699, 1706, 1713, 1720, 1727, 1734, 1741, 1748, 1755, 1762, 1769, 1776, 1783, 1790, 1797, 1804, 1811, 1818, 1825, 1832, 1839, 1846, 1853, 1860, 1867, 1874, 1881, 1888, 1895, 1902, 1909, 1916, 1923, 1930, 1937, 1944, 1951, 1958, 1965, 1972, 1979, 1986, 1993, 2000, 2007, 2014, 2021, 2028, 2035, 2042, 2049, 2056, 2063, 2070, 2077, 2084, 2091, 2098, 2105, 2112, 2119, 2126, 2133, 2140, 2147, 2154, 2161, 2168, 2175, 2182, 2189, 2196, 2203, 2210, 2217, 2224, 2231, 2238, 2245, 2252, 2259, 2266, 2273, 2280, 2287, 2294, 2301, 2308, 2315, 2322, 2329, 2336, 2343, 2350, 2357, 2364, 2371, 2378, 2385, 2392, 2399, 2406, 2413, 2420, 2427, 2434, 2441, 2448, 2455, 2462, 2469, 2476, 2483, 2490, 2497, 2504, 2511, 2518, 2525, 2532, 2539, 2546, 2553, 2560, 2567, 2574, 2581, 2588, 2595, 2602, 2609, 2616, 2623, 2630, 2637, 2644, 2651, 2658, 2665, 2672, 2679, 2686, 2693, 2700, 2707, 2714, 2721, 2728, 2735, 2742, 2749, 2756, 2763, 2770, 2777, 2784, 2791, 2798, 2805, 2812, 2819, 2826, 2833, 2840, 2847, 2854, 2861, 2868, 2875, 2882, 2889, 2896, 2903, 2910, 2917, 2924, 2931, 2938, 2945, 2952, 2959, 2966, 2973, 2980, 2987, 2994, 3001, 3008, 3015, 3022, 3029, 3036, 3043, 3050, 3057, 3064, 3071, 3078, 3085, 3092, 3099, 3106, 3113, 3120, 3127, 3134, 3141, 3148, 3155, 3162, 3169, 3176, 3183, 3190, 3197, 3204, 3211, 3218, 3225, 3232, 3239, 3246, 3253, 3260, 3267, 3274, 3281, 3288, 3295, 3302, 3309, 3316, 3323, 3330, 3337, 3344, 3351, 3358, 3365, 3372, 3379, 3386, 3393, 3400, 3407, 3414, 3421, 3428, 3435, 3442, 3449, 3456, 3463, 3470, 3477, 3484, 3491, 3498, 3505, 3512, 3519, 3526, 3533, 3540, 3547, 3554, 3561, 3568, 3575, 3582, 3589, 3596, 3603, 3610, 3617, 3624, 3631, 3638, 3645, 3652, 3659, 3666, 3673, 3680, 3687, 3694, 3701, 3708, 3715, 3722, 3729, 3736, 3743, 3750, 3757, 3764, 3771, 3778, 3785, 3792, 3799, 3806, 3813, 3820, 3827, 3834, 3841, 3848, 3855, 3862, 3869, 3876, 3883, 3890, 3897, 3904, 3911, 3918, 3925, 3932, 3939, 3946, 3953, 3960, 3967, 3974, 3981, 3988, 3995, 4002, 4009, 4016, 4023, 4030, 4037, 4044, 4051, 4058, 4065, 4072, 4079, 4086, 4093, 4100, 4107, 4114, 4121, 4128, 4135, 4142, 4149, 4156, 4163, 4170, 4177, 4184, 4191, 4198, 4205, 4212, 4219, 4226, 4233, 4240, 4247, 4254, 4261, 4268, 4275, 4282, 4289, 4296, 4303, 4310, 4317, 4324, 4331, 4338, 4345, 4352, 4359, 4366, 4373, 4380, 4387, 4394, 4401, 4408, 4415, 4422, 4429, 4436, 4443, 4450, 4457, 4464, 4471, 4478, 4485, 4492, 4499, 4506, 4513, 4520, 4527, 4534, 4541, 4548, 4555, 4562, 4569, 4576, 4583, 4590, 4597, 4604, 4611, 4618, 4625, 4632, 4639, 4646, 4653, 4660, 4667, 4674, 4681, 4688, 4695, 4702, 4709, 4716, 4723, 4730, 4737, 4744, 4751, 4758, 4765, 4772, 4779, 4786, 4793, 4800, 4807, 4814, 4821, 4828, 4835, 4842, 4849, 4856, 4863, 4870, 4877, 4884, 4891, 4898, 4905, 4912, 4919, 4926, 4933, 4940, 4947, 4954, 4961, 4968, 4975, 4982, 4989, 4996, 5003, 5010, 5017, 5024, 5031, 5038, 5045, 5052, 5059, 5066, 5073, 5080, 5087, 5094, 5101, 5108, 5115, 5122, 5129, 5136, 5143, 5150, 5157, 5164, 5171, 5178, 5185, 5192, 5199, 5206, 5213, 5220, 5227, 5234, 5241, 5248, 5255, 5262, 5269, 5276, 5283, 5290, 5297, 5304, 5311, 5318, 5325, 5332, 5339, 5346, 5353, 5360, 5367, 5374, 5381, 5388, 5395, 5402, 5409, 5416, 5423, 5430, 5437, 5444, 5451, 5458, 5465, 5472, 5479, 5486, 5493, 5500, 5507, 5514, 5521, 5528, 5535, 5542, 5549, 5556, 5563, 5570, 5577, 5584, 5591, 5598, 5605, 5612, 5619, 5626, 5633, 5640, 5647, 5654, 5661, 5668, 5675, 5682, 5689, 5696, 5703, 5710, 5717, 5724, 5731, 5738, 5745, 5752, 5759, 5766, 5773, 5780, 5787, 5794, 5801, 5808, 5815, 5822, 5829, 5836, 5843, 5850, 5857, 5864, 5871, 5878, 5885, 5892, 5899, 5906, 5913, 5920, 5927, 5934, 5941, 5948, 5955, 5962, 5969, 5976, 5983, 5990, 5997, 6004, 6011, 6018, 6025, 6032, 6039, 6046, 6053, 6060, 6067, 6074, 6081, 6088, 6095, 6102, 6109, 6116, 6123, 6130, 6137, 6144, 6151, 6158, 6165, 6172, 6179, 6186, 6193, 6200, 6207, 6214, 6221, 6228, 6235, 6242, 6249, 6256, 6263, 6270, 6277, 6284, 6291, 6298, 6305, 6312, 6319, 6326, 6333, 6340, 6347, 6354, 6361, 6368, 6375, 6382, 6389, 6396, 6403, 6410, 6417, 6424, 6431, 6438, 6445, 6452, 6459, 6466, 6473, 6480, 6487, 6494, 6501, 6508, 6515, 6522, 6529, 6536, 6543, 6550, 6557, 6564, 6571, 6578, 6585, 6592, 6599, 6606, 6613, 6620, 6627, 6634, 6641, 6648, 6655, 6662, 6669, 6676, 6683, 6690, 6697, 6704, 6711, 6718, 6725, 6732, 6739, 6746, 6753, 6760, 6767, 6774, 6781, 6788, 6795, 6802, 6809, 6816, 6823, 6830, 6837, 6844, 6851, 6858, 6865, 6872, 6879, 6886, 6893, 6900, 6907, 6914, 6921, 6928, 6935, 6942, 6949, 6956, 6963, 6970, 6977, 6984, 6991, 6998, 7005, 7012, 7019, 7026, 7033, 7040, 7047, 7054, 7061, 7068, 7075, 7082, 7089, 7096, 7103, 7110, 7117, 7124, 7131, 7138, 7145, 7152, 7159, 7166, 7173, 7180, 7187, 7194, 7201, 7208, 7215, 7222, 7229, 7236, 7243, 7250, 7257, 7264, 7271, 7278, 7285, 7292, 7299, 7306, 7313, 7320, 7327, 7334, 7341, 7348, 7355, 7362, 7369, 7376, 7383, 7390, 7397, 7404, 7411, 7418, 7425, 7432, 7439, 7446, 7453, 7460, 7467, 7474, 7481, 7488, 7495, 7502, 7509, 7516, 7523, 7530, 7537, 7544, 7551, 7558, 7565, 7572, 7579, 7586, 7593, 7600, 7607, 7614, 7621, 7628, 7635, 7642, 7649, 7656, 7663, 7670, 7677, 7684, 7691, 7698, 7705, 7712, 7719, 7726, 7733, 7740, 7747, 7754, 7761, 7768, 7775, 7782, 7789, 7796, 7803, 7810, 7817, 7824, 7831, 7838, 7845, 7852, 7859, 7866, 7873, 7880, 7887, 7894, 7901, 7908, 7915, 7922, 7929, 7936, 7943, 7950, 7957, 7964, 7971, 7978, 7985, 7992, 7999, 8006, 8013, 8020, 8027, 8034, 8041, 8048, 8055, 8062, 8069, 8076, 8083, 8090, 8097, 8104, 8111, 8118, 8125, 8132, 8139, 8146, 8153, 8160, 8167, 8174, 8181, 8188, 8195, 8202, 8209, 8216, 8223, 8230, 8237, 8244, 8251, 8258, 8265, 8272, 8279, 8286, 8293, 8300, 8307, 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11548, 11555, 11562, 11569, 11576, 11583, 11590, 11597, 11604, 11611, 11618, 11625, 11632, 11639, 11646, 11653, 11660, 11667, 11674, 11681, 11688, 11695, 11702, 11709, 11716, 11723, 11730, 11737, 11744, 11751, 11758, 11765, 11772, 11779, 11786, 11793, 11800, 11807, 11814, 11821, 11828, 11835, 11842, 11849, 11856, 11863, 11870, 11877, 11884, 11891, 11898, 11905, 11912, 11919, 11926, 11933, 11940, 11947, 11954, 11961, 11968, 11975, 11982, 11989, 11996, 12003, 12010, 12017, 12024, 12031, 12038, 12045, 12052, 12059, 12066, 12073, 12080, 12087, 12094, 12101, 12108, 12115, 12122, 12129, 12136, 12143, 12150, 12157, 12164, 12171, 12178, 12185, 12192, 12199, 12206, 12213, 12220, 12227, 12234, 12241, 12248, 12255, 12262, 12269, 12276, 12283, 12290, 12297, 12304, 12311, 12318, 12325, 12332, 12339, 12346, 12353, 12360, 12367, 12374, 12381, 12388, 12395, 12402, 12409, 12416, 12423, 12430, 12437, 12444, 12451, 12458, 12465, 12472, 12479, 12486, 12493, 12500, 12507, 12514, 12521, 12528, 12535, 12542, 12549, 12556, 12563, 12570, 12577, 12584, 12591, 12598, 12605, 12612, 12619, 12626, 12633, 12640, 12647, 12654, 12661, 12668, 12675, 12682, 12689, 12696, 12703, 12710, 12717, 12724, 12731, 12738, 12745, 12752, 12759, 12766, 12773, 12780, 12787, 12794, 12801, 12808, 12815, 12822, 12829, 12836, 12843, 12850, 12857, 12864, 12871, 12878, 12885, 12892, 12899, 12906, 12913, 12920, 12927, 12934, 12941, 12948, 12955, 12962,$$

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1

$a_1, a_2, a_3, \dots, a_n = k \rightarrow a_1 = k$
 $a_1 + a_2 + a_3 + \dots + a_n = k \rightarrow a_1 = k$
 $a_1 = k$

$a_1, a_2, a_3, \dots, a_n \rightarrow a_1 = k$

2

$S_1 = \frac{1}{2}(a_1 + a_n)$
 $S_2 = \frac{1}{2}(a_1 + a_n)$
 $\frac{1}{2}(a_1 + a_n) = \frac{1}{2}(a_1 + a_n)$
 $a_1 + a_n = a_1 + a_n$
 $a_1 = a_n \rightarrow a_1 = \frac{1}{2}a_n$

$\frac{a_1}{a_2} = \frac{a_1 + a_2}{a_1 + a_2} = \frac{1 + 1}{1 + 1} = \frac{2}{2} = 1$

3

$t_1 = 11, t_2 = 11 \rightarrow d = \frac{11-11}{1} = 0$

$11, 11, 11, \dots, 11$
 $a_1 = 11, a_2 = 11, a_3 = 11, \dots, a_n = 11$
 $a_1 = 11$

$a_1 = 11 \rightarrow ? \rightarrow a_1 = 11$

$a_1 = 11, a_2 = 11, a_3 = 11, \dots, a_n = 11$
 $a_1 = 11$