PRACTICO # 3
SERIES Y SUMATORIAS

Realizar algoritmo, prueba de escritorio y su codificación

Series

1. 4, 5, 9, 14, 23, 37,.....
2. 60, 1, 58, 3, 56, 5, 54, 7, 52, 9, 50, 11 .....
3. 1, 1, 2, 3, 5, 8, 13…
4. 2, 1, 4, 3, 6, 5, 8, 7, 10, 11..,
5. 0, 2, 6, 12, 20…
6. 1, 4, 9, 16, 25…
7. 1, 2, 3, 5, 7, 11, 13, 17…
8. 1, 0, 1, 0, 1, 0, 1, 0, 1…
9. 1, 2, 4, 5, 10, 11, 22…
10. 1, 1, 2, 1, 2, 3, 1, 2, 3, 4, 1, 2, 3, 4, 5…
11. 1, 1, 2, 1, 2, 3, 1, 2, 3, 4, 1, 2, 3, 4, 5, 1, 2, 3, 4, 5, 6…
12. 1, 4, 7, 10, 13,16, 19, 22, 25,…
13. 3, 8, 13, 18, 23, 28, 33, 38,…
14. 3, 9, 27, 81, 243, 729, 2187, ...
15. 1, 8, 27, 64, 125, 216, 343, 512, 729, ...
16. 4, 2, 1, 0.5, 0.25, ...

17 .- si n = 8 generar 8, 1, 7, 2, 6, 3,5, 4
si n = 7 generar 7, 1, 6, 2, 5, 3, 4

18. 1, 20, 3, 18, 5, 16, 7, 14, 9, 12, 11, 10, 13, 8, 15, 6, 17, 4, 19, 2, 21, 0.
19. 1, 2, 4, 8, 16, 32, 64, 128,.....n2
20. 1, 2, 3, 4, 5, 5, 4, 3, 2, 1, 1, 2, 3, 4, 4, 3, 2, 1, 1, 2, 3, 3, 2, 1, 1, 2, 2, 1, 1, 1
21. -1, 1,-2, 3, -5, 8, -13, 21, -34, 55,.....n

.

22. 1, 3, 6, 8, 16, 18, 36,.....n

23. 1, 3, 2,6,4,9,12, 12, 48,.....n

24. 1, 10, 100, 1000, 10000, 100000,.....n

25. 1, -3, +9, -13, +25, -31,.....n

26. 1, 1, 2, 1, 2, 3, 1, 2, 3, 4,.....n

27. 4, 7, 10, 13, 16, 19,.....n

28. 8, 9, 11, 14, 18,…

29. 4, 4 , 8, 24 96,…

30. 1, 7, 14, 21, 28…

31 1, 4, 8, 16, 32…

32 8, 13, 23, 38, 58,….

34. 6, 8, 14, 22, 36…

La secuencia sería; multiplicar el primero por 3 el segundo dividir por 2 el tercero multiplicar por 3 el cuarto dividir por dos, etc. Por tanto seria;
35. 8 x3 = 24, 24: 2 = 12, 12x 3 = 36, 36 : 2 = 18, 18 x 2 = 54, 54 : 2 = 27

36. 100, 97, 94, 91, 88, 85, 50, 100, 200, 400, 800, 1600

37. 1, 1, 2, 4, 2, 6, 9, 6, 12, 16, 24, 24,25,120,48,……

Sumatorias

1. F = 3 + 6 + 12 + 24 + 48 +... + n
2. F = 1 + 4 + 5 + 9 + 14 + 23+…
3. F = 1 + 4 + 9 + 16 + 25 +…
4. F = 1 x 2 + 3 x 4 + 5 x 6 +.....
5. F = 1 + 2 – 3 + 4 – 5 + 6 – 7+…
6. F = 1x1 + 2x3 + 3x4 + 4x7…
7. F = ½ + ¾ + 5/6 + 7/8 +…
8. F = 1^2+ 3^2+ 5^2 +7^2+…
9. F = x/1! + x^3 / 2! + x^5 / 3! ...
10. F= 1+1+2+2+4+4+.....+100.
11. F = 1*3+3*5+5*7+7*9+9*11+.....
12. F = $1^1 + 2^2 + 3^3 + 4^4$+ ..... + n^n

13.

b. $S = \sum_{i=n}^{i=m} \frac{1}{i^2 + 1}$

14. F = 3 x 1 + 5 x 2 + 7 x 6 + 9 x 24 + ...
15. S = 6 + 12 + 24 + 48 + 96 +... + n
16. K = 1x5 + 5x4 + 4x9 + 9x16 + 16x25+.....
17. 9/ 1+ 8/2 + 7/3 + 6/4 +.....+ 1/9