P431-432

15：

a):C(25,21) -C(24,21) = 10626

b): it is same to x1 + x2 + x3+ x4 + x5 = 11, where xi, i = 1,2,3,4,5, is a nonnegative integer

C(15,11) = 1365

c): Σk（0,10）C(25-k,21-k) = C(25,4) – C(13,4) = 11649

d): it is same to 0<=x1<=3, 0<=x2<=2, x3>=0, x1 + x2 + x3 + x4 + x5 = 5;

Σi（0,3）Σj（0,2）C(9-i-j,5-k-j) = C(9,4) – C(6,4) – C(4,3) -C(3,3) = 106

21:

C(14,6) = 3003

P501-511

7：

a）：if the last number(n) is 1, there is an-1; if the last-second one is 1, there is an-2; if the last 2 is both0, there’s 2^(n-2)

So an = an-1 + an-2 + 2^(n-2)

b): a0 = 0; a1 = 0;

c): 94

17：

a):an = 2an-1

b): a1 = 3

c): 96

P524-526

13:

x^3 = 7x + 6 ,so (x+1)(x+3)(x-2) = 0;

so x1 =-1, x2 = 2, x3 = -3; suppose that an = a\*(-1)^n+ b\*2^n + c\*（-3）^n,

because a0 =9, a1 = 10, a2 = 32;

hence an = 8\*(-1)^n – 3(-2)^n + 4\*3^n

35:

an = -4\*2^n – n^2/4 – 5n/2 +39\*3^n/8 + 1/8

P535

21:

a): f(16) = 2f(4) +1 = 4f(2) + 3 = 7;

b): O(logn)