anam=an+m

anbn=(ab)n

(an)m=anm

(a+b)2=a2+2ab+b2

(a+b)3=a3+3a2b+3ab2+b3

(a-b)3=a3-3a2b+3ab2-b3

(a+b+c)2=a2+b2+c2+2ab+2ac+2bc

(a-b)(a+b)=a2-b2

(a3-b3)=(a-b)(a2+ab+b2)

(a3+b3)=(a-b)(a2-ab+b2)

(an-bn)=(a-b)(an-1+an-2b+an-2b2+an-3b3+...+abn-2+bn-1)

(a2k+1+b2k+1)=(a+b)(a2k-a2k-1b+a2k-2b2-a2k-3b3+...-ab2k-2+b2k-1)

(x+a)(x+b)=x2+(a+b)x+ab