

Problem 22

In each of Problems 21 through 27, rewrite the given expression as a sum whose generic term involves x^n .

$$\sum_{n=0}^{\infty} a_n x^{n+2}$$

Solution

Substitute $k = n + 2$.

$$\sum_{k=2}^{\infty} a_{k-2} x^k$$

Solve for k .

$$\sum_{k=2}^{\infty} a_{k-2} x^k$$

As k is only a dummy index, it can be replaced with n .

$$\sum_{n=2}^{\infty} a_{n-2} x^n$$