With:

Let a = , b =

Let

Then may be written:

After some algebra,

According to the formula:

Making the associations , we obtain  
whereupon may be written as:

The inverse z-transform of is given by

2

Plugging back into the definitions of a , b , r , and , we have for the inverse ztransform of the term

All together, the required inverse z-transform is given by:

g[n]=