Example 9-1: Consider the sequence $x[n]$ given in the following table:

n	$n < -1$	-1	0	1	2	3	4	5	$n > 5$
$x[n]$	0	0	2	4	6	4	2	0	0

The z-transform of this sequence is

$$X(z) = 2 + 4z^{-1} + 6z^{-2} + 4z^{-3} + 2z^{-4}$$

The nonzero values of the sequence $\{2, 4, 6, 4, 2\}$ become the coefficients of the polynomial $X(z)$.

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