Show All Solutions

**Rosen, Discrete Mathematics and Its Applications, 7th edition**
**Extra Examples**
**Section 8.4—Generating Functions**

Extra Examples — *Page references correspond to locations of Extra Examples icons in the textbook.*

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**p.537, icon at Example 1**
**#1.** Find a formula for a generating function for $1, -1, 1, -1, 1, -1, 1, -1, 1, -1, \ldots$.

See Solution

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**p.537, icon at Example 1**
**#2.** Find a formula for a generating function for:

(a) $1, 0, 0, 1, 0, 0, 1, 0, 0, 1, 0, 0, 1, 0, \ldots$

(b) $0, 0, 1, 0, 0, 1, 0, 0, 1, 0, 0, 1, 0, 0, \ldots$ (Note that this is the same sequence as in (a), except that it begins with an extra pair of 0's.)

See Solution

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**p.537, icon at Example 1**
**#3.** Find a formula for a generating function for $4, 3, 2, 1, 0, -1, -2, -3, \ldots$.

See Solution

**p.546, icon at Example 16**

**#1.** Solve $a_n = 3a_{n-1} - 2$, $a_0 = 4$, using generating functions.

See Solution