Show All Solutions

**Rosen, Discrete Mathematics and Its Applications, 6th edition**
**Extra Examples**

**Section 4.5—Program Correctness**

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

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### p.323, icon at Example 1

**#1.** Show that the program segment $S$

$a := 5$
$c := a + 2b$

is correct with respect to the initial assertion $p$: $b = 3$ and the final assertion $q$: $c = 11$.

See Solution

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### p.326, icon at Example 4

**#1.** Use a loop invariant to prove that this program segment for computing $nx$ ($x$ a real number), where $n$ is a positive integer, is correct:

$multiple := 0$
$i := 1$
**while** $i \leq n$
**begin**
  $multiple := multiple + x$
  $i := i + 1$
**end**

See Solution

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