/*
 * assignments.pdf
 *
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 *
 * This file contains solutions of exercises with assignments.
 */

1. (a)
before:
/* x == A */
then:
 /* x == 7*A + 5 */
therefore:
x = 7*x + 5

2. (b)
before:
/* x == A, y == B */
then:
/* x == B – A, y == A */
therefore:
x = y – x /*=> x == B – A */
and then
y = y – x /*=> y == B – (B – A) == A*/

3. (a)
before:
/* x == B+1 */
/* y == (B + 1)*(B + 1) + A == B^2 + 2*B + 1 + A */
then:
/* x == B */
/* y == x^2 + A */
therefore:
x = x – 1 /* => x == B + 1 – 1 = B */
y = y – 2*x – 1
/* => y == B^2 + 2*B + 1 + A – 2*B – 1 == x^2 + A */

4. (c)
/* x == A, y == B */
x = 3*y + x /*=> x == 3*B + A */
y = 3*y – x /*=> y == 3*B – (3*B + A) = -A */
x = x + y /*=> x == 3*B + A – A = 3*B */

5. (b)
/* x – y == B => x == B + y */
/* y == A => x == B + A */
y = x – y /* => y == A + B – A = B */
x = x – y /* => x == A + B – B = A */

6. (a)
/* 2*x + 4*y – 2*z > 4 (divide by 2 and add 1)
=> x + 2*y + 1 – z > 2 + 1 */
insert x into the inequality:
x = x + 2*y + 1 /* => x – z > 3 */
insert z into the inequality:
z = x - z /* => z > 3 */