1)

You have 28 coins that are all nickels $n$ and dimes $d$. The value of the coins is $2.05. Which system of equations can be used to find the number of nickels and the number of dimes?

    Ⓐ $n + d = 28$                             Ⓒ $n + d = 205$

          $10n + 5d = 2.05$                      $n + d = 28$

    Ⓑ $10n + 5d = 205$                   Ⓓ $n + d = 28$

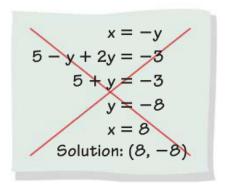          $n + d = 28$                        $5n + 10d = 205$

2)

The length of a rectangle is 5 cm more than twice the width. The perimeter of the rectangle is 34 cm. Find the dimensions of the rectangle.

3)

Suppose you have $28.00 in your bank account and start saving $18.25 every week. Your friend has $161.00 in his account and is withdrawing $15 every week. When will your account balances be the same?

4)

**Error Analysis** Two students solved the system at the right. $x + y = 0$
Explain their mistakes and solve the system correctly. $\quad 5x + 2y = -3$

$x = -y$
$5 - y + 2y = -3$
$5 + y = -3$
$y = -8$
$x = 8$
Solution: $(8, -8)$

$2y = -5x - 3$
$y = -\frac{5}{2}x - \frac{3}{2}$
$5x + 2\left(-\frac{5}{2}x - \frac{3}{2}\right) = -3$
$5x - 5x - 3 = -3$
$-3 = -3$
infinitely many solutions

# Solve each system using substitution.

5)
$y = 2x$
$6x - y = 8$

6)
$y = -x + 4$
$y = 2x + 6$

7)
$6x - 2y = 10$
$y = 3x + 1$

8)
$h = 6g - 4$
$h = -2g + 28$

9)
$y = x - 2$
$2x + 2y = 4$