Example 1 Solve a Linear-Quadratic System by Using Substitution

Solve the system of equations.

$x = 2y^2 + 3y + 1$ **(1)**

$-x + y = -1$ **(2)**

Step 1 Solve Equation (2) for x.

$-x + y = -1$	Equation (2)
$-x = \boxed{} - 1$	Subtract y from each side.
$x = \boxed{} + \boxed{}$	Divide each side by -1.

Step 2 Substitute for x in Equation (1). Then solve for y.

$x = 2y^2 + 3y + 1$	Equation (1)
$\boxed{} = 2y^2 + 3y + 1$	
$0 = 2y^2 + \boxed{}$	Simplify.
$0 = 2y(\boxed{})$	Factor out $2y$.
$y = \boxed{}$ or $y = \boxed{}$	Zero Product Property

Step 3 Substitute the y-values and solve for x.

Case 1

$x = y + 1$ Equation (2)

$= \boxed{} + 1 = \boxed{}$ Substitute for y and simplify.

Case 2

$x = y + 1$

$= \boxed{} + 1 = \boxed{}$

The two solutions of the system are $(1, \boxed{})$ and $(0, \boxed{})$.