✦ Check Up

1. Solve the following system of equations by substitution. Verify the solution.

$x + y = 29$

$x - y = 175$

☑ Compare your answer.

1. Solve the following system of equations by substitution. Verify the solution.

$$x + y = 29$$

$$x - y = 175$$

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$$x + y = 29$$
$$x = 29 - y$$

$$x - y = 175$$
$$(29 - y) - y = 175$$
$$29 - 2y = 175$$
$$-2y = 146$$
$$y = -73$$

$$x = 29 - y$$
$$x = 29 - (-73)$$
$$x = 102$$

The solution is (102,–73).

Verify the solution.

Left Side	Right Side
$x + y$	29
$102 + (-73)$	
29	
LS = RS	

Left Side	Right Side
$x - y$	175
$102 - (-73)$	
175	
LS = RS	

Some systems of equations have solutions that are not whole numbers. When this happens, it is often preferable to use fractions instead of decimal approximations because fractions represent exact values.