

Name: _____

Date: _____

5.2 Solving Systems of Linear Equations By Substitution

Essential Question: _____

Step 1: _____ one of the equations for _____ of the _____.

Step 2: _____ the expression from Step 1 _____ the other equation and _____
for the _____.

Step 3: _____ the value from Step 2 into one of the _____ equations and
_____.

In the following equations, circle or highlight the variable that would be the best choice to isolate (get alone).

$$3x + y = 5$$

$$-2y + x = -7$$

$$-5x + 10y = 5$$

EXAMPLE 1

Solving a System of Linear Equations by Substitution

Solve the system of linear equations by substitution.

$$y = -2x - 9 \quad \text{Equation 1}$$

$$6x - 5y = -19 \quad \text{Equation 2}$$

EXAMPLE 2**Solving a System of Linear Equations
by Substitution**

Solve the system of linear equations by substitution.

$$-x + y = 3 \quad \text{Equation 1}$$

$$3x + y = -1 \quad \text{Equation 2}$$

Solving Real-Life Problems**EXAMPLE 3****Modeling with Mathematics**

A drama club earns \$1040 from a production. A total of 64 adult tickets and 132 student tickets are sold. An adult ticket costs twice as much as a student ticket. Write a system of linear equations that represents this situation. What is the price of each type of ticket?