

# ISOLATING A VARIABLE

## EXAMPLE

$$15 - 2(Y - 3) = 6(2Y + 5) - 5Y$$

$$15 + -2(Y + -3) = 6(2Y + 5) + -5Y$$

$$15 + -2(Y + -3) = 6(2Y + 5) + -5Y$$

$$15 + -2Y + 6 = 12Y + 30 + -5Y$$

$$15 + -2Y + 6 = 12Y + 30 + -5Y$$

$$-2Y + 21 = 7Y + 30$$

$$-2Y + 21 = 7Y + 30$$

$$+ -7Y \quad + -7Y$$

$$-9Y + 21 = 30$$

$$-9Y + 21 = 30$$

$$+ -21 \quad + -21$$

$$-9Y = 9$$

$$-9Y = 9$$

$$\div -9 \quad \div -9$$

$$Y = -1$$

## STEPS TO FOLLOW

1. Change subtraction problems into equivalent addition statements.
2. Distribute to get rid of the parenthesis.
3. Combine like terms on each side of the equal sign.
4. Get the variables (letter terms) on the left side of the equal sign by adding the opposite.
5. Get the constants (numbers) on the right side of the equal sign by adding the opposite.
6. Divide the coefficient (number next to the variable) from both sides to get the variable by itself.
7. The variable is by itself and the number is your answer.