

$2(x - 5)$	$=$	$5x + 23$	Identify the variables to solve (in red)
$2(x) - 2(5)$	$=$	$5x + 23$	Apply distributive property on the left side
$2x - 10$	$=$	$5x + 23$	Simplify
↑		↑	
keep		eliminate	Keep x on the left side
$2x - 5x - 10$	$=$	$5x - 5x + 23$	Subtract both sides by $5x$
$-3x - 10$	$=$	23	Simplify, x on the right side is gone!
↑	$=$	↑	
eliminate		keep	Keep constants on the right side
$-3x - 10 + 10$	$=$	$23 + 10$	Add both sides by 10
$-3x$	$=$	33	Simplify, constant on the left side is gone!
$\frac{-3x}{-3}$	$=$	$\frac{33}{-3}$	Divide both sides by -3
x	$=$	-11	Simplify, done!