

Substitution Method

$$\begin{aligned}x &= y + 5 \\2x - 2y &= 7\end{aligned}$$

Steps to using the Substitution Method:

- Using one of the equations, solve for one of the unknowns (does not matter which equation or variable you use.)
- Using the second equation, substitute the solved variable with the expression (this will create an equation with only one unknown)
- Solve the equation for that one unknown
- Using either equation, replace the unknown with the solved for value.
- Solve for the remaining variable.
- Write the ordered pair as the solution to the system.
- **If in the process all variable terms cancel resulting in a constant = constant, then there is no single point of intersection.**
- **If the resulting equation is true then IDENTITY (collinear lines)**
- **If the resulting equation is false then NO SOLUTION (parallel lines)**