

Descriptions for System of Linear Equations

INDEPENDENT: The two equations represent different lines (**not the same equation**). The solution may be one ordered pair (if lines intersect) or no ordered pair (if lines are parallel).

DEPENDENT: The two equations represent the same line (**same equation**). The solution is an infinite number of ordered pairs; every ordered pair on the line.

CONSISTENT: The two equations **do have a solution**; either 1 ordered pair or an infinite number of ordered pairs.

INCONSISTENT: The two equations **do not have a solution** in common.

A system representing intersecting lines would be consistent and independent.

A system representing the same line would be consistent and dependent.

A system representing parallel lines would be inconsistent and independent.