A SYSTEM OF EQUATIONS: More than one equation with (possibly) more than one unknown.

A SYSTEM OF LINEAR EQUATIONS: More than one linear equation with (possibly) more than one unknown.

EX $\begin{array}{rrrcr} 4x & + & 2y & = & 8 \\ x & - & y & = & 5 \end{array}$ $\leftarrow$ 2 equations; 2 unknowns x and y.

To solve the system of equations, find all possible values of x and y that satisfy both equations.

Note: Both equations are lines, so the solution will be   the point where the two lines intersect.

Graphical Method

    1. Graph both lines (as accurately as possible)

    2. Graphically determine any intersection points.

EX $\begin{array}{rrrcr} 4x & + & 2y & = & 8 \\ x & - & y & = & 5 \end{array}$

EX
$$
\begin{aligned}
4x &+ 2y &=& \ 8 \\
2x &+ \ y &=& \ -6
\end{aligned}
$$

EX
$$
\begin{aligned}
4x &+ 2y &=& \ 8 \\
2x &+ \ y &=& \ 4
\end{aligned}
$$