

1.3 Solving Linear Systems: Graphing by Hand

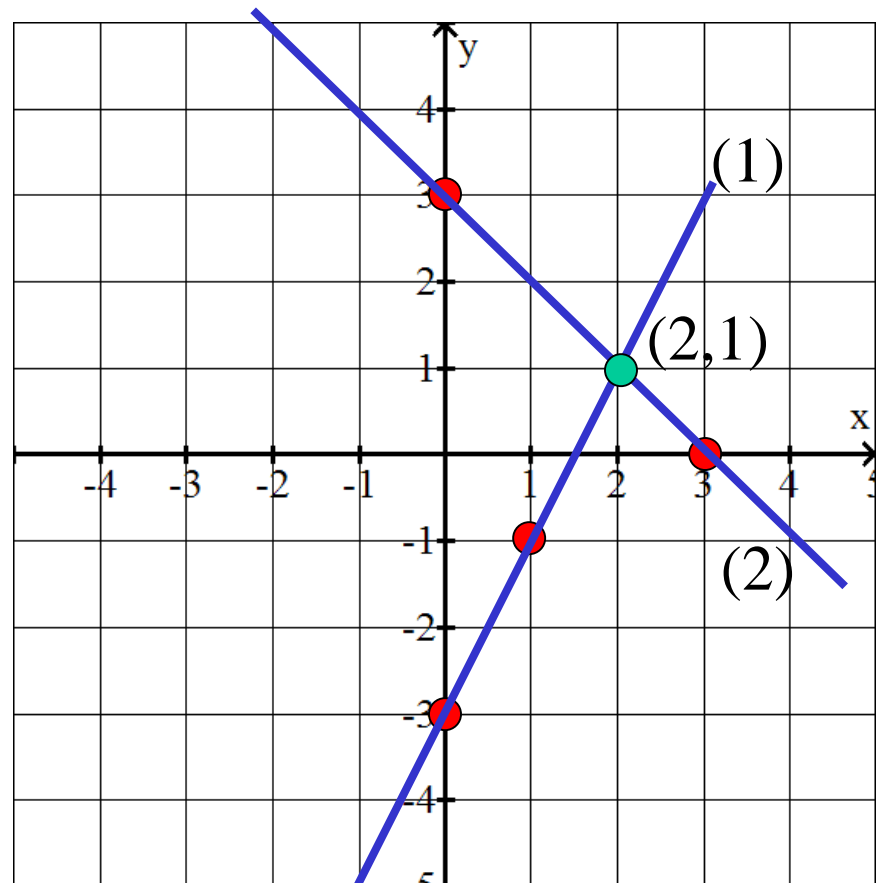
A *linear system* consists of two equations with two unknowns and can be solved by **graphing**.

Example:

$$y = 2x - 3 \quad (\text{i})$$

$$x + y = 3 \quad (\text{ii})$$

The solution is $(2,1)$



Determine the point of intersection of

(i) $x - 2y = -6$ and (ii) $y = -2x - 2$

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x-intercept let $y = 0$

$$x - 2(0) = -6$$

$$x = -6$$

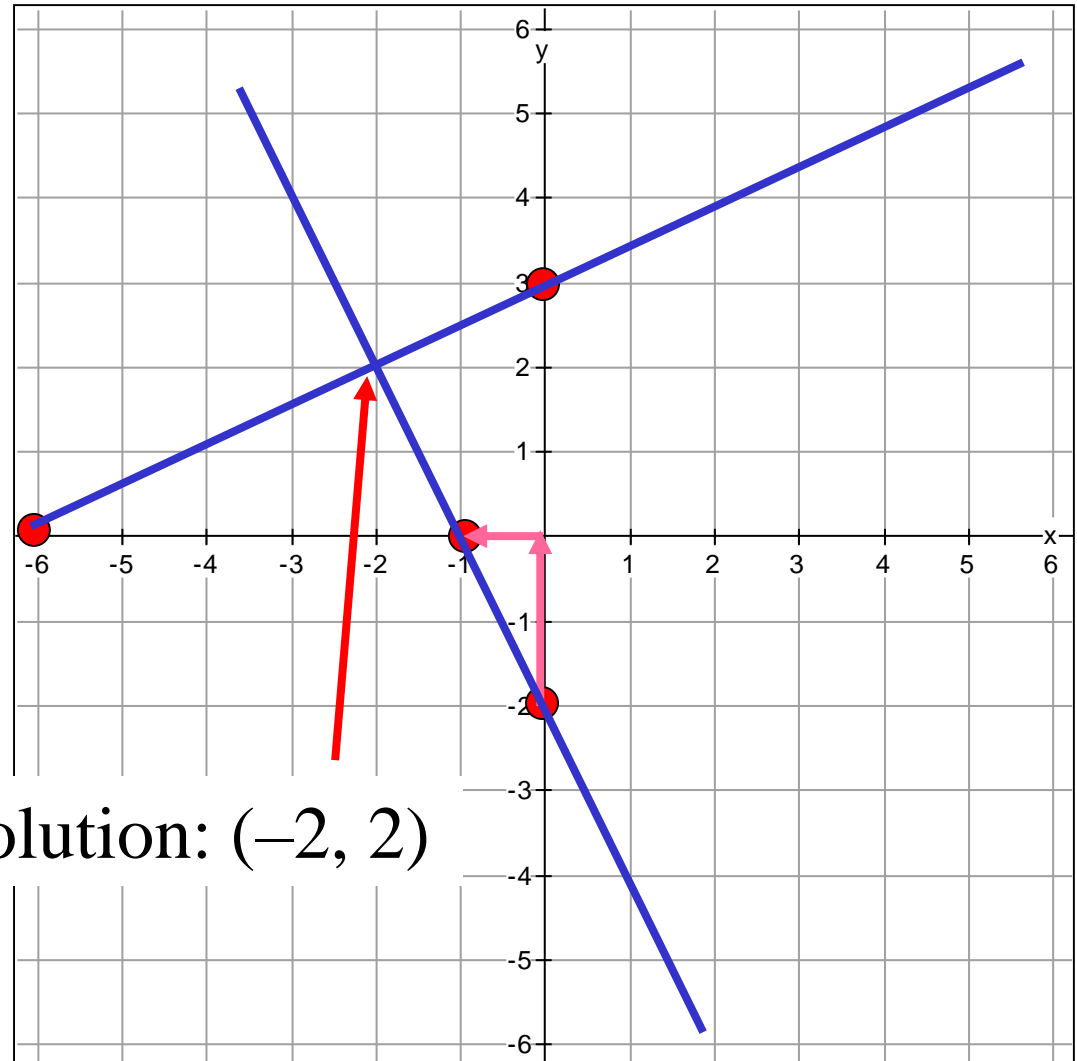
y-intercept let $x = 0$

$$0 - 2y = -6$$

$$y = 3$$

(ii) $y = -2x - 2$

m b



Solution: $(-2, 2)$